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From Start to Finish: A Historical Review of Nuclear Arms Control Treaties and Starting Over With the New Start

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Recommended Citation

Lisa M. Schenck & Robert A. Youmans, 20 *Cardozo J. Int'l Comp. L.* 399, 436 (2012)

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FROM START TO FINISH: A HISTORICAL REVIEW OF NUCLEAR ARMS CONTROL TREATIES AND STARTING OVER WITH THE NEW START

Lisa M. Schenck & Robert A. Youmans***

[O]n August 6, [1945,] a new weapon exploded over Hiroshima. Its stupendous power, shattering old concepts of war and weaponry, imposed new urgencies and demanded new perspectives on international efforts to control armaments.

The first U.S. proposal for the control of nuclear weapons recognized that this new force involved the interests of the entire world community.¹

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¹ U.S. ARMS CONTROL & DISARMAMENT AGENCY, ARMS CONTROL AND DISARMAMENT AGREEMENTS: TEXTS AND HISTORIES OF THE NEGOTIATIONS 2 (1996) [hereinafter ACDA].

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I. INTRODUCTION

Rather than commencing with the U.S. bombings of Hiroshima and Nagasaki, the nuclear age actually began on the morning of July 16, 1945, near Alamogordo, New Mexico, with the detonation of the world's first nuclear weapon in the so-called Trinity Explosion.² That test validated the design and functionality of the plutonium implosion device,³ nicknamed “Fat Man” because of the round shape of the bomb casing.⁴ The Trinity Explosion produced a 21-kiloton blast, the equivalent of exploding 21,000 tons of TNT.⁵ On August 9, 1945, less than one month after the Trinity Explosion, a Fat Man implosion bomb was dropped on Nagasaki, Japan, killing an estimated 40,000 people.⁶ This bombing, combined with the use of the “Little Boy” uranium bomb against Hiroshima three days earlier, killed approximately 110,000 people and led to the end of World War II in the Pacific theater.⁷ The explosion over Hiroshima,⁸ and the subsequent

² HARRY A. GAILEY, *THE WAR IN THE PACIFIC: FROM PEARL HARBOR TO TOKYO BAY* 479 (1995).

³ See F.G. GOSLING, U.S. DEP'T OF ENERGY, *THE MANHATTAN PROJECT: MAKING THE ATOMIC BOMB 91-92* (2010), http://energy.gov/sites/prod/files/edg/media/The_Manhattan_Project_2010.pdf.

⁴ See *id.* at 83 (stating that the Fat Man was “named after Winston Churchill”).

⁵ *Id.*

⁶ *Id.*

⁷ *Id.*; see GAILEY, *supra* note 2, at 488, 490.

detonation on Nagasaki, catalyzed global collective action to address nuclear arms control. Unfathomable dimensions of potential destruction transformed the concepts of waging war and maintaining peace,⁹ and the public understood the risks.

Over the past six and a half decades, the world has watched as global powers negotiated arms control, grappling with this lethal international issue. Nuclear arms control negotiations from 1925 to 2010 can be segmented into distinct periods reflecting different approaches to the threat of nuclear arms. Six stages can be distinguished by their evolving focused objectives:

- (1) 1925–1958, concentrating on comprehensive disarmament;
- (2) 1959–1968, attempting to implement partial measures to achieve nuclear arms control;
- (3) 1969–1979, holding bilateral talks (enhancing stability, as well as maintaining world order and non-proliferation);
- (4) 1980–1991, involving reassessment and repositioning by the United States and the Union of Soviet Socialist Republics (U.S.S.R. or Soviet Union);¹⁰
- (5) 1991–2009, a period of uncertainty caused by the impact of the Soviet Union's dissolution on the Strategic Arms Reduction Talks (START) and corresponding treaties;¹¹ and
- (6) 2009–present, encompassing the most recent

⁸ In a public statement on August 6, 1945, President Truman informed the public: That bomb had more power than 20,000 tons of T.N.T. It had more than two thousand times the blast power of the British "Grand Slam" which is the largest bomb ever yet used in the history of warfare. . . . With this bomb we have now added a new and revolutionary increase in destruction to supplement the growing power of our armed forces. . . . It is the atomic bomb. It is a harnessing of the basic power of the universe.

White House Press Release on Hiroshima, August 6, 1945: Statement by the President of the United States, reprinted in THE AMERICAN ATOM: A DOCUMENTARY HISTORY OF NUCLEAR POLICIES FROM THE DISCOVERY OF FISSION TO THE PRESENT 64-65 (Philip L. Cantelon et al. eds., 2d ed. 1991).

⁹ See ACDA, *supra* note 1, at 1.

¹⁰ See H.R. FOREIGN AFFAIRS COMM., SUBCOMM. ON ARMS CONTROL, INTERNATIONAL SECURITY & SCIENCE, 99TH CONG., FUNDAMENTALS OF NUCLEAR ARMS CONTROL: PART I—NUCLEAR ARMS CONTROL: A BRIEF HISTORICAL SURVEY IX-X (Comm. Print 1985) (prepared by the Congressional Research Service) [hereinafter 1985 NUCLEAR ARMS CONTROL REPORT] (setting forth a similar break down of time periods, asserting that 1957 to 1968 was a comprehensive disarmament period, 1969 to 1979 reflected arms control through partial measures, and 1980 to 1984 was a period of reassessing and repositioning by the United States and U.S.S.R.).

