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A PRIMER ON THE NONPROLIFERATION REGIME FOR MARITIME SECURITY OPERATIONS FORCES

Craig H. Allen*

*U.S. Naval forces will be employed to detect, monitor, and defeat the threat and/or use of weapons of mass destruction against the United States, our military forces, friends and allies We will continually refine and expand our participation in this crucial international effort.*¹

I. INTRODUCTION

Maritime security operations (MSO)² boardings have become a familiar element in the daily routine of units assigned to the maritime component of combined and joint force commands in some theaters. Indeed, it is not unusual in the Central Command area of operations for assigned naval vessels to conduct one hundred or more visit, board, search and seizure (VBSS) boardings during a six-month deployment. Over the last three years, a number of those MSO boardings were conducted under the framework established by the Proliferation Security Initiative (PSI), a multilateral effort launched in May of 2003 to counter the proliferation of weapons of mass destruction (WMD) and their components and delivery systems.³ The *Naval Operations Concept*

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¹ Chief of Naval Operations-Commandant of the Marine Corps, *Naval Operations Concept 2006*, (Sept. 1, 2007), [hereinafter "NOC"], at 21-22, available at <http://www.mcwl.usmc.mil/concepts/ServiceConcepts/NOC%20FINAL%2014%20Sep.pdf>.

² The most complete working definition of "maritime security operations" is set out in the NOC. It states that the goals of such operations are to "ensure freedom of navigation, the flow of commerce and the protection of ocean resources" and to "secure the maritime domain from nation-state threats, terrorism, drug trafficking and other forms of transnational crime, piracy, environmental destruction and illegal seaborne immigration." *Id.* at 14. The execution of many of these missions must be carried out by personnel with law enforcement authority and jurisdiction, which is one of the U.S. Coast Guard's contributions to the National Fleet Policy Agreement. See ADM Thad Allen & ADM Mike Mullen, *America's National Fleet: A Coast Guard-Navy Imperative*, 132 U.S. NAVAL INST. PROC. (Aug. 2006), at 16, 18.

³ See U.S. Dep't of State, Proliferation Security Initiative (Jul. 28, 2004), available at <http://www.state.gov/t/isn/c10390.htm>; Andrew C. Winner, *The Proliferation Security Initiative: The New Face of Interdiction*, 28 WASH. Q. 129 (Spring 2005). In 2005, the United States established its National Counter Proliferation Center (NCPC) within the office of the Director of National Intelligence, as required by the Intelligence Reform and Terrorism Prevention Act of 2004.

excerpt quoted above put the fleet on notice that boardings to intercept WMD shipments may be a growing mission in the coming years. The United Nations Security Council's unanimous decision on October 14, 2006 to impose Chapter VII sanctions restricting the Democratic Peoples' Republic of Korea's imports and exports, in response to Pyongyang's missile and nuclear device tests, certainly suggests that in the coming years the Central Command area of operations might not be the only theater where WMD-related maritime security operations will be a common naval mission.⁴

Although most of the recent legal analyses of the maritime efforts to curb WMD proliferation have focused on counterproliferation operations, it is important not to lose sight of the fact that the first line against proliferation is the nonproliferation regime. Indeed, the long term effectiveness of counterproliferation measures requires an applicable nonproliferation regime. For example, when counterproliferation forces boarded the North Korean flag vessel *So San* off the coast of Yemen in 2002 and discovered she was carrying Scud missiles, many were shocked to learn that the vessel was not violating any binding international laws against proliferation.⁵

This article seeks to provide the reader with an overview of the WMD nonproliferation regime relevant to MSO and to alert the reader to shortfalls in that regime that might frustrate at-sea efforts to interdict WMD shipments. It begins with a general description of the international approach to combating proliferation of WMD and then examines the individual regimes for nuclear weapons, chemical weapons (CW), biological-toxin weapons (BTW) and WMD delivery systems, such as missiles and unmanned aerial vehicles. It next traces the development of several resolutions by the United Nations Security Council that target global terrorism and WMD proliferation. The article does not directly address maritime operations in support of Security Council resolutions imposing economic sanctions on a particular nation, nor does it address the war-

See Office of the Director of National Intelligence Press Release 9-05, Dec. 21, 2005, available at <http://www.dni.gov/aboutODNI/organization/NCPC.htm>. The NCPC replaced the Counterproliferation Center within the Central Intelligence Agency. PSI counterproliferation operations are coordinated in accordance with the recently promulgated Maritime Operations Threat Response ("MOTR") Plan and its protocols. Access to the MOTR Plan is limited by its "for official use only" designation.

⁴ See S. C. Res. 1718, U.N. Doc. S/RES/1718 (Oct. 14, 2006).

⁵ The *So San* was reportedly a Democratic Peoples' Republic of Korea (DPRK, or North Korea) flag cargo vessel that was observed loading missile components while in a North Korean port. The vessel was boarded, under the "right of visit," on the high seas south of Yemen by a Spanish frigate that was part of a combined maritime security force that included U.S. Navy elements. Although the boarding team ultimately discovered a cargo of Scud missiles hidden beneath bags of cement, when it was learned that the missiles were destined for the government of Yemen, the vessel was released. See Winner, *supra* note 3, at 131-32. The DPRK protested sharply, characterizing the boarding as an act of piracy.

time doctrines of neutrality, visit and search for contraband or blockade. The article concludes that while the global nonproliferation regime has progressively developed over the past several decades, it remains incomplete.

A. The International Approach to WMD Proliferation

As used in this article, the term “weapons of mass destruction” includes nuclear, chemical and biological-toxin weapons, together with their delivery systems⁶ and related materials.⁷ Responses to the dangers posed by WMD, and more specifically the dangers they pose in the hands of rogue regimes and terrorist organizations, include the international arms control and nonproliferation regime, safeguards for materials while in storage or transit, domestic and multilateral export controls, a family of treaties on terrorism, United Nations Security Council resolutions, and a new, but not yet legally effective, protocol to the Convention for the Suppression of Unlawful Acts Against the Safety of Maritime Navigation.⁸ The signature characteristic of the regime is its multilateral, but not always universal approach.⁹

The international arms control and nonproliferation security regime comprises four components. First, through arms control agreements it seeks to limit the kind and number of available WMD and to deter states from using them.¹⁰ Second, it imposes limits on weapon testing.¹¹ Third, it prohibits the

⁶ The United Nations Security Council defines the term to include “missiles, rockets and other unmanned systems capable of delivering nuclear, chemical, or biological weapons, that are specially designed for such use.” S.C. Res. 1540, U.N. Doc. S/RES/1540 (Apr. 28, 2004), available at [http://disarmament.un.org/Committee1540/Res1540\(E\).pdf](http://disarmament.un.org/Committee1540/Res1540(E).pdf).

⁷ As defined by the Security Council, the term includes “materials, equipment and technology covered by relevant multilateral treaties and arrangements, or included on national control lists, which could be used for the design, development, production or use of nuclear, chemical and biological weapons and their means of delivery.” *Id.* Radiological (but non-fissile) materials/devices are sometimes included in the term. *See, e.g.*, 18 U.S.C. §§ 2332a, 2332h (2005).

⁸ Protocol of Amendment to the 1988 Convention for the Suppression of Unlawful Acts against the Safety of Maritime Navigation [2005 SUA Protocol], Nov. 1, 2005, IMO Doc. LEG/CONF.15/21, 27 I.L.M. 688 (1988). *See also* U.S. Dep’t of State, *International Conference Amends Maritime Treaties on Unlawful Acts*, Oct. 21, 2005, available at <http://usinfo.state.gov/is/Archive/2005/Oct/28-980286.html>. The United States signed the 2005 Protocol on Feb. 17, 2006; however, it is not yet in force.

⁹ One writer observed well before the post 9/11 era that “[t]he paradox of American power at the end of this millennium is that it is too great to be challenged by any other state, yet not great enough to solve problems such as global terrorism and nuclear proliferation.” Sebastian Mallaby, *A Mockery in the Eyes of the World*, WASH. POST, Jan. 31, 1999, at B5.

¹⁰ Such treaties do not bind non-parties on their own force, or non-state actors. *See* Vienna Convention on the Law of Treaties, May 23, 1969, art. 34, U.N. Doc. A/CONF.39/27, 1155 U.N.T.S. 331, reprinted in 8 I.L.M. 679 (1969). The United States is not a party to the Vienna Convention on Treaties, but it accepts most of the Convention as a codification of customary law. RESTATEMENT (THIRD) FOREIGN RELATIONS LAW OF THE UNITED STATES, Part III, Introductory Note (1987).

emplacement of nuclear weapons in the global commons, such as outer space and the seabed.¹² Finally, it seeks to halt and even reverse the proliferation of WMD and their delivery systems, with the long-term goal of a complete, irreversible and verifiable disarmament of all weapons of mass destruction.

Within the United States, national and homeland security depend on both nonproliferation and counterproliferation measures. The distinction between nonproliferation and counterproliferation is far from clear, and often differs depending on the context, the identity and motivation of the person using the terms, and the times.¹³ Proliferation looks at both the kind and quantity of

¹¹ Even though the physical principles for constructing nuclear weapons are generally known, producing a reliable and effective nuclear weapon without testing holds significant challenges. Test ban treaties seek to eventually eliminate all nuclear weapons testing. The United States is party to the so-called Limited Test Ban Treaty of 1963. Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space, and Under Water, Aug. 5, 1963, 14 U.S.T. 1313, T.I.A.S. 5433, 480 U.N.T.S. 43. In 1999, the U.S. Senate declined, 51:48, to give its advice and consent to ratification of the Comprehensive Test Ban Treaty. See Congressional Research Service, *Nuclear Weapons: Comprehensive Test Ban Treaty*, CRS Issue Brief IB92099, at 3. Ratification would have required an affirmative vote by two-thirds of those senators present.

¹² See Treaty on the Prohibition of the Emplacement of Nuclear and Other Weapons of Mass Destruction on the Seabed and the Ocean Floor and in the Subsoil Thereof, Feb. 11, 1971, 23 U.S.T. 701, T.I.A.S. 7337; U.N. Convention on the Law of the Sea, Dec. 10, 1982, art. 141, U.N. Doc. A/CONF.62/122 (1982), 1833 U.N.T.S. 3 [hereinafter "LOS Convention"] (reserving the international seabed for peaceful purposes); Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, Jan. 27, 1967, 18 U.S.T. 2410, T.I.A.S. 6347.

