

Targeting War-Sustaining Capability at Sea: Compatibility with Additional Protocol I

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*The power to maintain war, if not to launch it, had passed out of the military sphere of the soldier and into that of economics.*¹

I. Introduction

The laws of targeting at sea have not kept pace with contemporary state practice and law. In particular, the practice of attacking economic (“war-sustaining”) targets at sea requires clarification to demonstrate its continuing legality. Additional Protocol I to the 1949 Geneva Conventions (Additional Protocol I) introduced a restrictive definition of a military objective, aspiring to restrict the use of force in armed conflict.² It is generally recognized as an authoritative expression of legal constraints on targeting.³ Despite the widespread adoption of Additional Protocol I, its application to naval warfare is unclear. The U.S. Navy’s *Commander’s Handbook on the Law of Naval Operations (Commander’s Handbook)* offers a competing definition of a legitimate military objective, permitting the targeting of adversaries’ war-sustaining capability.⁴ Scholarly debate has compared and contrasted the Additional Protocol I definition of a target with that found in the *Commander’s Handbook*.⁵ However, this debate generally concerns the direct targeting of civilian persons, rather than the traditional economic objectives of naval campaigns.⁶ The definition of targeting war-sustaining assets at sea needs clarification to affirm its compatibility with international law and to better distinguish the law of war at sea from the laws of land warfare.

Maritime warfare’s long association with maritime trade, the failure of previous attempts to restrict economic warfare at sea, and the historical practice of states, render the legal status of economic warfare at sea unclear.⁷ Defined broadly, economic warfare at sea is the interdiction of a state’s maritime trade network through force (destroying merchant shipping) or the threat of force (blockades).⁸ It has lengthy historic precedents.⁹ Naval power is closely linked to global maritime

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¹ B. H. LIDDELL HART, *HISTORY OF THE SECOND WORLD WAR* 22 (1971).

² Protocol Additional to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of International Conflicts (Protocol I) art. 51, June 8, 1977, U.N. Doc. A/32/144, Annex I [hereinafter Protocol I].

³ See, e.g., Prosecutor v. Zejnil Delalic (Čelebići Case), Case No. IT-96-21-A, Judgment of the Appeals Chamber, ¶ 182 (Feb. 20, 2001); Final Report to the Prosecutor by the Committee Established to Review the NATO Bombing Campaign Against the Federal Republic of Yugoslavia, 39 I.L.M. 1257, 1283 (2000); see also U.S. NAVAL WAR COLLEGE, ANNOTATED SUPPLEMENT TO THE COMMANDER’S HANDBOOK ON THE LAW OF NAVAL OPERATIONS, INT’L L. STUD. NO. 73, at 401–05 (A R. Thomas & James C. Duncan eds., 1999) [hereinafter ANNOTATED SUPPLEMENT].

⁴ DEP’T OF NAVY & DEP’T OF HOMELAND SECURITY, NWP 1-14M/MCWP 5-12.1/COMDTPUB P5800.7A, THE COMMANDER’S HANDBOOK ON THE LAW OF NAVAL OPERATIONS 5-3 (July 2007) [hereinafter COMMANDER’S HANDBOOK]. Although the *Commander’s Handbook* does not limit its definition of legal targets to naval operations, this article refers to “war-sustaining” targets in the context of naval operations only. See *id.* This article also excludes the use of naval forces to deliver nuclear weapons, a situation defying the limitations of international law. See Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, 1996 I.C.J. 226, 262–264 (8 July).

⁵ E.g., Brigadier-General Kenneth Watkin, *Canada/United States Military Interoperability and Humanitarian Law Issues*, 15 DUKE J. COMP. & INT’L L. 281 (2005) (rejecting “war-sustaining” rationale); Yoram Dinstein, *Legitimate Military Objectives Under Current Jus in Bello*, 31 ISR. Y.B. ON HUM. RTS., at 1, 7 (2001) (targeting war-sustaining assets “goes too far”); Horace B. Robertson, Jr., *The Principle of the Military Objective in the Law of Armed Conflict*, 8 U.S.A.F.A. J. L. STUD. 35, 53–55 (1998) (incorporation of core Additional Protocol I targeting principles into customary international law).

⁶ The proposed San Remo Manual seeks to address some of these shortcomings; however, it is an aspirational “model code” proposed by a non-governmental organization, not a binding international agreement. See SAN REMO MANUAL ON INTERNATIONAL LAW APPLICABLE TO ARMED CONFLICTS AT SEA, 12 June 1994, available at <http://www.icrc.org/ihl.nsf/FULL/560?OpenDocument>; see also Louise Doswald-Beck, *The San Remo Manual on International Law Applicable to Armed Conflicts at Sea*, 89 AM. J. INT’L L. 192, 200 (1995) (providing background of San Remo Manual and rejection of war-sustaining concept).

⁷ See generally NEILL ALFORD, *MODERN ECONOMIC WARFARE*, INT’L L. STUD. NO. 56 *passim* (1967) (comprehensive discussion of laws related to economic warfare, but written before adoption of Additional Protocol I and concerned primarily with World War II).

⁸ Lengthy and complex rules traditionally governed both blockades and attacks on merchant shipping. Their continued relevance is debatable. This article, however, is concerned with the general propriety of attacking economic resources at sea, rather than the specific means employed. See generally L. F. E. Goldie, *Targeting Merchant Shipping: An Overview of Law and Practice*, in TARGETING ENEMY MERCHANT SHIPPING, INT’L L. STUD. NO. 65, at 2, 2–28

trade. For centuries, states attacked maritime trade during periods of armed conflict as a method of warfare, hoping to hinder their opponents' war efforts and their ability to project power overseas.¹⁰

Global economic changes of the late twentieth century did not diminish the importance of maritime trade as a strategic center of gravity.¹¹ The most recent expression of the United States' national maritime strategy reaffirms the role of naval power in protecting maritime trade.¹² Recent economic studies confirm that the majority of the world's trade goods travel by sea.¹³ No other mode of transportation has supplanted maritime trade as a means of moving goods between states over long distances.¹⁴