¹¹ See, e.g., George Bunn & John B. Rhinelander, *The Arms Control Obligations of the Former Soviet Union*, 33 VA. J. INT'L L. 323 (1993).

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developments since the expiration of the START Treaty.¹²

This Article provides a historical review, describing nuclear arms control agreements that helped diminish the nuclear arms threat and build up.

Even as negotiations were occurring, the United States and the Soviet Union began a nuclear arms race, with each striving to gain a military advantage over the other by building more and more nuclear weapons and the means to deliver them. This race led to a debate about the appropriate means to deal with the nuclear arms problem—i.e., arms control. Essentially, collective arms control responses from 1925 to 1991 evolved into three types of agreements, which focused on: (1) non-armament; (2) confidence-building measures; and (3) arms limitations.¹³

After 1991, the focus became arms reduction, which initially began as a bilateral measure, but has since become multilateral due to the Soviet Union's dissolution. As the United States and Soviet Union came to realize that their vast expenditures on nuclear weapons were not making either side safer from the other, both parties were drawn to the negotiating table in the late 1960s to discuss limits on strategic nuclear weapons.¹⁴ These negotiations resulted in the Strategic Arms Limitation Talks (SALT) Treaties,¹⁵ which later led to the START Treaties—the latest iteration of which is the New START Treaty. The relative merits of the New START Treaty were debated at great length during the ratification process in the United States and in the Russian Federation. This Article describes how we arrived at this point in the global efforts to regulate nuclear weapons, how each approach differed and was built on previous experience, the impact of world events on negotiations and the resultant pressure on the parties to achieve agreement, and what we can expect in the future of nuclear arms control.

¹² The START Treaty expired on December 5, 2009. See *Comparison of the START Treaty, Moscow Treaty, and New START Treaty: Fact Sheet*, U.S. DEP'T OF STATE (Apr. 8, 2010), <http://www.state.gov/t/avc/rls/139901.htm>.

¹³ These categories reflect those presented in the 1985 Congressional Nuclear Arms Control Report. See *id.* at IX-XIII.

¹⁴ See NAT'L ACAD. OF SCIS., *NUCLEAR ARMS CONTROL: BACKGROUND AND ISSUES* 24, 25-27 (1985).

¹⁵ See *id.* at 27-32.

II. 1925–1958: COMPREHENSIVE DISARMAMENT FOCUS

Prior to 1945 and the nuclear era, global collective agreements regarding disarmament and arms control primarily resulted from constraints imposed upon the defeated by victors, rather than mutually-negotiated agreements.¹⁶ From 1926 to 1934, disarmament discussions (including the League of Nations-sponsored multilateral general disarmament conferences) revolved around the reduction of weapons and armed forces (predominantly naval), and the diminution of poison gas use (such as in World War I) and bacteriological weapons.¹⁷ Prior to World War II, these diplomatic efforts to reduce and limit arms established a multilateral diplomatic structure, which included several major powers controlling global political influence, relied on agendas that focused on comprehensive disarmament, but actually resulted in participants' weaponry growing in size, sophistication, and lethality.¹⁸

Following the 1945 nuclear detonation in Hiroshima, arms control and disarmament proposals included stipulations regarding the timing of disarmament—i.e., the pace and order for eliminating weapons—and reduction of armed forces without a corresponding weakening of any one nation's security.¹⁹ The world grappled with “[t]he inherent difficulty of promoting the peaceful uses of the atom, without easing the proliferation of nuclear weapons, [which] ultimately led the Truman administration to propose the Baruch [P]lan”²⁰

In 1946, Bernard Baruch, the U.S. representative to the U.N. Atomic Energy Commission, presented a plan to place the world's atomic resources under the purview of an independent international authority (the Baruch Plan).²¹ According to the proposal, the International Atomic Development Authority would have exclusive control or ownership of atomic resources

¹⁶ See ACDA, *supra* note 1, at 1.

¹⁷ See *id.* at 1-2.

¹⁸ See Joseph Keith Lyou, *The Social Psychology of U.S.-Soviet Arms Control Negotiations: The Role and Experience of the U.S. Negotiator and Delegation* 11-13 (June 1990) (unpublished Ph.D. dissertation, University of California Santa Cruz) (on file with author) [hereinafter Lyou Dissertation].

¹⁹ See ACDA, *supra* note 1, at 3.

²⁰ THOMAS GRAHAM, JR. & DAMIEN J. LAVERA, *CORNERSTONES OF SECURITY: ARMS CONTROL TREATIES IN THE NUCLEAR ERA 2* (2003).