¹³ For a distinction between nonproliferation and counterproliferation see Daniel H. Joyner, *The Proliferation Security Initiative: Nonproliferation, Counter-proliferation, and International Law*, 30 YALE J. INT'L L. 507, 519- 520 (2005). In the early years of the Clinton Administration, the NSC reportedly attempted, without success, to define each term and limit the scope of counterproliferation. A 1999 directive by the Director of Central Intelligence (as he was then called) provided the following definitions (for CIA purposes):

1. *Proliferation* refers to the acquisition and spread (including development and transfer) by state and non-state entities of nuclear, biological, and chemical weapons, the means used to deliver them, the significant components of those weapons (such as fissile material and biological and chemical agents), and the technology and equipment necessary to build or exploit such weapons.
2. *Nonproliferation* is the use of the full range of political, economic, military, law enforcement, and other tools to prevent proliferation, to reverse it, and to protect the interests of the United States against an opponent armed with weapons of mass destruction or missiles or other means of delivery, should that prove necessary. Nonproliferation tools include: intelligence, global nonproliferation norms and agreements, diplomacy, export controls, security assurances, defenses, and the application of military force.
3. *Counter-proliferation* refers to activities across the full range of US efforts to combat proliferation, including diplomacy, arms controls, export controls, and intelligence collection and analyses, with particular responsibility for ensuring that US forces and interests can be protected should they confront an adversary armed with weapons of mass destruction and their means of delivery.

Director of Central Intelligence Agency Directive 7/2, May 7, 1999.

weapons, and materials for producing weapons, as well as their distribution. Nonproliferation generally refers to the international and national regimes that seek to halt and eventually reverse the proliferation of WMD and their delivery systems.¹⁴ The nonproliferation regime was recently expanded to include measures to identify and secure nuclear materials and other weapons of mass destruction, to prevent their use by terrorist organizations and criminal syndicates. Nonproliferation supplier and export control measures are pursued through arms control and other multilateral agreements,¹⁵ threat reduction assistance programs and domestic export controls.¹⁶ Multilateral export control regimes by so-called “supplier states,” while vital, only restrict exports of WMD materials from member states, and only to the extent those members choose to implement them. They do not restrict states that decline to join the export control regime. Nonproliferation and arms control regimes have long struggled with the problems posed by the dual-use of WMD technologies.¹⁷ The dual-use character of many WMD and related equipment and precursors significantly complicates compliance verification and monitoring. Moreover, they present complex “gray-market” issues.¹⁸ Finally, the national implementing measures

As part of a 1999 federal government reorganization by President Clinton, the Arms Control and Disarmament Agency was merged into the Department of State. Arms control and nonproliferation missions are now carried out by the Department of State’s Bureau of International Security and Nonproliferation (ISN) under the direction of the Under Secretary of State for Arms Control and International Security. To develop and implement nonproliferation strategies, the Department of State works closely with the Departments of Defense and Energy. Export controls are coordinated with the Department of Commerce Bureau of Industry and Security (BIS).

¹⁴ See Nuclear Non-Proliferation Act of 1978, Pub. L. No. 95-242, 92 Stat. 120, *codified as amended at* 22 U.S.C. § 3201 (2005) (congressional declaration of non-proliferation policy). See also Exec. Order No. 12,058 (1978) (performance of duties relating to nuclear non-proliferation).

¹⁵ Multilateral export control regimes by supplier states include the Nuclear Suppliers’ Group, the Australia Group and the Missile Technology Control Regime. As discussed more fully below, each is primarily a political commitment by responsible supplier states to restrict and regulate exports of specified WMD materials and delivery systems and does little to address the actual transport of such materials.

¹⁶ Since 1991, the Nunn-Lugar Cooperative Threat Reduction (CTR) program has allocated over \$400 million/year to deactivate nuclear weapons in the former Soviet Union. Those funds were used to deactivate 6,760 nuclear warheads and destroy 587 ballistic missiles, 483 ballistic missile silos, 150 bombers, 436 submarine missile launchers and 28 strategic missile submarines. See *Nunn-Lugar Report 2005*, available at http://lugar.senate.gov/reports/Nunn-Lugar_Report_2005.pdf. See also [Senator] Lugar Welcomes President’s Support of Nunn-Lugar Expansion; Praises Nonproliferation Initiative, Feb. 11, 2004, available at <http://lugar.senate.gov/pressapp/record.cfm?id=217970> [hereinafter “Lugar Praises PSI”].

¹⁷ Dual-use materials are those that have both legitimate (peaceful) and illegitimate (weapons) application. For example, a DNA synthesizer has any number of legitimate biotechnology applications, but might also be used to produce BTW agents.

¹⁸ As used herein, “black market” goods are ones that are illegal to sell to any buyer. “Gray market” goods are ones that may be legally sold to some buyers, but are in fact—often through deceptive or fraudulent means—sold to an unqualified buyer. Dual-use materials are prime candidates for the gray market. When sold to a legitimate user who puts them to a legitimate, non-WMD use, they violate no laws. When sold to a user who intends to incorporate them into a WMD, however, the

for export control regimes often limit their application to sellers, exporters and buyers, and typically exclude from their coverage transporters.¹⁹ As a result, those aboard a vessel engaged in transporting illicit WMD or related materials might not be in violation of any laws, even though the actual export of those materials violated the source nation's export control regime.²⁰

In contrast to nonproliferation, counterproliferation generally refers to the more muscular efforts to prevent the movement of WMD materials, technology and expertise from states that fail to conform to nonproliferation norms to hostile states and terrorist organizations.²¹ Counterproliferation measures include diplomacy, sanctions (granting/withholding of aid, financing, eligibility for government/military contracts, and trade)²² and, in select cases, interdiction. Interdiction actions that keep WMD out of the hands of rogue regimes and terrorist groups are now a key component in some counterproliferation strategies. Thus, counterproliferation strategies have expanded to include measures to be used in a preemptive sense to deny, disrupt, delay, or destroy proliferation capabilities. Such strategies may include law enforcement measures against those who traffic in or transport WMD and, more recently, who facilitate or finance the transactions.²³ As with nonproliferation measures, the dual-use character of many WMD and their related equipment and materials seriously complicates counterproliferation efforts.

Early approaches to combating the threat of a strike by WMD focused on deterrence strategies and diplomatic efforts to negotiate and implement arms control treaties.²⁴ Arms control treaties—the diplomatic approach—seek to halt

transaction may be illegal, depending on the relevant national laws. Gray market sellers are characterized by their willingness to ask no questions if the price is right.

¹⁹ Some United States criminal statutes extend to persons who acquire, transfer, receive, possess, import, export, or use, or possess and threaten to use certain devices. See, e.g., 18 U.S.C. § 2332g (2005). However, such laws are often limited in their application by the location or nationality of the actor.

²⁰ Although the 2005 SUA Protocol, *supra* note 8, may extend criminal liability to certain transporters, that Protocol is not yet in force.

²¹ See generally Omnibus Diplomatic Security and Antiterrorism Act of 1986, Pub. L. No. 99-399, 100 Stat. 853, codified at 22 U.S.C. § 3244 (2005) (actions to combat international nuclear terrorism).

²² See Congressional Research Service, *Nuclear, Biological, Chemical and Missile Proliferation Sanctions: Selected Current Law*, CRS Rep. RL31502 (updated Oct. 21, 2005).

²³ On June 28, 2005, under authority of the International Emergency Economic Powers Act, 50 U.S.C. §§ 1701-1707 (2000), the President issued an executive order authorizing “blocking” (i.e., prohibiting the transfer, payment or withdrawal) of any assets in the United States owned by certain proliferators of WMD. See Exec. Order No. 13,382, 70 Fed. Reg. 38,567 (July 1, 2005).

²⁴ The law of armed conflict (LOAC) also limits the use of certain WMD. See Advisory Opinion, *Legality of the Threat or Use of Nuclear Weapons*, [1996] I.C.J. Rep. 226, paras. 55, 86 (July 8), reprinted in 35 I.L.M. 80 (1996). Limits on the use of such weapons under the LOAC, their placement in space or on the seabed, and weapons testing restrictions are beyond the scope of this article. Additionally, some uses of WMD could conceivably implicate the 1977 Convention on the

the proliferation of WMD and their delivery systems, with the long-term goal of disarmament.²⁵ Deterrence strategies—the principal military approach—rest on a threat of retaliation in kind, and are grounded on the belief that a rational state will be deterred from using WMD if it knows, or at least believes, that the enemy has the capability to survive a first strike and respond with similar weapons that will inflict an unacceptable level of damage. The Allies' threat of retaliation in kind against any first use of CW agents by Germany during World War II is believed to be the chief reason Germany never used any of its considerable stockpiles of such weapons. Similar threats are believed to have deterred Saddam Hussein from deploying WMD against coalition forces in the 1991 Gulf War to liberate Kuwait.

The growing threat of WMD use, or the threat of its use, by terrorist groups and so-called rogue regimes, who may not be subject to internal and external political and legal controls or to the same deterrence rationale as responsible states, has added a new sense of urgency to proliferation security discussions. For some, it is becoming increasingly obvious that diplomatic measures and the nonproliferation regime will never be sufficient in themselves to curb the threats posed by WMD in the possession of these actors, and that deterrence strategies have little or no effect on rogue regimes and non-state actors. That realization has set in motion a shift in priority from nonproliferation and deterrence strategies to counterproliferation measures that are more proactive and may even include preemptive or preventive measures aimed at denying those groups access to WMD and their delivery systems.²⁶

B. Nonproliferation Regime for Nuclear Weapons and Materials

The Nuclear Nonproliferation Treaty of 1968²⁷ (NPT) seeks to restrict the application of nuclear technology to peaceful purposes. Under the NPT, only five states—China, France, Russia, the United Kingdom and the United

Prohibition of Military or Other Hostile Use of Environmental Modification Techniques, 31 U.S.T. 233, T.I.A.S. 9614, *reprinted in* 16 I.L.M. 90 (1977). *See generally* U.S. ARMY, OPERATIONAL LAW HANDBOOK 234 (2004).

²⁵ Congressional Research Service, *Proliferation Control Regimes: Background and Status*, CRS Rep. RL31559 (updated Feb. 10, 2005); Barry Kellman, *Bridling the International Trade in Catastrophic Weapons*, 43 AM. U. L. REV. 755 (1994).