However, Additional Protocol I and other recent contributions to the law of war generally concern conflicts between states and non-state or sub-national actors.¹⁵ They tend to ignore naval conflict, a method of warfare almost exclusively involving state actors and frequently concerned with the economics of warfare.¹⁶ Combined with the general absence of relevant state practice, the legal boundaries of targeting war-sustaining resources remain more permissive than the targeting of civilian objects on land.¹⁷

The lack of clear, modern rules regarding targeting at sea contrasts with the well-developed rules of targeting for land forces.¹⁸ While the United States does not consider all of Additional Protocol I to codify customary international law, most scholars agree that its targeting protocols are customary international law.¹⁹ Unwise application of those rules to naval warfare would essentially prohibit targeting economic resources at sea. Denying naval forces a traditional and legal target set through the application of rules of warfare derived from state practice on land denies military planners a useful strategy and risks prolonging conflicts.²⁰

(Richard J. Grunawalt ed., 1993) (overview of rules governing targeting of neutral and hostile vessels); *see also* ROBERT W. TUCKER, *THE LAW OF WAR AND NEUTRALITY AT SEA*, INT'L L. STUD. NO. 50, at 26–32 (1955) (sources of law of war at sea).

⁹ Early twentieth century naval thinkers studied the lengthy history of commerce raiding as an essential component of strategy. The revision of strategic thought prompted by modern, industrial navies did not diminish the economic aspects of naval warfare. *See, e.g.*, PHILIP HOWARD COLOMB, *1 NAVAL WARFARE* 29–31, 39 (Naval Inst. Press 1990) (1899); *see also* JON TETSURO SUMIDA, *INVENTING GRAND STRATEGY AND TEACHING COMMAND* 45–48 (1997) (interpreting Alfred Thayer Mahan's analysis of naval warfare and commerce).

¹⁰ *See, e.g.*, SAM WILLIS, *FIGHTING AT SEA IN THE EIGHTEENTH CENTURY passim* (2008); ERIC JAY DOLIN, *LEVIATHAN: THE HISTORY OF WHALING IN AMERICA* 156–58, 200–02 (2007) (describing the whaling industry as a target of American and British forces in 1775–1780 and 1812–1814); LANCE EDWIN DAVIS & STANLEY L. ENGERMAN, *NAVAL BLOCKADES IN PEACE AND WAR: AN ECONOMIC HISTORY SINCE 1750 passim* (2006) (overview of tradition of blockades).

¹¹ U.N. Conf. on Trade and Dev., *Review of Maritime Transportation*, at xiii, U.N. Doc. UNCTAD/RMT/2008 (Jan. 11, 2008) [hereinafter *Review of Maritime Transportation*] (“With over 80 percent of world merchandise trade by volume being carried by sea, maritime transport remains the backbone supporting international trade and globalization.”).

¹² DEP'T OF NAVY & DEP'T OF HOMELAND SECURITY, *A COOPERATIVE STRATEGY FOR 21ST CENTURY SEAPOWERS* 13 (Oct. 2007) (“[N]or will we permit an adversary to disrupt the global supply chain by attempting to block vital sea-lanes of communication and commerce.”).

¹³ *See Review of Maritime Transportation, supra* note 11, at 5–9; *see also* U.S. DEP'T OF TRANSPORTATION MARITIME ADMIN., *U.S. WATER TRANSPORTATION STATISTICAL SNAPSHOT* 9 (May 2008) [hereinafter *DoT MARITIME ADMIN.*] (noting that U.S. foreign trade accounted for 19% of global maritime commerce).

¹⁴ *See DoT MARITIME ADMIN., supra* note 13 (observing only rail travel as a more energy-efficient mode of transportation than maritime travel).

¹⁵ *See, e.g.*, Watkin, *supra* note 5, at 296–98 (relationship between Additional Protocol I and non-state actors).

¹⁶ *See* HOSSEIN G. ASKARI ET AL., *ECONOMIC SANCTIONS* 1–31 (2003) (historical economic analysis of sanctions and blockades). *But see* GRETCHEN PETERS, *SEEDS OF TERROR: HOW HEROIN IS BANKROLLING THE TALIBAN AND AL QAEDA* (2009) (suggesting strategy of eliminating terrorists economic support).

¹⁷ State practice is a necessary requirement to form a rule of customary international law. RESTATEMENT (THIRD) OF THE FOREIGN RELATIONS LAW OF THE UNITED STATES, § 102(2) (1987).

¹⁸ *See generally* INT'L & OPERATIONAL LAW DEP'T, THE JUDGE ADVOCATE GENERAL'S LEGAL CTR. & SCH., *OPERATIONAL LAW HANDBOOK* 12–25 (2008) (outlining authorities relevant to targeting decisions on land).

¹⁹ *E.g.*, Robertson, *supra* note 5, at 53–55.

²⁰ Admittedly, the efficacy of economic warfare is not universally accepted; historians continue to debate historic examples. Lance Davis & Stanley Engerman, *Economic Warfare, Naval Blockades, and the Continental System*, in ELI HECKSCHE, *INTERNATIONAL TRADE, AND ECONOMIC HISTORY* 348–51 (2006); Tor Egil Førland, *The History of Economic Warfare: International Law, Effectiveness, Strategies*, 30 J. OF PEACE RES. 2, 159–60 (1993).

II. The Problem of Defining and Targeting War-Sustaining Assets

The *Commander's Handbook* does not clearly define “war-sustaining” targets. The *Annotated Supplement to the Commander's Handbook on the Law of Naval Operations (Annotated Supplement)*, in essence the official commentary, offers a more detailed discussion.²¹ It provides examples of “[p]roper economic targets,” including “enemy lines of communication, rail yards, bridges, rolling stock, lighters, industrial installations producing war-fighting products, and power generation plants.”²² The *Annotated Supplement* explains the list, noting “[e]conomic targets . . . that indirectly but effectively support and sustain the enemy’s warfighting capability may also be attacked.”²³ However, the primary example given for such a target, destruction of cotton during the American Civil War, is outdated and misleading.²⁴

The definition of legitimate targets found in the *Commander's Handbook* needs clarification to distinguish targeting civilians or civilian morale from targeting materiel resources that logically but indirectly support a state’s military.²⁵ Commentators offer “slippery slope” arguments against the war-sustaining concept of targeting. They claim it could lead to the wholesale destruction of cities, permanent environmental damage, or other actions prohibited by treaties and customary international law.²⁶ However, analyzing historical naval operations against economic targets and the influence of contemporary international law reveals a narrower interpretation of war-sustaining that is compatible with international humanitarian law.