²⁶ For an adversary who is immune to deterrence strategies, prevention may be a necessary strategic choice. *See generally* Lawrence Freedman, *Prevention, Not Preemption*, 26 WASH. Q. 105 (Spring 2003).

²⁷ Treaty on the Non-Proliferation of Nuclear Weapons, July 1, 1968, 21 U.S.T. 483, T.I.A.S. 6839, 729 U.N.T.S. 161 (1970). The NPT was extended indefinitely in 1995. A comprehensive review conference was held in May of 2005, but failed to resolve a number of vexing issues facing the parties, including a timetable for disarmament by the five nuclear weapon states.

States—may legitimately manufacture and possess nuclear weapons.²⁸ These “nuclear weapon states” may not, however, transfer nuclear weapons or nuclear explosive devices to “any other recipient whatsoever,” or in any way assist, encourage or induce any non-nuclear-weapon state to manufacture or otherwise acquire nuclear weapons or nuclear explosive devices.²⁹ The non-nuclear-weapon states agree not to acquire nuclear weapons in return for assistance in developing peaceful uses for nuclear power. At the same time, each of the “nuclear five” (who are also permanent members of the U.N. Security Council) is obligated under the NPT to undertake “general and complete disarmament under strict and effective international control.”³⁰ Although considerable progress toward disarmament has been made over the last twenty years, the global inventory of strategic and tactical nuclear warheads still exceeds 10,000.³¹ The failure of the nuclear weapon states to move more quickly on disarmament has been a recurring source of criticism by the non-nuclear weapon states.³²

Compliance with the nonproliferation and disarmament requirements of the NPT is monitored by the International Atomic Energy Agency (IAEA).³³ However, it has been frequently pointed out that promulgating safeguards and monitoring and verification measures do not by themselves ensure compliance. “The most air-tight verification regime is worthless if confirmed violations are ignored.”³⁴ Unfortunately, remedies for violations of the NPT are not as well

²⁸ The five nuclear weapon states are those that had manufactured and tested a nuclear weapon prior to January 1, 1967.

²⁹ NPT, *supra* note 27, art. I.

³⁰ *Id.* art. VI.

³¹ In 2005, the United States nuclear stockpile stood at approximately 5,000 operational warheads (4,216 strategic and 780 non-strategic). *U.S. Nuclear Forces, 2005*, 61 BULL. ATOMIC SCIENTISTS 73-75 (2005). The 2005 Russian nuclear stockpile stood at 3,814 operational warheads. *Russian Nuclear Forces, 2005*, 61 BULL. ATOMIC SCIENTISTS 70-72 (2005). The Soviet nuclear arsenal is thought to have reached as many as 35,000 warheads at the end of the Cold War in 1991. Estimated nuclear stockpiles for other states are: China: 410, France: 350, U.K.: 185, India: 95, Israel: 75-200 and Pakistan: 52. See 14 CONG. Q. RESEARCHER 297, 300 (2004). See also *Nuclear Weapons: An Exchange*, 54 NAVAL WAR C. REV. 13-46 (2001).

³² See, e.g., U.N. General Assembly, Res. 59/83, U.N. Doc. A/RES/59/83 (Dec. 16, 2004) (expressing the Assembly’s deep concern with the lack of progress in the implementation of the thirteen steps to implement article VI of the NPT).

³³ The IAEA’s authority will be expanded as more states ratify and implement the Model Additional Protocol adopted by the IAEA in 1997. See U.S. DEP’T OF STATE, DIGEST OF UNITED STATES PRACTICE IN INTERNATIONAL LAW 2002, at 1057-58 (2003) [hereinafter “2002 DIGEST”]; Nobuyasu Abe, U.N. Undersecretary-General for Disarmament Affairs, Non-Proliferation and the Challenge of Compliance, Sept. 19, 2003, available at <http://disarmament.un.org:8080/speech/19sept2003.htm>. President Bush transmitted the Additional Protocol to the U.S.-IAEA Safeguards Agreement to the Senate for advice and consent on May 9, 2002. See SEN. TREATY DOC. NO. 107-7 (2002). The Senate unanimously approved it on March 31, 2004.

³⁴ U.S. Dep’t of State, Undersecretary of State for Arms Control and International Security John R. Bolton, *The NPT: A Crisis of Non-Compliance*, Statement to the Third Session of the Preparatory

developed as the verification regime. The IAEA may report violations to the U.N. Security Council,³⁵ which may then take appropriate action under Chapters VI or VII of the United Nations Charter,³⁶ but such measures are impossible without the support of at least all of the permanent members. Given the widely divergent interests expressed by those states over recent issues involving Iraq and longstanding support by some permanent members for North Korea and Iran, the prospects for Chapter VII measures to enforce the NPT were, until quite recently, not encouraging. The unanimous decision to impose sanctions on North Korea, following its October 9, 2006 nuclear test, and to demand that Pyongyang return to the NPT and the IAEA safeguards, may signal a new resolve. U.N. observers will no doubt closely monitor the Council in the coming months to see what actions it takes to “restore international peace and security” with respect to these proliferation threats.

All but four states (India, Israel, North Korea and Pakistan) are party to the NPT.³⁷ India and Pakistan have both developed and tested nuclear weapons.³⁸ It is also likely that Israel possesses nuclear weapons,³⁹ though there is no proof that Israel has tested such weapons, nor has it formally declared it possesses (or denied that it possesses) nuclear weapons. Until quite recently, Israel has generally refused access to the IAEA. North Korea and Iran are at varying stages in the development of a nuclear weapons capability. In 2004 Libya admitted to a WMD development program, but agreed to abandon it. As

Committee for the 2005 Review Conference on the Treaty on the Non-Proliferation of Nuclear Weapons, Apr. 27, 2004, available at <http://www.state.gov/t/us/mm/31848.htm> (“Enforcement is critical. We must increase the costs and reduce the benefits to violators, in ways such as the Proliferation Security Initiative now being pursued actively around the world.”).

³⁵ Statute of the International Atomic Energy Agency, Oct. 23, 1956, art. XII.A.7, 8 U.S.T. 1093, 276 U.N.T.S. 3 (amended Oct. 4, 1961, 14 U.S.T. 135, 471 U.N.T.S. 333).

³⁶ Charter of the United Nations, June 26, 1945, 59 Stat. 1031, T.S. No. 993, as amended in 1963 (16 U.S.T. 1134, T.I.A.S. No. 5857), 1965 (19 U.S.T. 5450, T.I.A.S. No. 6529) and 1971 (24 U.S.T. 2225, T.I.A.S. No. 7739).

³⁷ At last count, there were 189 states-parties. Despite widespread acceptance of the treaty, the parties are not in agreement over the treaty’s future direction. See *Nuclear Nonproliferation Treaty Meeting Ends with Deep Divides*, UN WIRE, May 7, 2004, available at http://www.unwire.org/News/328_426_23598.asp. See also U.S. Dep’t of State, *2005 NPT Review Conference*, available at <http://www.state.gov/t/isn/wmd/nnp/c10602.htm>.

³⁸ In early 2006, the United States and India entered into an agreement on civil nuclear cooperation. In return for a U.S. promise to permit India to engage in trade for civil nuclear technology, India agreed to take steps to bring its program into compliance with IAEA safeguards and Nuclear Suppliers’ Group and Missile Technology Control Regime guidelines. See The White House, *Fact Sheet: United States and India: Strategic Partnership*, Mar. 2006, available at <http://www.whitehouse.gov/news/releases/2006/03/20060302-13.html>.

³⁹ One estimate puts the Israeli nuclear arsenal at up to 200 warheads, deliverable by aircraft, missile and perhaps submarine. *Weapons of Mass Destruction: If You Push I’ll Shove*, THE ECONOMIST, July 10, 2004, at 41.

an NPT party, Iran is subject to IAEA compliance inspections.⁴⁰ Despite two years of negotiations with the European Union and Russia, Iran—whose president has called for the state of Israel to be wiped off the map—continues its enrichment program, ignoring two Security Council resolutions calling for a suspension.⁴¹

After the world discovered that North Korea had, for years, been systematically violating the 1994 “Agreed Framework” it reached with the United States,⁴² and circumvented safeguards in the NPT system to hide its nuclear weapons programs, it withdrew from the NPT in early 2003 and denied further access to IAEA inspectors.⁴³ Pyongyang’s renunciation of the NPT and expulsion of the IAEA inspectors were largely symbolic, since it had been violating the treaty for years despite IAEA oversight. In 2002, the Security Council members considered a resolution critical of North Korea’s renunciation of the NPT; however, China blocked the action.⁴⁴ China relented, and voted for sanctions, after the DPRK’s October 9, 2006 nuclear device test.

Although the long-term goal of the NPT is to eliminate all nuclear weapons, it preserves and even promotes the “inalienable” right to peaceful use of nuclear technology, within a complex system of safeguards agreements entered into between 145 states and the IAEA and implemented through IAEA

⁴⁰ In June of 2004, after the IAEA inspectors discovered traces of highly-enriched uranium (HEU) on centrifuge parts from an Iranian facility. Iran made an ambiguous assertion that it would demand that it be recognized as a “nuclear power.” See *Iran Wants Recognition as Nuclear Nation*, CNN.COM NEWS, June 13, 2004, available at <http://www.cnn.com/2004/WORLD/meast/06/12/iran.iaea/index.html>.

⁴¹ S. C. Res. 1696, U.N. Doc. S/RES/1696 (Jul. 31, 2006); S.C. Res. 1737, U.N. Doc. S/RES/1737 (Dec. 23, 2006). See also Int’l Atomic Energy Agency Board of Governors, *Implementation of the NPT Safeguards against the Islamic Republic of Iran*, IAEA Doc. GOV/2006/53, Sept. 16, 2006, available at <http://www.iaea.org/Publications/Documents/Board/2006/gov2006-53.pdf>. While Iran negotiated with several European Union governments to end its uranium enrichment program it took advantage of the opportunity to develop the technology to convert solid uranium to its gas form. Between June and July of 2006, Iran also enriched six kilograms of UF₆ into uranium 235. *Id.*

⁴² The 1994 Geneva Accords, or “Agreed Framework,” called for North Korea to freeze its plutonium nuclear program in Yongbyon in exchange for United States foreign aid, oil transfers and assistance in developing two civilian light water reactors. See Congressional Research Service, *North Korea’s Nuclear Weapons Program*, CRS Issue Brief IB91141 (updated May 25, 2006).

⁴³ Some argue that North Korea’s renunciation of the NPT was invalid when made, for substantive and procedural reasons. See Frederic L. Kirgis, *North Korea’s Withdrawal from the Nuclear Proliferation Treaty*, ASIL INSIGHTS, Jan. 2003, available at <http://www.asil.org/insights/insigh96.htm>. In Resolution 1718, the Security Council “demanded” that the DPRK “immediately retract its announcement of withdrawal from the Treaty on the Non-Proliferation of Nuclear Weapons,” and return to the NPT and IAEA safeguards. S.C. Res. 1718, ¶ 3, 4, U.N. Doc. S/RES/1718 (Oct. 14, 2006).

⁴⁴ Jean du Preez & William Potter, *North Korea’s Withdrawal from the NPT: A Reality Check*, Center for Non-Proliferation Studies, Apr. 9, 2002, available at www.cns.miis.edu/pubs/week/030309/htm.

compliance inspections.⁴⁵ Rising oil prices seem certain to stimulate interest and investment in nuclear power projects that will significantly add to the challenge of NPT compliance monitoring.⁴⁶ The dual-use capability of the relevant nuclear technology presents thorny compliance verification problems, as the present situation in Iran demonstrates. The non-compliance by several states that exploit the benefits of NPT membership to develop nuclear weapons “under cover of supposed peaceful nuclear technology” has produced what a United States spokesman characterized as a crisis.⁴⁷ As the President signaled in the *National Security Strategy of the United States*, the NPT parties must work together to close the “loophole in the Non-Proliferation Treaty that permits regimes to produce fissile material that can be used to make nuclear weapons under cover of a civilian nuclear power program.”⁴⁸

In 1974, shortly after the Indian nuclear test demonstrated how nuclear technology and materials transferred for peaceful purposes could be used, a number of supplier states (now up to 44) came together to form the “Nuclear Suppliers’ Group” (NSG). The NSG is a voluntary multilateral export control regime for nuclear materials used in peaceful applications by other states.⁴⁹ The NSG scheme, which complements but is not formally part of the NPT, is a nonbinding arrangement among like-minded nuclear materials supplier states designed to control exports of nuclear materials, equipment and technology, both dual-use and specially designed and prepared components. The primary control mechanism is a set of agreed upon “guidelines.” The NSG’s guidelines are linked to the work of the thirty-five-member Zangger Committee (also known as the Nuclear Exporters’ Committee), which develops the “Trigger List”

⁴⁵ NPT, *supra* note 27, arts. III & IV. The safeguards program will be enhanced by the Model Additional Protocol. See Int’l Atomic Energy Agency, IAEA *Safeguards: Stemming the Spread of Nuclear Weapons*, available at http://www.iaea.org/Publications/Factsheets/English/S1_Safeguards.pdf.

⁴⁶ The Energy Policy Act of 2005, Pub. L. No. 109-58, 119 Stat. 594 (2005), signed into law on August 8, 2005, included measures to “encourage investment in a new generation of safer, more reliable, and more proliferation-resistant nuclear power plants.” See also Ann Stouffer Bisconti, *Nuclear Snapshots: Perceptions of Energy Needs Drive Public Opinion on the USA’s Nuclear Future*, 46 IAEA BULL. No. 1, at 27 (June 2004).

⁴⁷ See Bolton, Statement to the 2005 Review Conference of the NPT, *supra* note 34.

⁴⁸ The White House, *The National Security Strategy of the United States 20* (2006), available at <http://www.whitehouse.gov/nsc/nss/2006/nss2006.pdf>.

⁴⁹ Nuclear Suppliers’ Group (also known as the London Group), available at <http://www.nuclearsuppliersgroup.org/>. The United States proposed formation of the NSG in 1974, following a nuclear test explosion by India. Prominent non-member states who supply such materials include China and Brazil. A proposal to merge the NSG and the three other “supplier group” export control regimes mentioned below into a single organization is under discussion. See Seema Gahlaut, et al., *Roadmap to Reform: Creating a New Multilateral Export Control Regime* (2004), available at <http://www.uga.edu/cits/documents/pdf/CITS%20ROADMAP%20Report.pdf>.

of controlled items.⁵⁰ Any export of an item on the Trigger List implicates not only the NSG's guidelines, but also the NPT safeguards established by the IAEA. The safeguards are implemented at the national level and enforced under domestic laws. At their 2004 summit, the G-8 member states—having declared that the “proliferation of weapons of mass destruction (WMD) and their means of delivery, together with international terrorism, remain the pre-eminent threat to international peace and security”—adopted an Action Plan for Nonproliferation that calls for significant changes to the NSG guidelines and called for a temporary suspension of transfers of enrichment and reprocessing equipment and technologies while the new guidelines are being developed.⁵¹ The G-8 Action Plan would also require all states seeking supplies for peaceful applications of nuclear technology or materials to accede to the IAEA's Additional Protocol and comply with the more stringent safeguards currently under development.⁵²

Advocates of a new Fissile Material Cut-Off Treaty⁵³ (FMCT) argue that a treaty banning production of fissile material for use in nuclear weapons is necessary to strengthen existing nonproliferation norms.⁵⁴ By one estimate, existing stockpiles of fissile materials total approximately 3,000 metric tons; enough to produce 200,000 weapons.⁵⁵ The draft FMCT, which has been under consideration since 1998, would not ban fissile materials used for non-explosive

⁵⁰ See <http://www.zanggercommittee.org>. The European Union is a permanent observer. The criteria for listing materials that will fall within the IAEA safeguards are derived from Article III.2 of the NPT, which provides that:

Each State Party to the Treaty undertakes not to provide: (a) source or special fissionable material, or (b) equipment or material especially designed or prepared for the processing, use or production of special fissionable material, to any non-nuclear-weapon State for peaceful purposes, unless the source or special fissionable material shall be subject to the safeguards required by this Article.

⁵¹ G-8 Action Plan on Nonproliferation, para. 1, June 9, 2004 [hereinafter “G-8 2004 Action Plan”], available at <http://www.whitehouse.gov/news/releases/2004/06/20040609-28.html>. The G-8 reaffirmed their commitment at the 2006 summit in St. Petersburg, Russia. See *Statement on Non-proliferation*, July 16, 2006, available at <http://www.g8.utoronto.ca/summit/2005gleneagles/nonprolif.pdf>.

⁵² G-8 2004 Action Plan, *supra* note 51, para. 1. The IAEA Model Additional Protocol, which was adopted in 1997, strengthens the safeguards system by requiring states to provide the IAEA with broader information covering all aspects of their nuclear fuel-related activities and to permit broader access to inspect facilities and install verification technologies. To date, however, only 78 of the 180 NPT signatories have ratified the Additional Protocol. See IAEA, *Safeguards and Verification*, available at http://www.iaea.org/OurWork/SV/Safeguards/sg_protocol.html.

⁵³ The proposed treaty is sometimes referred to as FISSBAN.

⁵⁴ See G.A. Res. 48/75L, U.N. Doc. A/48/75L (Jan. 7, 1994) (calling for negotiation of a non-discriminatory, multilateral and international, effectively verifiable treaty banning production of fissile material for nuclear weapons or other nuclear explosive devices).

⁵⁵ Bipartisan Security Group, *Status of the Non-Proliferation Treaty. Interim Report*, June 2003, at 5, available at http://www.middlepowers.org/gsi/pubs/06_03_npt_brief.pdf. Those familiar with the group's public statements may reasonably wonder whether the group is indeed bipartisan.

purposes, and it would not apply to non-fissile materials such as tritium.⁵⁶ The draft FMCT also does not include measures to reduce existing stockpiles. However, the treaty would do much to reduce availability of fissile material, and therefore the threat of such materials finding their way into an illicit nuclear weapon. Negotiating a fissile materials cut-off treaty that advances the interests of the nation is an announced goal of the United States.⁵⁷

Nuclear weapons and their components are vulnerable to diversion or theft while stored or in transport. A principal aim of the U.S. Department of Energy's Global Threat Reduction Initiative is to secure, remove or dispose of nuclear and radiological materials around the world that are vulnerable to theft.⁵⁸ Recent efforts have focused on "repatriating" spent reactor fuel provided by the United States and Russia to other states and to convert research reactors that presently run on highly enriched uranium to non-fissile alternatives. The transport of nuclear materials and the standards for their protection were addressed in the Convention on the Physical Protection of Nuclear Materials (CPPNM), which requires states-parties to the convention to criminalize the theft or fraudulent obtaining of certain nuclear materials, or the use of such materials in attacks or threatened attacks.⁵⁹ The United States enacted criminal statutes to implement the CPPNM convention.⁶⁰ In 2003, the IAEA approved a revised Code of Conduct on the Safety and Security of Radioactive Sources.⁶¹ The Safety of Life at Sea Convention (SOLAS)⁶² and the International Code for the Safe Carriage of Packaged Irradiated Nuclear Fuel, Plutonium and High

⁵⁶ See *Fissile Material Cut-Off Treaty* (information article), available at <http://www.fas.org/nuke/control/fmct>.

⁵⁷ The White House, *National Strategy for Combating Weapons of Mass Destruction* (Dec. 2002), available at <http://www.whitehouse.gov/news/releases/2002/12/WMDStrategy.pdf>. India recently joined the U.S in supporting the conclusion of a Fissile Material Cut-off Treaty. See The White House Fact Sheet, *supra* note 38.

⁵⁸ The DoE program for nuclear and radiological materials complements and in some ways overlaps with the Nunn-Lugar Cooperative Threat Reduction Program.

⁵⁹ Convention on the Physical Protection of Nuclear Materials, Oct. 26, 1979, art. 7, T.I.A.S. 11080, 1456 U.N.T.S. 24631. Parties must also make such offenses extraditable. *Id.* art. 11. Materials of interest are plutonium, uranium 233 and uranium 235. A 2005 diplomatic conference adopted amendments to the Convention designed to strengthen its existing provisions and expand its scope to cover, among other points, the physical protection of nuclear material used for peaceful purposes, in domestic use, storage and transport, and the physical protection of nuclear material and peaceful nuclear facilities against sabotage. See IAEA Press Release 2005/03, *States Agree to Stronger Physical Protection Regime*, July 8, 2005, available at <http://www.iaea.org/NewsCenter/PressReleases/2005/pm200503.html>.

⁶⁰ See 18 U.S.C. § 831 (2005).