III. Historic Practices and Twentieth Century Humanitarian Responses

The evolution of technologically-advanced, industrial navies shifted strategists’ interests from the capture of enemy merchant vessels to the direct targeting of enemy warships.²⁷ During World War I, combatants sought to gain strategic advantages by economically isolating each other through blockades.²⁸ Allied powers, enjoying superior naval forces, executed a traditional blockade while Germany declared, for the first time in history, a campaign of “unrestricted submarine warfare,” effectively targeting any Allied vessel.²⁹ The campaign aimed to deprive the United Kingdom of imperial resources and military supplies provided by the United States.³⁰

Germany’s campaign against Allied shipping provoked an outcry during and after the war, while the effective Allied blockade of Germany actually continued until 1919.³¹ Allied and Triple Alliance powers, primarily Germany, argued over the legality of the campaign, accusing each other of violating the law of war.³² Public protest over the sinking of passenger

²¹ ANNOTATED SUPPLEMENT, *supra* note 3, at 402.

²² *Id.*

²³ *Id.* at 403.

²⁴ The Confederacy relied on cotton for war-sustaining income but it is not clear if Union forces had other motivations. General William T. Sherman ordered the destruction of civilian property, not only to halt the Confederate military, but also “to make old and young, rich and poor, feel the hard hand of war” WILLIAM T. SHERMAN, MEMOIRS 616 (Barnes & Noble ed. 2005) (1886).

²⁵ This is a fundamental distinction between traditional targets of naval operations and air warfare. Cf. Charles H. Dunlap, Jr., *The End of Innocence: Rethinking Noncombatancy in the Post-Kosovo Era*, STRATEGIC REV., Summer 2000, at 16–17; W. Hays Parks, *Air War and the Law of War*, 32 A.F. L. REV. 1, 224–25 (1990).

²⁶ Notably, objections to the use of “war-sustaining” draw on World War II bombings of cities, not naval warfare. See Doswald-Beck, *supra* note 6, at 200; see also Dinstein, *supra* note 5, at 7.

²⁷ See A.T. MAHAN, NAVAL STRATEGY 245–55 (1911).

²⁸ THE MARITIME BLOCKADE OF GERMANY IN THE GREAT WAR: THE NORTHERN PATROL, 1914–18, at 4–5 (John Granger ed., 2003) (outlining British motivation to establish surface blockade of Germany); RICHARD COMPTON-HALL, SUBMARINES AND THE WAR AT SEA, 1914–18, at 194–97 (1991) (German attacks on Allied merchant shipping as reprisal for blockade); see also Albrecht Ritschl, *The Pity of Peace: Germany's Economy at War, 1914–18 and Beyond*, in THE ECONOMICS OF WORLD WAR I, at 41, 51 (Stephen Broadberry & Mark Harrison eds., 2005) (economic analysis of blockade).

²⁹ COMPTON-HALL, *supra* note 28, at 194–97.

³⁰ *Id.*

³¹ *Id.* at 138–43; *The League of Nations and the Laws of War*, 1 BRIT. Y.B. INT’L L. 109, 112 (1920–1921) (regarding Allied blockade of Germany: “without exception the most important weapon in [World War I] was the starvation by blockade of the whole civilian population in enemy countries”).

³² COMPTON-HALL, *supra* note 28, at 194–97 (German government justified campaign as a reprisal).

liners such as the *Lusitania*, and not over the use of economic warfare, influenced the first twentieth century rules intended to regulate naval warfare against commerce.³³

The 1930 London Treaty, generally a naval arms control treaty, also limited the targeting of merchant vessels.³⁴ It proposed as “established rules of international law” that:

- (1) In their action with regard to merchant ships, submarines must conform to the rules of international law to which surface vessels are subject.
- (2) In particular, except in the case of persistent refusal to stop on being duly summoned, or of active resistance to visit or search, may not sink or render incapable of navigation, a merchant vessel without having first placed passengers, crew and ships papers in a place of safety³⁵

Notably, the agreement did not ban all forms of economic warfare at sea; it only sought to minimize the harm inflicted on mariners.

Perhaps the Allied success in depriving Germany of food and industrial resources through the use of naval blockades restrained the drafters of the London Treaty from imposing greater restrictions on targeting at sea.³⁶ Instead, they chose to mitigate the suffering of ships’ crews or passengers while allowing submarines to target the cargo or the vessel itself. This limited aim failed during World War II when economic warfare at sea reached a new level of excess.³⁷

The humanitarian outcry against submarine warfare in World War I, and the attempt to regulate it with the London Treaties, failed to prevent the re-appearance of unrestricted submarine warfare and other forms of commerce raiding in World War II.³⁸ The effect of naval operations against maritime trade was unprecedented. The goal of the primary proponents of unrestricted submarine warfare, the United States and Nazi Germany, was to disrupt enemy trade and eliminate access to natural resources.³⁹ Submarines targeted merchant vessels without distinction, hoping to deny raw materials for industry and food for civilian populations.⁴⁰

The emphasis on denying industrial raw materials distinguished submarine warfare in World War II from its predecessors. Economic warfare at sea during World War I attempted to starve adversaries into submission.⁴¹ Neither side denied using starvation as a method of warfare.⁴² The belligerents in World War II emphasized more general economic harms. Admiral Karl Dönitz, the senior Nazi naval commander, coined the phrase “Tonnage War” to describe the practice of indiscriminately sinking Allied merchant vessels in order to force Allied industry to replace the vessel.⁴³ The United States

³³ See *id.*; THE MARITIME BLOCKADE OF GERMANY IN THE GREAT WAR, *supra* note 28, at 21–22 (praising psychological effect of “encirclement” in motivating states to join allied cause).

³⁴ Treaty for the Limitation and Reduction of Naval Armament art. 22, Apr. 22, 1930, 22 AM. J. INT’L L. 63 (1931) [hereinafter London Treaty].

³⁵ *Id.*

³⁶ Ritschl, *supra* note 28, at 57–59.

³⁷ The signatories of the 1930 London Treaty failed to ratify it and drafted the 1936 London Treaty as an alternative. See Procès-Verbal Relating to the Rules of Submarine Warfare Set Forth in Part IV of The Treaty of London of April 22, 1930, 31 AM. J. INT’L L. SUPP. 137 (1937). Nonetheless, a number of the signatories (including the United States, Germany and Japan) sought to affirm the restrictions on submarine warfare as customary international law. *Id.* Based on statements contained in the ratification documents of the 1936 London Treaty, the restrictions on submarine warfare remained in effect during World War II. *Id.*

³⁸ See generally I SAMUEL ELIOT MORRISON, HISTORY OF THE UNITED STATES NAVAL OPERATIONS IN WORLD WAR II: THE BATTLE OF THE ATLANTIC 1939–1943, at 3–16 (Univ. of Il. ed. 2001) (1954) (outlining initial use of attacks on maritime trade).

³⁹ MAX HASTINGS, RETRIBUTION: THE BATTLE FOR JAPAN 1944–45, at 279–80 (2007).

⁴⁰ *Id.*

⁴¹ *The League of Nations and the Laws of War*, *supra* note 32, at 112; see also THOMAS H. MIDDLETON, FOOD PRODUCTION IN WAR 12–13 (1923) (explaining influence of food policy and submarine warfare in food supply).

⁴² COMPTON-HALL, *supra* note 28, at 194–97.

⁴³ KARL DÖNITZ, MEMOIRS: TEN YEARS AND TWENTY DAYS 238 (1956).

followed less rigorous logic in the Pacific theater out of desperation at the beginning of the war. However, eventually the United States directed attacks with the hope of collapsing the Japanese economy.⁴⁴

Although the most analyzed attacks on economic resources during World War II involve air power, they illustrate the logic of economic targeting.⁴⁵ The U.S. Army Air Corps staged several raids on industries thought critical to the Nazi military.⁴⁶ It targeted national oil industries, in particular, because economists identified them as “bottlenecks” in the Axis supply chain.⁴⁷ The oil industries served both civilian and military purposes, but were thought to be indispensable to Axis military capabilities.⁴⁸ Despite the sophisticated economic analysis behind such raids, their effectiveness remains debatable.⁴⁹

Attacks on Japan’s shipping industry during World War II produced better results despite the lack of a rigorous economic targeting analysis.⁵⁰ As an island, Japan relied extensively on sea commerce for resources, including oil.⁵¹ The destruction of Japan’s merchant fleet eliminated its access to strategic resources and devastated its industry, hindering its ability to conduct offensive operations.⁵²

Targeting economic resources, however, did not result in more “humane” warfare. Both sides knowingly violated the law of war, indiscriminately targeting vessels, civilians, and other protected persons.⁵³ The trial of Admiral Karl Dönitz at Nuremberg⁵⁴ failed to clarify the limits of the law of war at sea. Moreover, the Nuremberg court’s decision to convict Dönitz of violating international law but not to inflict punishment signaled a grudging acknowledgement of the problem of constraining maritime warfare in international armed conflict.⁵⁵

The tribunal at Nuremberg charged Dönitz with waging “unrestricted submarine warfare contrary to the Naval Protocol of 1936 . . . which reaffirmed the rules of submarine warfare laid down in the London Naval Agreement of 1930.”⁵⁶ The court concluded that he ordered violations of the London Treaties as well as customary international law, but that it would impose no sentence for his direction of the U-boat war. The court reasoned:

In view of all the facts proved . . . and the answers to interrogatories by Admiral Nimitz stating that unrestricted submarine warfare was carried on in the Pacific Ocean by the United States . . . the sentence of Doenitz is not assessed on the ground of his breaches of the international law of submarine warfare.⁵⁷

⁴⁴ Admiral Harold Stark, the Chief of Naval Operations in 1941, ordered attacks on Japan’s merchant shipping with one short phrase: “EXECUTE AGAINST JAPAN UNRESTRICTED AIR AND SUBMARINE WARFARE.” See JOEL IRA HOLWITT, “EXECUTE AGAINST JAPAN”: THE U.S. DECISION TO CONDUCT UNRESTRICTED SUBMARINE WARFARE 1–4 (2009). It reflected the United States’ strategic situation after Pearl Harbor and not a particular strategy. *Id.* Indeed, pre-war U.S. naval doctrine disfavored commerce raiding. *Id.*

⁴⁵ OVERALL ECONOMIC EFFECTS DIV., THE UNITED STATES STRATEGIC BOMBING SURVEY, THE EFFECTS OF STRATEGIC BOMBING ON THE GERMAN WAR ECONOMY 1 (Oct. 31, 1945) [hereinafter GERMAN WAR ECONOMY].

⁴⁶ *Id.* at 67.

⁴⁷ *Id.*

⁴⁸ *Id.*

⁴⁹ *E.g.*, ARTHUR TEDDER, WITH PREJUDICE 502 (1966) (conclusions of former British Air Marshal).

⁵⁰ EUAN GRAHAM, JAPAN’S SEA LANE SECURITY, 1940–2004, at 82 (2006). *But see* Akira Hara, *Japan: Guns Before Rice*, in THE ECONOMICS OF WORLD WAR II, at 224, 264–65 (Mark Harrison ed., 1998) (explaining the role of poorly-reasoned government regulations).

⁵¹ *Id.*

⁵² SAMUEL ELIOT MORRISON, LEYTE: JUNE 1944–JANUARY 1945, at 411–14 (1958).

⁵³ See, *e.g.*, JAMES DE ROSE, UNRESTRICTED WARFARE: HOW A NEW BREED OF OFFICERS LED THE SUBMARINE FORCE TO VICTORY IN WORLD WAR II, at 81–95 (2000) (killing of shipwrecked Indian prisoners of war, believed to be Japanese soldiers, by crew of USS *Wahoo*); Trial of Kapitänleutnant Heinz Eck and Four Others (Peleus Case), in 1 LAW REPORTS OF TRIALS OF WAR CRIMINALS SELECTED AND PREPARED BY U.N. WAR CRIMES COMMISSION 9, 15–16 (1947) (rejecting defense of military necessity for killing of shipwrecked merchant sailors, but suggesting that submarine commander could abandon them if tactical situation required).