⁶¹ See also G.A. Res. 58/240, U.N. Doc. A/RES/58/240 (2003), para. 26 (welcoming IAEA Res. GC(47)/RES/7 concerning measures for strengthening international cooperation in nuclear, radiation and transport safety and waste management).

⁶² International Convention for the Safety of Life at Sea, Nov. 1, 1974, T.I.A.S. 9700 & Protocol of 1978 Relating to the International Convention for the Safety of Life at Sea, 1974, Feb. 17, 1978, ch. VII, part D, T.I.A.S. 10009.

Level Radioactive Wastes on Board Ships (INF Code)⁶³ prescribe requirements for the maritime transport of nuclear materials. Liability for maritime transporters is governed by the Convention Relating to Civil Liability in the Field of Maritime Carriage of Nuclear Material.⁶⁴

In 2005, the U.N. General Assembly adopted the International Convention for the Suppression of Acts of Nuclear Terrorism,⁶⁵ which, if it enters into force, will extend the criminal regime applicable to proliferation-related offenses in several important respects. For example, the General Assembly's Convention would require states-parties to criminalize the possession of radioactive material, or the making or possession of a nuclear or radioactive device, with the intent to use that material to cause death, serious bodily injury or substantial damage to property or the environment.⁶⁶ The prohibitions would extend to attempts, and to those who participate as an accomplice, organize or direct those who carry out acts of nuclear terrorism, or who in "any other way contributes to the commission" of a covered act, knowing of the intent to commit such acts or with the aim of furthering the general criminal activity or purpose of the group.⁶⁷ States-parties must also take all practicable measures to, *inter alia*, prohibit in their territories illegal activities by persons or groups that encourage, instigate, or organize acts of nuclear terrorism, or knowingly finance or provide technical assistance or information to persons or groups engaged in such acts.⁶⁸ The General Assembly's Convention plainly embraces a law enforcement approach to the threat posed by nuclear and radiological weapons in the hands of terrorists.⁶⁹ The Convention would also eliminate, with significant exceptions, the political offense exemption to extradition.⁷⁰

⁶³ Compliance with the INF Code is mandatory. See *id.* Reg. VII/16. See also International Maritime Organization, Res. A.853(20) (adopting updated INF Code); Eugene R. Fidell, *Maritime Transport of Plutonium and Spent Nuclear Fuel*, 31 INT'L LAWYER 757 (1997).

⁶⁴ Convention Relating to Civil Liability in the Field of Maritime Carriage of Nuclear Material, Dec. 17, 1971, U.N.T.S. No. 14120. The Convention limits the transporter's liability for damage caused by a nuclear incident in cases where the operator of the related nuclear installation bears liability under the Paris or Vienna Conventions or national law. *Id.* arts. 1-2.

⁶⁵ International Convention for the Suppression of Acts of Nuclear Terrorism, annexed to G.A. Res. 59/240, U.N. Doc. A/RES/59/240 (Feb. 24, 2005), reprinted in 44 I.L.M. 815 (2005).

⁶⁶ *Id.* art. 2(1).

⁶⁷ *Id.* arts. 2(2), (3), (4).

⁶⁸ *Id.* art. 7.

⁶⁹ The Convention expressly mandates that all states-parties carry out the Convention obligations in a manner "consistent with the principles of sovereign equality and territorial integrity of states and that of non-intervention in the domestic affairs of other States." *Id.* art. 21. The Convention twice addresses the rights of individuals engaged in covered acts of nuclear terrorism (*Id.* arts. 12, 17) and requires the interdicting state to return any seized nuclear material or device to the state to which it belongs or of which the person owning it is a national. *Id.* art. 18(2).

⁷⁰ *Id.* arts. 6, 15. However, the grounds for refusing extradition in article 16 of the convention arguably provide a sympathetic state a nearly peremptory basis for denying extradition.

C. Nonproliferation Regime for Chemical Weapons

Nearly seventy years after the 1925 Geneva Gas and Bacteriological Warfare Protocol banned the use of asphyxiating and poisonous gases in war,⁷¹ the Chemical Weapons Convention of 1993 (CWC)⁷² took the further step of forbidding parties to the CWC from developing, producing, stockpiling or using chemical weapons. The Convention also requires member states not to permit any such activities to be conducted in any place under the state's control.⁷³ In contrast to the NPT, which has been ratified almost universally, a significant number of states, including many in the Middle East, are not yet a party to the CWC.

The CWC requires parties to destroy existing stockpiles by 2007. The United States recently stepped up its CW stockpile destruction program; however, it requested an extension on the 2007 destruction deadline.⁷⁴ The CWC includes provisions for verification and challenge inspections by the Organization for the Prohibition of Chemical Weapons (OPCW), located in The Hague. So far, however, the OPCW has apparently been consumed more by organizational tasks than field inspections.⁷⁵ Although the OPCW has no enforcement powers, violations of the CWC can be reported to the CWC Conference of States-Parties, which can refer the matter to the United Nations Security Council. As with other WMD, however, the fact that many—perhaps most—CW agent precursors and technologies have legitimate dual-use

⁷¹ Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous, or Other Gases, and of Bacteriological Methods of Warfare, 26 U.S.T. 571 (1925), *reprinted in* U.S. ARMY, LAW OF WAR DOCUMENTARY SUPPLEMENT 159 (2004) [hereinafter "1925 Geneva Gas and Bacteriological Warfare Protocol"]. U.S. Department of Defense policy on the use of chemical weapons is set out in Secretary of Defense, DoD Directive S-3145.2, Chemical Weapons Policy, July 23, 1987 (secret) and Commander, Joint Chiefs of Staff, CJCS Instruction 2030.01A, Chemical Weapons Convention Compliance Policy, Aug. 9, 2001. For a discussion of the "no-first-use" reservations, see ANNOTATED SUPPLEMENT TO THE COMMANDER'S HANDBOOK OF THE LAW OF NAVAL OPERATIONS, at para. 10.3.1.1 (1997).

⁷² Convention on the Prohibition of the Development, Production, Stockpiling and Uses of Chemical Weapons and on Their Destruction, Jan. 13, 1993, 1974 U.N.T.S. 45, *reprinted in* 32 I.L.M. 800 (1993) and U.S. ARMY, LAW OF WAR DOCUMENTARY SUPPLEMENT 435 (2004) [hereinafter "CWC"]. The United States ratified the CWC in 1997. See SEN. EXEC. REP. NO. 104-33, Sept. 11, 1996. See generally THE NEW CHEMICAL WEAPONS CONVENTION: IMPLEMENTATION AND PROSPECTS (Michael Bothe, et al., eds., 1998).

⁷³ CWC, *supra* note 72, art. VII(1).

⁷⁴ See U.S. Dep't of State, *U.S. Requests to Extend Chemical Weapons Convention (CWC) Deadline for Complete Destruction of Chemical Weapons Stocks*, Apr. 20, 2006 (requesting an extension until 2012), available at <http://www.state.gov/t/isn/rls/fs/64874.htm>. Environmental concerns and community opposition have limited U.S. disposal options. See Rick Callahan, *Army to Begin Destroying Deadly Nerve Gas*, Assoc. Press, June 9, 2004 (reporting program to destroy 1,269 tons of VX nerve gas at the Newport, IN, facility).

⁷⁵ In its first seven years, the OPCW staff grew to more than 500 and its annual budget reached approximately 60 million Euros.

applications complicates enforcement. For example, many chemical production plants exhibit an ability to engage in multiple uses, including production of pesticides, pharmaceuticals and industrial chemicals.⁷⁶ In many cases, such plants may be converted to produce CW agents. Thus, in many cases, the intent to create CW cannot be inferred from the mere capability to produce them.

As with the NPT, the CWC requires states-parties to restrict exports of certain CWC materials and enforce those restrictions through their penal laws.⁷⁷ In the United States, the CWC is implemented through the Chemical Weapons Convention Implementation Act of 1998.⁷⁸ Federal prohibitions on possession and use of CW agents are prescribed in Chapter 11B of Title 18 of the U.S. Code.⁷⁹ The 1996 Antiterrorism and Effective Death Penalty Act enacted a number of changes to the prohibitions.⁸⁰ Nevertheless, the extraterritorial jurisdictional reach of the CW statute is limited, and would likely not extend to most foreign vessel situations likely to fall within the ambit of a PSI boarding.⁸¹

To better coordinate export controls, a group of thirty-nine states concerned with the threats posed by CW (and BTW) agent proliferation have formed the "Australia Group," a voluntary multilateral export control regime.⁸² Like the Nuclear Suppliers' Group, the Australia Group regime is a nonbinding arrangement among like-minded supplier states designed to control the risk of proliferation of WMD and their component materials. The primary purpose of the group is to ensure that industries of the participating states do not assist, either purposely or inadvertently, another state in acquiring CW or BTW capability. Participating states meet on a regular basis to consult on proliferation issues and harmonize their national export control regimes. The participants have agreed to restrict trade in CW and BTW materials through their national laws and regulations, by establishing a system to license the export of certain chemicals, biological agents and dual-use equipment and facilities that might be used to produce CW or BTW. Finally, all of the states agree to exchange

⁷⁶ Chemical plants capable of manufacturing organic phosphorous pesticides or flame retardants could be converted to CW production in a matter of weeks.

⁷⁷ CWC, *supra* note 72, art. VII(1).

⁷⁸ 22 U.S.C. § 6723 (2005).

⁷⁹ *See, e.g.*, 18 U.S.C. §§ 229, 229A-229F (2005).

⁸⁰ Antiterrorism and Effective Death Penalty Act of 1996, Pub. L. No. 104-132, title V, subtitle C (1996), 110 Stat. 1214. *See also* Omnibus Diplomatic Security and Antiterrorism Act of 1986 (ODSAA), Pub. L. No. 99-399, 100 Stat. 853. Title IX of the ODSAA was the International Maritime and Port Security Act, 100 Stat. 889, *codified at* 46 U.S.C. §§ 1801-1809 (2005).

⁸¹ *See* 18 U.S.C.A. § 229(c) (2005). Extraterritorial conduct to acquire WMD for use in the United States may, however, constitute a substantial step in furtherance of a conspiracy or an attempt. Providing CW agents or precursors to a terrorist organization might also implicate the "material support" prohibition in 18 U.S.C. § 2339B.

⁸² Australia Group (for BTW and CW weapons), *available at* <http://www.austliagroup.net/>.

information with the other participants regarding proliferation trends and entities attempting to procure CW or BTW related materials.