⁵⁴ 5 TRIAL OF THE MAJOR WAR CRIMINALS BEFORE THE INTERNATIONAL MILITARY TRIBUNAL, NUREMBURG 201–10 (1948).

⁵⁵ INT’L MILITARY TRIALS, NURNBERG, NAZI CONSPIRACY AND AGGRESSION: OPINION & JUDGMENT 138 (W.S. Hein photo. reprint 1996) (1947).

⁵⁶ *Id.*

⁵⁷ *Id.* at 140.

While Dönitz served ten years in prison for crimes related to his role in the Nazi high command, the Nuremberg court failed to address what, if any, restraints could be imposed on economic warfare at sea.⁵⁸

IV. Post-World War II Practice

Few naval engagements of significance occurred after World War II. Fewer still involved the use of submarines, with only the Indo-Pakistan War of 1971 and the Falklands Conflict of 1982 seeing submarines attack warships.⁵⁹ Only the Iran-Iraq War of 1980 to 1988 prompted any significant discussion about targeting non-combatants in naval warfare.⁶⁰

During the so-called “Tanker War” of 1984 to 1986, Iraqi forces targeted oil tankers in an effort to deny Iran the benefit of oil revenues.⁶¹ Iran responded in kind, commencing the largest maritime conflict since World War II.⁶² Indiscriminate attacks on neutrally flagged shipping raised the ire of the international community.⁶³

Iraq’s decision to target tanker traffic in the Persian Gulf echoed earlier maritime campaigns directed against economic targets. Iraqi land offensives failed to gain any strategic advantage, but by denying Iran’s economy income from oil sales Iraq hoped to undermine the effectiveness of the Iranian military.⁶⁴ Indeed, the *Annotated Supplement*’s notion of targets that “indirectly but effectively” support a state’s military describes Iraq’s motivation to attack oil tankers.⁶⁵

However, Iran and Iraq generally ignored the law of war throughout the conflict.⁶⁶ The international community objected to attacks on neutral shipping and suffered from global disruptions of the oil market.⁶⁷ While the practices of the belligerents during the Tanker War echoed earlier naval campaigns, they demonstrated that the international community expects greater discrimination in targeting.

V. Additional Protocol I and Naval Warfare

The signing of Additional Protocol I in 1977 codified many existing laws of armed conflict and introduced a number of novel concepts.⁶⁸ While the entire Protocol is not customary international law, at least in the opinion of U.S. officials and commentators, its restrictions on targeting are widely accepted as authoritative.⁶⁹ Articles 51 and 52 of Additional Protocol I outline a legal framework for protecting the civilian population and infrastructure from military attack in all but a few circumstances.⁷⁰ Article 51 introduces the concept, noting that “[t]he civilian population and individual civilians shall enjoy general protection against dangers arising from military operations.”⁷¹ The majority of the other rules in Additional Protocol

⁵⁸ *Id.* at 141.

⁵⁹ See HECTOR J. DONOHUE, MARITIME LESSONS FROM THE 1971 INDO-PAKISTAN WAR *passim* (1989); Jane Gilliland, *Submarines and Targets: Suggestions for New Codified Rules of Submarine Warfare*, 73 GEO. L. J. 975, 994 (1985).

⁶⁰ See generally TOBY M. ORFORD, THE IRAN-IRAQ WAR: RECENT DEVELOPMENTS IN THE INTERNATIONAL LAW OF NAVAL ENGAGEMENTS 6–9 (1988).

⁶¹ *Id.*; Raphael Danziger, *The Persian Gulf Tanker War*, 111 PROCEEDINGS, No. 5, May 1985, at 160–75.

⁶² Danziger, *supra* note 61, at 160–75.

⁶³ See Francis V. Russo Jr., *Targeting Theory in the Law of Armed Conflict at Sea: The Merchant Vessel as Military Objective in the Tanker War*, in THE GULF WAR OF 1980–1988, at 153, 156–58 (Ige F. Dekker & Harry H.G. Post eds., 1992).

⁶⁴ *Id.*

⁶⁵ ANNOTATED SUPPLEMENT, *supra* note 3, at 402.

⁶⁶ Frits Kalshoven, *Prohibitions or Restrictions on the Use of Methods and Means of Warfare*, in THE GULF WAR OF 1980–88, *supra* note 63, at 97, 107.

⁶⁷ *Id.*

⁶⁸ CLAUDE PILLOUD ET AL., *Introduction* to COMMENTARY ON THE ADDITIONAL PROTOCOLS OF 8 JUNE 1977 TO THE GENEVA CONVENTIONS OF 12 AUGUST 1949 (1987) [hereinafter COMMENTARY].

⁶⁹ *Cf.* ANNOTATED SUPPLEMENT, *supra* note 3, at 401–05.

⁷⁰ Protocol I, *supra* note 2, arts. 51, 52.

⁷¹ *Id.* art. 51(1).

I clarify this rule or provide exceptions to it. It allows the direct targeting of civilians only “for such time as they take a direct part in hostilities.”⁷²

Notably, the relationship between Additional Protocol I and naval warfare is not fully developed. Article 49 of Additional Protocol I states:

The provisions of [Additional Protocol I’s restrictions on attacks] apply to any . . . sea warfare which may affect the civilian population, individual civilians or civilian objects on land. They further apply to all attacks from the sea . . . against objectives on land but do not otherwise affect the rules of international law applicable in armed conflict at sea⁷³

The application of Additional Protocol I to naval operations is therefore tied to their effects on civilians on land, essentially a state’s civilian population. The Commentary to Additional Protocol I elaborates on the problem of applying it to naval warfare.⁷⁴ It concedes that:

[T]he conditions of sea warfare were radically transformed during the Second World War and in subsequent conflicts. It is therefore difficult to determine which are the rules that still apply.

. . . .

Admittedly both sea and air warfare are subject to treaties of general application . . . but there are hardly any specific rules relating to sea or air warfare, and insofar as they do exist, they are controversial or have fallen into disuse.⁷⁵

Nonetheless, it appears that Additional Protocol I’s targeting regime restricts sea combat.⁷⁶ Both the *Commander’s Handbook* and the *Annotated Supplement* consider much, but not all, of Additional Protocol I’s targeting provisions to reflect customary international law.⁷⁷ The core principles of distinction and proportionality, at minimum, apply to naval warfare. If state practice suggests more restrictive interpretations, then all of Additional Protocol I’s restrictions might apply to naval warfare.

Future attempts to target war-sustaining objects, places or materiel should account for the restrictions codified in Additional Protocol I. It limits military objectives to those objects that, “by their nature, location, purpose, or use make an effective contribution to military action and whose total or partial destruction, capture or neutralization, in the circumstances ruling at the time, offers a definite military advantage.”⁷⁸ The Commentary to Article 52 does not define “an effective contribution.”⁷⁹ It notes that “purely civilian objects” can become military objectives while occupied or used by military forces, and that indiscriminate destruction of civilian objects is forbidden.⁸⁰ However, nothing is said of denying a belligerent resources that, while not military in nature, support war-sustaining capabilities.⁸¹

⁷² *Id.* art. 51(3).

⁷³ *Id.* art. 49(3).

⁷⁴ COMMENTARY, *supra* note 68, ¶ 1895 (“In general the delegates at the Diplomatic Convention were guided by a concern not to undertake a revision of the rules applicable to armed conflict at sea . . .”).

⁷⁵ *Id.* ¶¶ 1896–97.

⁷⁶ Robertson, *supra* note 5, at 53–55.

⁷⁷ COMMANDER’S HANDBOOK, *supra* note 4, at 5-3.

⁷⁸ Protocol I, *supra* note 2, art. 52.

⁷⁹ Cf. COMMENTARY, *supra* note 68, ¶¶ 2024–28 (describing contribution in terms of a “definite military advantage” if destroyed).

⁸⁰ *Id.*

⁸¹ *Id.*

Only Article 54 of Additional Protocol I describes what resources a belligerent cannot interdict.⁸² It prohibits the use of starvation as a method of warfare, a provision consistent with other international bans on indiscriminate means and methods of warfare.⁸³ Belligerents cannot deny civilian populations items “indispensible to their survival.”⁸⁴ The nature of “their survival” is unclear, however.

Article 54 would prohibit the use of total blockades or measures directed at civilians alone.⁸⁵ It would not prohibit measures that inconvenience civilians but do not violate basic measures of subsistence. If an attack on a state’s petroleum imports, for example, prevented civilians from using personal vehicles but did not result in a loss of life, there would be no violation of international law. International law does not obligate belligerents to protect civilians from all evils of war, only the most harmful.⁸⁶

VI. Incorporating Discrimination and Proportionality Into Economic Warfare

Despite the silence of international tribunals on the conduct of maritime economic warfare and Additional Protocol I’s limited application to naval warfare, customary international law necessitates incorporating the principle of discrimination. Unless discrimination is incorporated into the targeting of war-sustaining assets, it will have no meaningful future as a military strategy. Targeting economic assets, however, challenges current concepts of discrimination. Civilian and military industries rely on the same economies.⁸⁷ In an age of globalized economies, harm inflicted on one state’s economy will have global consequences.⁸⁸

Generally, the principle of discrimination requires a belligerent to use reasonable means to limit the effects of an attack to military objectives.⁸⁹ If an objective is defined as “war-sustaining,” some nexus to military capability is required. Just as the doctrine of proximate causation limits tort actions by excluding unforeseeable consequences of a breached duty, discrimination excludes targets whose destruction would result in a speculative military advantage.⁹⁰

Overcoming the general prohibition on objectives conferring speculative advantages is the greatest challenge to the legality of attacks on war-sustaining objectives. Determining what advantage attacking a war-sustaining objective will yield is a matter of economic analysis. Even today, the United States safeguards certain natural resources as strategic assets.⁹¹ The “Information Economy” relies on any number of rare minerals or other commodities to function.⁹²

⁸² Protocol I, *supra* note 2, art. 54; *see also id.* arts. 55, 56 (prohibiting the infliction of “long-term and severe damage” on the environment or “works and installations containing dangerous forces”).

⁸³ *Id.* art. 54; *cf.* Convention on the Prohibition of the Use, Stockpiling, Production and Transfer or Anti-Personnel Mines and on Their Destruction, Dec. 3, 1997, 2056 U.N.T.S. 211.

⁸⁴ Protocol I, *supra* note 2, art. 54.

⁸⁵ *Id.*

⁸⁶ *See* COMMENTARY, *supra* note 68, ¶ 1940 (“[T]here is no doubt that acts of violence related to a state of war almost always give rise to some degree of terror among the population”); *see also* Dunlap, *supra* note 25, at 16–17 (arguing that citizens of belligerent states must accept certain hardships of armed conflict).

⁸⁷ The notion of a “military-industrial complex” denies a distinction between civilian and military economies. *See, e.g.*, DWIGHT D. EISENHOWER, PUBLIC PAPERS OF THE PRESIDENTS: DWIGHT D. EISENHOWER, 1953–1960, at 1035–40 (Gov’t. Printing Office ed. 1960).

Now this conjunction of an immense military establishment and a large arms industry is new in the American experience. The total influence—economic, political, even spiritual—is felt in every city, every Statehouse, every office of the Federal government. We recognize the imperative need for this development. Yet we must not fail to comprehend its grave implications. Our toil, resources, and livelihood are all involved. So is the very structure of our society.

Id.

⁸⁸ DAVID CORTRIGHT ET AL., THE SANCTIONS DECADE: ASSESSING U.N. STRATEGIES IN THE 1990s, at 204, 247 (2000).

⁸⁹ Protocol I, *supra* note 2, art. 51(4).

⁹⁰ *Id.*; 57A AM. JUR. 2D. *Negligence* § 431 (1989).

⁹¹ *The Role of Strategic and Critical Minerals in our National and Economic Security: Oversight Hearing Before the Subcomm. on Energy and Mineral Resources*, 108th Cong. 2 (2003) (statement of the Rep. Barbara Cubin, Chairman, H. Subcomm. on Energy and Mineral Resources).