The international regulatory regime for the transport of hazardous chemicals and explosives includes Chapter VII of the SOLAS Convention together with the International Maritime Dangerous Goods Code.⁸³ The IMDG Code prescribes standards for the packing, stowage and labeling of dangerous goods transported by sea. Compliance with the IMDG Code is now mandatory.⁸⁴ Vessels carrying hazardous materials (including radioactive and biohazard materials) by sea are required to have available for inspection a “dangerous cargo manifest,” which lists the weight, quantity, packaging, class and stowage of all hazardous cargo on the vessel.⁸⁵ Enforcement, however, is generally limited to flag states and port states.

D. Nonproliferation Regime for Biological and Toxin Weapons

The nation’s reaction to the anthrax attacks of 2001, which infected twenty-five and killed five, provided the nation with a stark warning on the wider repercussions of even a relatively small-scale biological warfare agent release in the United States. Bio-terrorism exercises like *Dark Winter*, held just before the 2001 attacks, and *Atlantic Storm*, conducted on January 14, 2005, demonstrate a much graver BTW potential, characterized by massive casualties well beyond the initial release site, a panic over infected carriers or other vectors, and a near certain shut down of international travel for a month or more.⁸⁶ Indeed, some predict that a large scale BTW attack could shut down much of the world’s economic activity, triggering a global depression.

The use of bacteriological methods of warfare has been banned since 1925.⁸⁷ The Biological Weapons Convention of 1972 (BWC) takes the further step of banning the production, acquisition or stockpiling of biological agents or

⁸³ See International Maritime Organization, *International Maritime Dangerous Goods Code*, IMO Pub. No. IE200E (2004) (new version to be released in 2007). A narrative description of the IMDG Code is available at http://www.imo.org/Safety/mainframe.asp?topic_id=158.

⁸⁴ See 49 C.F.R. pt. 176 (2006) (regulation for carriage of hazardous materials by water).

⁸⁵ See 49 C.F.R. § 176.30 (2006).

⁸⁶ See Byron Spice, *Nations Vulnerable to Bioterror*, PITTSBURGH POST-GAZETTE, Jan. 16, 2005, available at <http://www.post-gazette.com/pg/05016/443175.stm>.

⁸⁷ 1925 Geneva Gas and Bacteriological Warfare Protocol, *supra* note 71; ANNOTATED COMMANDER’S HANDBOOK, *supra* note 71, para. 10.4.1. The Handbook asserts that the United States considers the ban on the use of biological weapons during armed conflict to be part of customary international law and therefore binding on all nations. ANNOTATED COMMANDER’S HANDBOOK, *supra* note 71, para. 10.4.2. No analysis of state practice is offered in support of that assertion. See Howard S. Levie, *Nuclear, Chemical, and Biological Weapons*, in U.S. NAVAL WAR COLLEGE INTERNATIONAL LAW STUDIES, vol. 64, at 331, 341, 344-45 (Horace B. Robertson, Jr., ed. 1991).

toxins (BTW agents).⁸⁸ Although the BWC includes a provision for reporting violations to the UN Security Council for possible action,⁸⁹ in contrast to the CWC, the BWC does not yet include provisions for verification and challenge inspections. The reasons for failing to close what many see as a potentially critical compliance gap are controversial. It is now known that the former Soviet Union systematically violated the BWC until at least 1992, by carrying on a massive program to produce BTW agents, which were then weaponized and stockpiled.⁹⁰ North Korea is believed to have stockpiles of anthrax, botulism, cholera, hemorrhagic fever, plague, smallpox, typhoid and yellow fever. Nevertheless, the United States has so far rejected a proposed protocol to the BWC that would add a verification scheme to increase compliance.⁹¹ The grounds for rejection given by U.S. negotiators included concerns that outside inspections of government-sponsored research facilities would compromise the nation's BTW defensive efforts, which are deemed necessary to guard against known or suspected BTW programs by hostile states and non-state actors. Additionally, outside inspections of commercial facilities in the United States whose products would fall within the dual-use parameters of the protocol might endanger intellectual property rights held by the pharmaceutical and biotechnology companies.⁹² Finally, given the nature and ubiquity of biological and pharmaceutical research facilities, and the difficulty of distinguishing prohibited BTW offensive activities from permitted defensive research, some question the extent to which an outside inspection regime could ever be practical and sufficiently reliable.⁹³

⁸⁸ Convention on the Prohibition of the Development, Production, Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction, Apr. 10, 1972, 26 U.S.T. 583, T.I.A.S. 8062, 1015 U.N.T.S. 163, , *reprinted in* U.S. ARMY, LAW OF WAR DOCUMENTARY SUPPLEMENT 342 (2004) ["hereinafter BWC"]. President Nixon ordered an end to U.S. research in offensive use of biological weapons in 1969. *See* 5 WEEKLY COMP. PRES. DOC. 1659-61 (Nov. 26, 1969); U.S. DEP'T OF STATE BULL. 226-27 (1970). Research into defensive measures, primarily vaccine development, continues. *See* U.S. DEP'T OF STATE, 18 MARJORIE W. WHITEMAN, DIGEST OF U.S. PRACTICE IN INTERNATIONAL LAW 732-36 (1976).

⁸⁹ BWC, *supra* note 88, arts. VI & XIII.

⁹⁰ U.S. Arms Control and Disarmament Agency, *Adherence to and Compliance with Arms Control Agreements and the President's Report to Congress on Soviet Noncompliance with Arms Control Agreements*, Jan. 14, 1992, at 14.

⁹¹ Rebecca Whitehair & Seth Brugger, *BWC Protocol Talks in Geneva Collapse Following U.S. Rejection*, ARMS CONTROL TODAY (Sept. 2001), available at http://www.armscontrol.org/act/2001_09/bwcsept01.asp.

⁹² *See* Undersec'y of State for Arms Control and Int'l Sec. John R. Bolton, *U.S. Efforts to Stop the Spread of Weapons of Mass Destruction*, Testimony before Committee on International Relations, U.S. House of Representatives, June 4, 2003, in U.S. DEP'T OF STATE, DIGEST OF UNITED STATES PRACTICE IN INTERNATIONAL LAW 2002, at 1037-38 (2003). *See generally* NATIONAL ACADEMY OF SCIENCES, BIOTECHNOLOGY RESEARCH IN AN AGE OF TERRORISM 46 (2004).

⁹³ *See* "The Debate over BWC Verification" in U.S. Congress, Office of Technology Assessment, *Technologies Underlying Weapons of Mass Destruction*, Report No. OTA-BP-ISC-115 (1993), at 74-75.

Some commentators are now propounding arguments for more onerous consequences when states fail to meet their international obligations to guard against BTW proliferation. For example, one writer argues that a state should bear international responsibility for failing to take adequate precautions against proliferation of BTW agents.⁹⁴ An argument might also be made that the criminal liability provisions of the Rome Statute of the International Criminal Court could extend to those who were complicit in putting BTW (or other WMD) or the means of delivery in the hands of those who later used them to commit crimes under the Statute.⁹⁵ On another front, an international convention proposed by the Harvard-Essex Program on CBW Disarmament would, if enacted, make it a crime under international law to develop, retain, acquire, transfer or use biological or chemical weapons.⁹⁶ U.N. Security Council Resolution 1540 (discussed below) calls for a similar approach at the national level. In the United States, federal prohibitions on possession and use of BTW agents are prescribed in chapter 10 of Title 18 of the U.S. Code.⁹⁷ The 1996 Antiterrorism and Effective Death Penalty Act enacted a number of changes to the prohibitions.⁹⁸ Nevertheless, the extraterritorial jurisdictional reach of the BTW statute, like the CW statute, remains limited, and would likely not extend to most MSO boarding cases.⁹⁹

E. Measures to Curb and Contain Missile and UAV Proliferation

Despite the fact that the United Nations Security Council has concluded that the proliferation of missile delivery systems for WMD constitutes a threat to international peace and security,¹⁰⁰ international law does not presently prohibit

⁹⁴ Barry Kellman, *State Responsibility for Preventing Bioterrorism*, 36 INT'L LAWYER 29 (2002).

⁹⁵ See Rome Statute of the International Criminal Court, July 17, 1998, 2187 U.N.T.S. 3, reprinted in U.S. ARMY, LAW OF WAR DOCUMENTARY SUPPLEMENT 470 (2004). Article 25(3)(c) extends individual criminal responsibility to one who "aids, abets or otherwise assists in [the commission of a crime under the Statute] or its attempted commission, including providing the means for its commission." Depending on the circumstances, use of a WMD could constitute the crime of genocide, a crime against humanity or a war crime.

⁹⁶ Harvard/Sussex program on CBW Disarmament and Arms Limitation, Draft Convention on the Prevention and Punishment of the Crime of Developing, Producing, Acquiring, Stockpiling, Retaining, Transferring or Using Biological or Chemical Weapons, Nov. 1, 2001, available at <http://fas-www.harvard.edu/~hsp/crim01.pdf>.

⁹⁷ See, e.g., 18 U.S.C. §§ 175-178 (2005). The BTW prohibitions were expanded by the USA PATRIOT Act, Pub. L. No. 107-56, § 817, 115 Stat. 272, 385-86 (2001).

⁹⁸ Antiterrorism and Effective Death Penalty Act of 1996, Pub. L. No. 104-132, title V, subtitle B (1996), 110 Stat. 1214 (1996).

⁹⁹ See 18 U.S.C. § 175(a)(2005) ("There is extraterritorial Federal Jurisdiction over an offense under this section committed by or against a national of the United States"). Providing BW agents to a terrorist organization might, however, implicate the "material support" prohibition in 18 U.S.C. § 2339B.

¹⁰⁰ See S.C. Res. 1695, U.N. Doc. S/RES/1695 (Jul. 15, 2006) (reaffirming its finding in Resolution 1540 that missile proliferation constitutes such a threat and condemning the DPRK for test launching

the sale or transfer of missiles or missile technology. For that reason, the nonproliferation regime for missiles is the weakest of the four considered, as the 2002 M/V *So San* incident demonstrated.¹⁰¹ A number of states concerned with the threats posed by missile proliferation have sought to at least partly fill this lacuna by establishing the Missile Technology Control Regime (MTCR).¹⁰² Like the regimes established by the Nuclear Suppliers' Group and the Australia Group, the MTCR is a voluntary multilateral export control regime.¹⁰³ The MTCR consists of a set of guidelines and an equipment and technology annex. Participating states agree to regulate trade in missile technology through their national laws, which establish systems to license the exports of sensitive items. In general terms, the MTCR participants agree to refrain from selling missiles capable of specified ranges and payloads as follows:

[The] greatest restraint is applied to what are known as Category I items. These items include complete rocket systems (including ballistic missiles, space launch vehicles and sounding rockets) and unmanned air vehicle systems (including cruise missiles systems, target and reconnaissance drones) with capabilities exceeding a 300km/500kg range/payload threshold; production facilities for such systems; and major sub-systems including rocket stages, re-entry vehicles, rocket engines, guidance systems and warhead mechanisms.