⁹² *See, e.g.*, Dena Montague, *Stolen Goods: Coltan and Conflict in the Democratic Republic of the Congo*, 22 S.A.I.S. REV. 1, 103–18 (2002) (discussing the conflict over coltan production, a mineral essential to most consumer electronics).

Determining what resources a state needs to keep its war effort functioning requires relying on economists and accepting the uncertainty of their methods.⁹³ For example, the *Strategic Bombing Survey* conducted after World War II discredited many of the assumptions about Nazi Germany's economy that directed the Allies' bombing campaigns.⁹⁴ Even after World War II, the United States relied on economic analysis to direct bombing and mining campaigns against Vietnam.⁹⁵ The campaign produced few meaningful results because of an incorrect understanding of Vietnam's economy.⁹⁶ However, the often fallible nature of economic analysis does not render it an illegal source of targeting information.

International law recognizes that commanders must rely on available information, even if it is not absolutely reliable. It does not hold commanders strictly liable for their targeting decisions.⁹⁷ The law obligates commanders to make reasonable, informed decisions about the nature of a proposed target and the expected consequences of an attack.⁹⁸ The Commentary to Additional Protocol I explains a commander's duties, noting:

[T]hose who plan or decide upon . . . an attack will base their decision on information given to them, and they cannot be expected to have personal knowledge of the objective to be attacked and of its exact nature. However, this does not detract from their responsibility, and in case of doubt, even if there is only slight doubt, they must call for additional information The evaluation of the information obtained must include a serious check of its accuracy In fact it is clear that no responsible military commander would wish to attack objectives which were of no military interest. In this respect humanitarian interests and military interests coincide.⁹⁹

Identifying a potential military objective does not require a commander to use a particular source of information or method of analysis. A commander makes a determination based on his subjective belief about the veracity and reliability of available information that a prospective target is a military objective. If the commander chooses to use economic analysis to make a targeting decision, the law is no obstacle.

If a military objective is identified through economic analysis, its destruction cannot result in indiscriminate effects.¹⁰⁰ Attacking a war-sustaining resource with dual civilian-military uses, such as natural gas production, might have widespread effects throughout a society. If a lack of natural gas during winter causes a humanitarian crisis such as civilians freezing to death, the attack may be indiscriminate. However, widespread effects are not always indiscriminate effects. Discrimination is a matter of circumstance, dependent on the weapon used and the context of its use.¹⁰¹ A commander would need to determine if attacking an economic resource would actually diminish a belligerent's military capability, or if it would cause uncontrollable effects throughout a society and must be halted.¹⁰²

Where a commander wishes to attack a war-sustaining target with the intent to achieve effects throughout an economic system, the line between discriminate and indiscriminate attacks becomes blurred. The strategy of a Tonnage War employed in World War II provides an example.¹⁰³ Studies of the shipping industry conducted after World War I found that attacks on

⁹³ Tor Egil Førland, *The History of Economic Warfare: International Law, Effectiveness, Strategies*, 30 J. OF PEACE RES. 2, 159–60 (1993).

⁹⁴ GERMAN WAR ECONOMY, *supra* note 45, at 11–16.

⁹⁵ Then-Secretary of Defense Robert S. McNamara served as an economist on the Strategic Bombing Survey. JOHN PRADOS, VIETNAM 160 (2009); GEORGE C. HERRING, AMERICA'S LONGEST WAR: THE UNITED STATES AND VIETNAM, 1950–1975, at 148–50, 241–43 (1979).

⁹⁶ HERRING, *supra* note 95, at 149.

⁹⁷ *E.g.*, United States v. List (Hostages Case), in 11 TRIALS OF WAR CRIMINALS BEFORE THE NUREMBURG MILITARY TRIBUNALS UNDER CONTROL COUNCIL LAW NO. 10, at 1296 (1950) (“If the facts were such as would justify the action by the exercise of judgment, after giving consideration to all the factors and existing possibilities, even though the conclusion reached may have been faulty, it cannot be said to be criminal.”).

⁹⁸ *Id.*

⁹⁹ COMMENTARY, *supra* note 68, ¶ 2195.

¹⁰⁰ Protocol I, *supra* note 2, art. 51(4).

¹⁰¹ COMMENTARY, *supra* note 68, ¶¶ 1961–63.

¹⁰² Protocol I, *supra* note 2, art. 52.

¹⁰³ DÖNITZ, *supra* note 43, at 238.

merchant shipping strained the shipbuilding industry and disrupted a nation's entire maritime supply chain.¹⁰⁴ The destruction of a single ship, regardless of its cargo or destination, would force a belligerent to incur the expense of replacing the ship and accounting for the loss of logistical capability.¹⁰⁵ Even damaging the vessel could delay the transport of military supplies and interfere with operations.¹⁰⁶

However, the extent of an attack's effects throughout a supply chain cannot always be predicted with certainty. Experience with the U.N.s' economic sanctions in the 1990s demonstrated that even careful analysis of a target nation's economy cannot ascertain all long-term effects.¹⁰⁷ Targeting any economic resource or other war-sustaining asset will result in unforeseen consequences. Commanders have the duty to ascertain if those consequences are reasonably predictable and controllable.¹⁰⁸ How well a particular economic analysis meets that duty is a matter of commander's discretion.

If a naval force could launch a discriminate attack on a state's war-sustaining resources, the attack would need to be proportional to the military advantage gained.¹⁰⁹ In other words, the expected loss of civilian life could not exceed the expected military gain. The broad nature of war-sustaining targets could encompass two groups of civilians likely to die from attacks on war-sustaining targets: merchant mariners and civilians ashore. Merchant mariners would certainly suffer if materials are targeted at sea.¹¹⁰ While international humanitarian law categorizes merchant mariners as civilians, their close association with the military is noted in domestic and international law.¹¹¹ Potentially, if merchant mariners shipped aboard armed vessels, they would qualify as combatants.¹¹² Merchant mariners aboard unarmed vessels providing a belligerent with war-sustaining materials, however, would occupy the same position as contractors transporting munitions on the battlefield.¹¹³ They could not be targeted directly, but their proximity to legitimate targets places them at great risk.¹¹⁴

Unlike the direct threat of death or injury faced by merchant mariners onboard the targeted vessels, civilians ashore might suffer from the indirect effects of targeting war-sustaining resources. Nonetheless, the U.N. Charter permits the U.N. Security Council to impose economic sanctions on states that threaten international security.¹¹⁵ Sanctions against Iraq and North Korea harmed large segments of their economies effecting the civilian population.¹¹⁶ The embargo against Iraq was particularly harsh, increasing the Iraqi infant mortality rate and generally degrading civilian welfare.¹¹⁷ Nonetheless, it remained a legal, enforceable action.