The remainder of the annex is regarded as Category II, which includes complete rocket systems (including ballistic missiles systems, space launch vehicles and sounding rockets) and unmanned air vehicles (including cruise missile systems, target drones, and reconnaissance drones) not covered in item I, capable of a maximum range equal to or greater than, 300km. Also included are a wide range of equipment,

ballistic missiles capable of delivering WMD on July 5, 2006). The resolution goes on to require all member states to prevent the transfer of missile and missile related items to the DPRK's missile or WMD programs or the procurement of such items from the DPRK.

¹⁰¹ The outcome of the M/V *So San* incident would not have been affected by U.N. Security Council Resolution 1540 because the resolution only directly addresses proliferation to non-state actors. The missiles on board the *So San* were destined for the government of Yemen. The transfer would likely come within the prohibitions of Resolution 1718, which was issued in 2006.

¹⁰² The text of the MTCR is available at <http://www.mtcr.info/english/>. The MTCR has no secretariat or implementation organization. It is administered collectively by the participating states (34 as of Sept. 2006). See generally U.S. General Accounting Office, *Nonproliferation: Strategy Needed to Strengthen Multilateral Export Control Regimes*, GAO-03-43 (Oct. 25, 2002).

¹⁰³ Under the MTCR, export licensing requirements do not ban exports. The sole objective of export licensing is to prevent transfers contributing to delivery systems for WMD. MTCR controls are not intended to impede peaceful aerospace programs or international cooperation in such programs, as long as these programs are not used to develop delivery systems for WMD. MTCR controls are also not designed to restrict access to technologies necessary for peaceful economic development. The MTCR Guidelines help to build confidence among suppliers that they can provide access to technology without such technology being diverted to WMD delivery system programs.

material, and technologies, most of which have uses other than for missiles capable of delivering WMD. While still agreeing to exercise restraint, partners have greater flexibility in the treatment of Category II transfer applications.

The efficacy of the MTCR depends on widespread adoption and adherence to the International Code of Conduct against Ballistic Missile Proliferation.¹⁰⁴ The Code, now referred to as the Hague Code of Conduct (HCOC), is, like the MTCR, a political commitment by the members, and is not legally binding. The HCOC calls on subscribing states to curb and prevent the proliferation of ballistic missiles capable of delivering WMD.¹⁰⁵ On November 25, 2002, the United States became an initial subscribing state to the Code.¹⁰⁶ Well over 100 states have similarly adopted the HCOC. The Code and the MTCR are key elements in the United States' multilateral strategy to impede and eventually roll back the missile proliferation threat.¹⁰⁷ Strengthening the MTCR is an announced goal of the United States.¹⁰⁸

In addition to ballistic missiles, some 70,000 cruise missiles are in the world's inventory, and the inventory of unmanned aerial vehicles (UAVs) is rapidly growing. The utility of UAVs for reconnaissance, surveillance, targeting and even weapon deployment has been convincingly demonstrated over the past decade. In contrast to the technology for intermediate-range and long-range ballistic missiles, the technology for cruise missiles and UAVs is readily available and increasingly affordable.¹⁰⁹ Iran has reportedly already supplied

¹⁰⁴ See International Code of Conduct against Ballistic Missile Proliferation, Nov. 25, 2002 [hereinafter "HCOC"]. Congress adopted the Code in the International Arms Sales Code of Conduct Act of 1999, Pub. L. No. 106-113, § 1262. However, several missile-producing states, including China, India, Iran and North Korea, as well as Taiwan, have so far declined to join the regime. See generally GAO, *Nonproliferation: Strategy Needed to Strengthen Multilateral Export Control Regimes*, *supra* note 102, at 9.

¹⁰⁵ See HCOC, *supra* note 104, para. 3(b).

¹⁰⁶ In announcing the support of the United States for the Code, former Undersecretary of State for Arms Control and International Security John Bolton notified the other participating states that this nation "regards the proliferation of ballistic missiles capable of delivering WMD as a *direct threat* to the U.S., our deployed forces, our friends and allies, and our interests in key regions of the world." See 2002 DIGEST, *supra* note 33, at 1063 (emphasis added). The full text of Secretary Bolton's remarks is at *Remarks by Undersecretary John Bolton at the Launching Conference for the International Code of Conduct against Ballistic Missile Proliferation*, The Hague, NE, Nov. 25, 2002, available at <http://www.state.gov/t/us/rm/15488.htm>.

¹⁰⁷ Congressional Research Service, *Missile Technology Control Regime (MTCR) and International Code of Conduct against Ballistic Missile Proliferation: Background and Issues for Congress*, CRS Rep. RL31848.

¹⁰⁸ The White House, *National Strategy to Combat Weapons of Mass Destruction 4* (Dec. 2002), available at <http://www.whitehouse.gov/news/releases/2002/12/WMDStrategy.pdf>.

¹⁰⁹ *Id.*; see also U.S. Government Accountability Office, *Nonproliferation: Improvements Needed for Controls on Exports of Cruise Missile and Unmanned Aerial Vehicle Technology*, GAO-04-493T (2004).

UAVs (and, apparently, anti-ship cruise missiles) to the Hezbollah organization.¹¹⁰ Cruise missile and UAV proliferation is addressed by both the MTCR and the Wassenaar Arrangement,¹¹¹ but neither is a binding international agreement, nor does either criminalize the sale, transfer or transport of cruise missiles or UAVs.

Missile technology proliferation controls within the United States are implemented through various statutes, including the Arms Export Control Act,¹¹² the International Emergency Economic Powers Act,¹¹³ and (at times) the Export Administration Act¹¹⁴ and/or Trading with the Enemy Act.¹¹⁵ The acts generally restrict exports of items on export control lists and shipments to enumerated states of missile proliferation concern.¹¹⁶ The Missile Technology Control Act establishes a scheme of missile proliferation sanctions for “U.S. persons” who export, transfer or otherwise engage in the trade of any item listed

¹¹⁰ *Hezbollah Drone Humiliates Israel*, IRAN DAILY, Nov. 8, 2004, available at <http://www.iran-daily.com/1383/2135/html/index.htm>; U.S. Dep’t of State, *Country Reports on Terrorism, 2004*, April 2005 (Terrorist Group Profile on Hezbollah).

¹¹¹ The Arrangement has thirty-three subscribing states. Its stated purpose is: to contribute to regional and international security and stability, by promoting transparency and greater responsibility in transfers of conventional arms and dual-use goods and technologies, thus preventing destabilising accumulations. Participating States will seek, through their national policies, to ensure that transfers of these items do not contribute to the development or enhancement of military capabilities which undermine these goals, and are not diverted to support such capabilities.

See The Wassenaar Arrangement on Export Controls for Conventional Arms and Dual-use Goods and Technologies, available at <http://www.wassenaar.org/>. The Wassenaar Arrangement, first launched in 1996, is the first multilateral institution covering both conventional weapons and sensitive dual-use goods and technologies. One of the arrangement’s current concerns is the proliferation of man-portable air defense systems (MANPADS), shoulder-fired weapons capable of destroying low-flying aircraft.

¹¹² See 22 U.S.C. § 2797b (2005). Under authority of 22 U.S.C. § 2778, the Department of State has promulgated the International Traffic in Arms Regulations (ITAR). See 22 C.F.R. pt. 120 (2006); RESTATEMENT, *supra* note 10, § 812.

¹¹³ International Emergency Economic Powers Act, 50 U.S.C. §§ 1701-1707 (2005) [hereinafter “IEEPA”]. See also Exec. Order No. 13,206, 66 Fed. Reg. 18,397 (2001). IEEPA violations are punishable by civil and, in cases of willful violations, criminal penalties. 50 U.S.C. § 1705 (2005).

¹¹⁴ Export Administration Act, 50 U.S.C. app. §§ 2401-2420 (expired) [hereinafter “EAA”]. Congress allowed the EAA to expire in 2001 (50 U.S.C. app. § 2419) and, at the time of this writing, had not yet renewed the act or replaced it with a suitable substitute. Accordingly, most export control measures are promulgated under a series of executive orders and Department of Commerce Bureau of Industry and Security regulations (15 C.F.R. pts. 730-774) issued under authority of the IEEPA, 50 U.S.C. §§ 1701, 1702, 1704 (2005).

¹¹⁵ 50 U.S.C. app. §§ 1-5 (2005).

¹¹⁶ States “of missile proliferation concern” under the Export Administration Regulations are listed in 15 C.F.R. pt. 738. In 2004, they included Bahrain, China, Egypt, India, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Macau, North Korea, Oman, Pakistan, Qatar, Saudi Arabia, Syria, United Arab Emirates and Yemen. The export control program is administered by the Department of Commerce. See U.S. Dep’t of Commerce, *Missile Technology Controls*, available at http://www.bis.doc.gov/PoliciesAndRegulations/04ForPolControls/Chap8_MTCR.htm.

in the MTCR Annex in violation of the implementing U.S. licensing laws.¹¹⁷ The Act also prescribes a more limited sanction scheme for “foreign persons” over whom the United States has jurisdiction.¹¹⁸ In addition, the federal criminal code prohibits certain acts of importing, manufacturing, or dealing in nuclear or explosive materials,¹¹⁹ as well as bringing, carrying or possessing weapons or explosive devices aboard U.S. vessels.¹²⁰

F. United Nations Security Council Responses to Proliferation and Terrorism

In early 2004, the growing threat posed by the proliferation of WMD and the potential for their use by terrorist organizations prompted the Security Council to invoke its authority under Chapter VII of the Charter. Resolution 1540—which is binding on all states—now forms an essential component of the international nonproliferation regime applicable to states.