¹⁰⁴ Several notable figures of twentieth century economic thought, including John Maynard Keynes, contributed to the study as part of a project by the Carnegie Endowment to analyze the economic and social history of World War I. CHARLES ERNEST FAYLE, *THE WAR AND THE SHIPPING INDUSTRY* 401–03 (1927).

¹⁰⁵ *Id.*

¹⁰⁶ *Id.*

¹⁰⁷ CORTRIGHT, ET AL., *supra* note 88, at 247–49 (noting inability to predict second or third order effects of even limited sanctions imposed during peacetime).

¹⁰⁸ *Cf.* Protocol I, *supra* note 2, art. 51(4).

¹⁰⁹ *Id.* art. 57.

¹¹⁰ Shipwrecked members of the merchant marine are protected persons, and must be “respected and protected.” Geneva Convention for the Amelioration of the Condition of Wounded, Sick and Shipwrecked Members of the Armed Forces at Sea arts. 12, 13(5), Aug 12, 1949, 6 U.S.T. 3317, 75 U.N.T.S. 85.

¹¹¹ However, they would not qualify as combatants unless directly engaging in hostilities. *See* Geneva Convention Relative to the Treatment of Prisoners of War art. 4(5), Aug. 12, 1949, 6 U.S.T. 3316, 75 U.N.T.S. 135 (conferring POW status on merchant mariners); *Schumacher v. Aldridge*, 665 F. Supp. 41, 46 (D.D.C. 1987) (finding merchant mariners equivalent to military personnel for benefits purpose).

¹¹² *See* San Remo Manual on International Law Applicable to Armed Conflicts at Sea, sec. IV, art. 60, 12 June 1994 (INT’L REV. OF THE RED CROSS NO. 309, at 595–637 (1995)).

¹¹³ *See, e.g.*, Michael N. Schmitt, *The Principle of Discrimination in 21st Century Warfare*, 2 YALE HUM. RTS. & DEV. L.J. 143, 160 (1999).

¹¹⁴ *Id.*

¹¹⁵ U.N. Charter art. 41.

¹¹⁶ S.C. Res. 1718, ¶ 8, U.N. Doc. S/RES/1718 (Oct. 14, 2006) (economic sanctions against North Korea); S.C. Res. 687, ¶ 21, U.N. Doc. S/RES/687 (Apr. 8, 1991) (embargo against Iraq).

¹¹⁷ David Cortright, *A Hard Look at Iraq Sanctions*, NATION (Dec. 3, 2001), available at <http://www.thenation.com/doc/20011203/cortright>.

The consequences of enforcing U.N. economic sanctions set a high legal standard for what indirect harm a civilian population might have to suffer before the sanctions violate international law.¹¹⁸ If economic sanctions, by definition a measure short of armed conflict, can negatively affect civilian welfare to the point that a state's mortality rate increases, *a fortiori* a state could inflict similar harm on a civilian population during wartime. Thus, the standard for determining when an attack on a war-sustaining asset is disproportional to its military value is no different than any other attack. All targeting decisions require commanders to balance a specified number of civilian deaths with an expected military gain.¹¹⁹

VII. Conclusion

While economic warfare at sea remains a legal strategy, developments in international law restrict its use. Contemporary international law prohibits attempts to starve nations into submission. Likewise, indiscriminate attacks of the sort carried out by submarine forces in World War I and World War II are likely illegal. Instead, war-sustaining targets should be defined according to careful economic analysis of a belligerent's military and industrial capacity.¹²⁰ Modern economic sanctions take a similar approach and are generally legal. The targeting analysis in this scenario is economic analysis, but it will account for discrimination and proportionality. Unduly speculative war-sustaining targets or those with a tenuous relationship to a state's war fighting capability should be excluded.¹²¹

Considering the historical practice of naval forces and contemporary international law, the practice of targeting war-sustaining economic targets remains legal. International law, however, expects commanders to exercise greater discrimination in targeting than in the past. Proper economic analysis of a proposed target's role in supporting a state's war-fighting industry should meet the standard expected of commanders before an attack is initiated.¹²²

Finally, the *Commander's Handbook* requires updating. Its definition of a war-sustaining target should explain the concept in the context of traditional, maritime targeting of material resources supported by state practice. Properly articulating a definition of war-sustaining targets will affirm their legality and continuing relevance to naval strategy.¹²³

¹¹⁸ Cf. GARY CLYDE HUFBAUER ET AL., *ECONOMIC SANCTIONS RECONSIDERED* 138–47 (3d ed. 2007) (describing various multilateral and unilateral sanctions and their wide-ranging effects).

¹¹⁹ However, some view sanctions as occupying a “grey area between humanitarian law and the rules of warfare [sic].” CORTRIGHT ET AL., *supra* note 88, at 246.

¹²⁰ Essentially the same analysis used in imposing sanctions under U.N. authority. See R. T. TAYLOR, *ECONOMIC WARFARE* 2–3, 18–19 (2001).

¹²¹ See ASKARI ET AL., *supra* note 16, at 190–93 (proposed economic analysis for targeting sanctions).

¹²² Cf. TAYLOR, *supra* note 120, at 18–19 (problem of figuring out what is a strategic resource).

¹²³ Recent scholarship by the International Committee of the Red Cross treats public statements of what the law of war should be as sources of customary international law. This view is not universally held, but it underscores the need to accurately articulate explanations of the law of war. See, e.g., Major J. Jeremy Marsh, *Lex Lata or Lex Ferenda? Rule 45 of the ICRC Study on Customary International Humanitarian Law*, 198 MIL. L. REV. 116, 119 (2009).