Over the years, the Security Council has addressed the threats of global terrorism and weapons proliferation and trafficking in a number of resolutions. In Resolution 1368, issued the day after the September 11 attacks, the council implicitly found that an attack by non-state actors can trigger the inherent right of self-defense under Article 51 of the Charter.¹²¹ The right was ultimately extended to actions against the states that harbored those non-state actors. Importantly, no state appears to have objected to extending the right of self-defense to non-state actors. Thus, the United Nations Charter is now understood by many to include a right of self-defense against attacks by non-state actors and those who harbor them.¹²²

On September 28, 2001, the Council passed Resolution 1373, which requires all states to refrain from providing any kind of support to persons involved in terrorist acts and to eliminate the supply of weapons to terrorists.¹²³ Four years later, in Resolution 1617, the Council reaffirmed the duty of all states

¹¹⁷ See Pub. L. No. 101-510, Div. A, Title XVII, § 1702(b), Nov. 5, 1990, 104 Stat. 1741; 50 App. U.S.C. § 2410b(a) (2005).

¹¹⁸ 50 App. U.S.C. § 2410b(b) (2005).

¹¹⁹ See 18 U.S.C. §§ 831, 842 (2005).

¹²⁰ See 18 U.S.C. § 2277 (2005).

¹²¹ S.C. Res. 1368, U.N. Doc. S/RES/1368 (Sept. 12, 2001).

¹²² It should be noted that Article 2(4) does not prohibit a state’s use of force against non-state actors *per se*. On November 2, 2002, a Predator UAV fired a Hellfire missile at a car carrying suspected al Qaeda operatives in the Yemen frontier. The principal target of the strike was Qaed Salim Sinan al Harethi, who was suspected of being a key al Qaeda operative in the attack on the USS Cole. Jonathan Landay, *U.S. says CIA missile kills six from al-Qaeda*, PHILA. INQUIRER, Nov. 5, 2002. Reportedly, the government of Yemen consented to the missile strike after earlier losing eighteen Yemeni soldiers in an unsuccessful attempt to apprehend the al Qaeda suspects in a remote region controlled by the tribes.

¹²³ S.C. Res. 1373, U.N. Doc. S/RES/1373 (Sept. 28, 2001).

to prevent the transfer of arms to listed terrorists.¹²⁴ Resolution 1373 notes the dangers posed by illegal movement of nuclear, chemical, biological and other potentially deadly materials and emphasizes the need to enhance efforts on the international, regional and national levels to strengthen the global response to the serious challenge and threat to international security posed by those weapons.

On September 23, 2003, President Bush—seeking further United Nations action—reported on the progress of the Proliferation Security Initiative to the United Nations General Assembly:

Through our Proliferation Security Initiative, eleven nations are preparing to search planes and ships, trains and trucks carrying suspect cargo, and to seize weapons or missile shipments that raise proliferation concerns. The nations have agreed on a set of interdiction principles, consistent with current legal authorities. And we're working to expand the Proliferation Security Initiative to other countries. We're determined to keep the world's most destructive weapons away from all our shores, and out of the hands of our common enemies.¹²⁵

The President announced to the General Assembly that he was asking the Security Council to adopt a new anti-proliferation initiative that would call on all states to criminalize the proliferation of weapons of mass destruction, enact strict export controls consistent with international standards, and secure any and all sensitive materials within their borders, thus closing the loopholes in the existing anti-proliferation regime.

In early 2004, the council specifically addressed the need for all states to prevent vessels or aircraft flying their flag from being used to transport arms and related materials of all types, including weapons and ammunition.¹²⁶ But

¹²⁴ S.C. Res. 1617, ¶ 1(c), U.N. Doc. S/RES/1617 (Jul. 29, 2005).

¹²⁵ The White House, *Remarks by President George W. Bush to the United Nations General Assembly*, New York, NY, Sept. 23, 2003, at 3, available at <http://www.whitehouse.gov/news/releases/2003/09/20030923-4.html>.

¹²⁶ S.C. Res. 1526, ¶ 1(c), U.N. Doc. S/RES/1526 (Jan. 30, 2004). Paragraph 1 of the resolution provides that the Security Council:

1. *Decides* to improve . . . the implementation of the measures . . . with respect to Usama bin Laden, members of the Al-Qaida organization and the Taliban and other individuals, groups, undertakings and entities associated with them . . . to:

(c) Prevent the direct or indirect supply, sale or transfer, to these individuals, groups, undertakings and entities from their territories or by their nationals outside their territories, or using their flag vessels or aircraft, of arms and related material of all types including weapons and ammunition, military vehicles and equipment, paramilitary equipment, and spare parts for the aforementioned and technical advice, assistance, or

many felt that specific measures calling for universal criminalization of WMD trafficking and transport were still needed. The Council debated various proposed drafts of the resolution for several months¹²⁷ before unanimously passing Resolution 1540 on April 28, 2004.¹²⁸ Resolution 1540 was co-sponsored by France, the Philippines, Romania, Russia, Spain and the United States. It includes the key finding under Article 39 of the United Nations Charter that the danger posed by proliferation of WMD threatens international peace and security.¹²⁹ Arguably, the council's resolution therefore implicates Article 88 of the LOS Convention, which reserves the high seas for peaceful purposes.¹³⁰

Resolution 1540 requires all states to “refrain from providing any form of support to non-State actors that attempt to develop, acquire, manufacture, possess, transport, transfer or use nuclear, chemical or biological weapons and their means of delivery,” and to:

adopt and enforce appropriate effective laws which prohibit any non-State actor to manufacture, acquire, possess, develop, transport, transfer or use nuclear, chemical or biological weapons and their means of delivery, in particular for terrorist purposes, as well as attempts to engage in any of the foregoing activities, participate in them as an accomplice, assist or finance them.¹³¹

Finally, all states must “take and enforce effective measures to establish domestic controls to prevent the proliferation of nuclear, chemical, or biological weapons and their means of delivery. . . .”¹³²

To monitor compliance with the resolution, the council established a Nonproliferation Committee and required all states to submit reports on their

training related to military activities; and *recalls* that all States shall implement the measures with respect to listed individuals and entities

¹²⁷ See UN WIRE, *U.N. Draft Resolution Would Require States Deny Terrorists WMDs*, Mar. 25, 2004, available at http://www.unwire.org/UNWire/20040212/449_13079.asp.

¹²⁸ S.C. Res. 1540, U.N. Doc. S/RES/1540 (Apr. 28, 2004). See also G.A. Res. 59/80, U.N. Doc. A/RES/59/80 (Dec. 16, 2004) (urging all U.N. member states to strengthen national measures to prevent terrorists from acquiring weapons of mass destruction, their means of delivery and materials and technologies related to their manufacture).

¹²⁹ Resolution 1540 reaffirms a 1993 statement by the president of the Security Council to that same effect.

¹³⁰ Although “peaceful” is not defined in the LOS Convention, activities condemned by Security Council Resolution 1540 as a threat to international peace and security might well violate Article 88 of the LOS Convention. Nevertheless, Article 88 is not self-executing, and does not in itself confer a right to board vessels whose use of the high seas is not peaceful.

¹³¹ S.C. Res. 1540, U.N. Doc. S/RES/1540 (Apr. 28, 2004).

¹³² *Id.*

compliance efforts to the committee. The United States submitted its first report on September 27, 2004.¹³³

The message sent by the Security Council in Resolution 1540 seems clear: the burden of preventing proliferation is one shared by *all* states. Several Security Council members characterized the resolution as a measure to fill a gap in the existing system, particularly with respect to measures aimed at denying WMD access to terrorists and other non-state actors.¹³⁴ The president of the Council emphasized that the disarmament, arms control and nonproliferation regime played the key role for realizing the goals of the resolution, but he also pointed out that the resolution does not authorize unilateral enforcement measures if a given state fails to take effective and appropriate implementation action. Any such action would be the subject of further decisions of the Council, which remain seized of the matter.¹³⁵ It is also important to note that the resolution directly addresses only proliferation to non-state actors, not to states. In 2006, the Security Council passed Resolution 1673, extending the program established by Resolution 1540 for two years.¹³⁶ It is too soon to predict, however, whether Resolution 1540, Resolution 1718 against North Korea, Resolution 1737 against Iran, and the growing family of resolutions aimed at denying terrorists access to weapons will measurably strengthen the developing anti-proliferation regime.

II. CONCLUSION

Global efforts to halt and eventually reverse proliferation of the world's most dangerous weapons incorporate a range of anti-proliferation measures, including bans on production or use of some WMD, with the long-term goal of disarmament, provisions for safeguarding materials in transport or storage, export controls in source states, information sharing and interdictions. The global nonproliferation system is not without serious gaps. Perhaps such gaps are inevitable in a horizontal community of sovereign states, the collective security of which is the responsibility of an ideologically divided Security

¹³³ See U.S. Dep't of State, *United States Report to the Nonproliferation Committee--Efforts Regarding United Nations Security Council Resolution 1540*, Sep. 27, 2004, available at <http://www.state.gov/t/np/rls/37375.htm>.

¹³⁴ U.N. Security Council Press Release SC/8076 (4956th meeting), Apr. 28, 2004, available at <http://www.un.org/News/Press/docs/2004/sc8076.doc.htm>. See also Report of the 4956th Meeting of the Security Council, Apr. 28, 2004, U.N. Doc. S/PV.4956 (2004).

¹³⁵ Reportedly, China agreed to support the resolution only after a provision for interdiction at sea was removed, stating publicly that "[t]hat nasty word, interdiction, has been taken out." See *U.S. Wins China's Support for Ban on Proliferation*, BLOOMBERG.COM NEWS, Mar. 25, 2004; Warren Hodge, *Ban on Weapons of Doom is Extended to Qaeda-Style Groups*, N.Y. TIMES, Apr. 29, 2004 (reporting that China ended a threat to use its veto when language that called for interception at sea was dropped).

¹³⁶ S.C. Res. 1673, U.N. Doc. S/RES/1673 (Apr. 27, 2006).

Council, whose members display disparate attitudes toward risk, particularly when the risk is to an abstract and distant “international” peace and security rather than to their individual or regional security.

Maritime Security Operations will likely continue to target vessels trafficking in or transporting WMD and their delivery systems. It must be borne in mind, however, that in the absence of a claim of self-defense or authorization by the U.N. Security Council, at-sea “enforcement” actions presume an applicable law actually prohibits the conduct involved. Until the nonproliferation regime is more fully developed and universally adopted, there will continue to be gaps in the regime that, to the consternation of many, might permit a vessel to transport WMD or missile components from one state to another with legal impunity.