²¹ See ACDA, *supra* note 1, at 2.

production—mining to manufacturing—and destruction.²² The Baruch Plan further proposed that the United States—the only country possessing such weapons—relinquish its atomic arsenal and secrets to the independent authority, which would inspect all nation parties²³ willing to destroy existing bombs and stop manufacturing weapons.²⁴ Essentially, the Baruch Plan called on the United States to abandon “its nuclear weapons program after all other states agreed to accept international control over their nuclear programs.”²⁵ The Soviet Union, however, declined to hand over its “atomic future” to a majority vote of the U.N. Security Council²⁶ and opposed the staging, ownership, and enforcement provisions of the Baruch Plan.²⁷

In the years following World War II, technological advancements continued and nuclear weapons changed. Larger, more powerful nuclear weapons were developed and mating them to ballistic missiles provided greater range, accuracy, and throw-weight.²⁸ Perhaps most alarming, the number of nations possessing these fearsome weapons increased, first evidenced by the Soviet Union’s detonation of a nuclear weapon on August 29, 1949.²⁹ Thus, Cold War rivals, the United States and Soviet Union, began their infernal race to develop weapons that were more lethal and deployed by more advanced weapon-delivery systems. By 1953, these rivals owned and had exploded hydrogen bombs, thus initiating the nuclear arms race.

The “deterrence” theory of arms control has its foundation in a somewhat odd notion—i.e., treating the U.S.–U.S.S.R. nuclear arms race as a method to maintain peace.³⁰ In 1954, Secretary of

²² *See id.*

²³ *Id.* at 3.

²⁴ *See* THE AMERICAN ATOM: A DOCUMENTARY HISTORY OF NUCLEAR POLICIES FROM THE DISCOVERY OF FISSION TO THE PRESENT 70 (Philip L. Cantelon et al. eds., 2d ed. 1991) [hereinafter THE AMERICAN ATOM].

²⁵ GRAHAM & LAVERA, *supra* note 20, at 2.

²⁶ *See* THE AMERICAN ATOM, *supra* note 24, at 70.

²⁷ *See* ACDA, *supra* note 1, at 2.

²⁸ For a discussion of the concept of throw-weight, see NOTBURGA K. CALVO-GOLLER & MICHEL A. CALVO, THE SALT AGREEMENTS: CONTENT–APPLICATION–VERIFICATION 56 (1987).

²⁹ *See* MINISTRY OF THE RUSSIAN FED’N FOR ATOMIC ENERGY & MINISTRY OF DEF. OF THE RUSSIAN FED’N, USSR NUCLEAR WEAPONS TESTS AND PEACEFUL NUCLEAR EXPLOSIONS: 1949 THROUGH 1990, at 11 tbl.3 (V. N. Mikhailov et al. eds., 1996), http://npc.sarov.ru/english/issues/peaceful/peaceful_e.pdf; *see also* ACDA, *supra* note 1, at 3.

³⁰ THE AMERICAN ATOM, *supra* note 24, at 194.

State John Foster Dulles established the doctrine of massive retaliation as the basis to deter war and Soviet aggression, “whereby the United States would maintain peace by maintaining its ability to respond to a nuclear attack or any other form of aggression with an all-out nuclear attack upon the Soviet Union.”³¹ Although nations throughout the world remained apprehensive about possible proliferation (the expanding possession of weapons), concern also existed regarding the testing of nuclear weapons and the risk of radioactive debris and accidents, whether caused by human error or miscalculation, mechanical failure or malfunction, or an unauthorized or misinterpreted action.³²

From 1956 to 1962, the United States (through the Atoms for Peace program) supplied peaceful nuclear technology—such as research reactors, training, and fissionable material—to twenty-six developing and friendly nations.³³ In return, the recipient nations fulfilled U.S.-required safeguards, such as having inspectors continually monitor the transferred technology to ensure its peaceful use.³⁴ Nevertheless, until 1959, negotiations primarily focused on comprehensive disarmament, with the United Nations’ global leadership and Presidents Truman (1945–1952) and Eisenhower (1953–1960) at the helm for the United States. However, negotiations did not result in any formal international arms control agreements during the period 1945–1958.³⁵

III. 1959–1968: PARTIAL MEASURES TO ADDRESS ARMS CONTROL

From the late 1950s to 1960s, global arms control negotiations shifted their focus from the generalized commitment to comprehensive disarmament (i.e., disarming the world) to the more focused approach of deterrence (i.e., preventing use of nuclear weapons). With the development of intercontinental

³¹ *Id.* at 193.

³² *See* ACDA, *supra* note 1, at 88.

³³ *See* GRAHAM & LAVERA, *supra* note 20, at 2.

³⁴ *Id.*

³⁵ *See* Lyou Dissertation, *supra* note 18, at 14. Lyou discusses the various events that stalled negotiations:

The Berlin Blockade, the Czechoslovakian coup, the Truman Doctrine, the first Soviet atomic weapons test, the communist takeover in China, the Korean War, the development of the hydrogen bomb, McCarthyism, and the successful launching of Sputnik I all contributed to, and were the result of, heightened post-war contentiousness between the nascent superpowers.

Id. at 14-15.

ballistic missiles in the late 1950s came reduced delivery time for strategic weapons (from hours to minutes), and a modified U.S. political position from deterrence of war to avoidance of Soviet aggression.³⁶

By 1964, the arms race between the United States and Soviet Union reached a point at which curtailment became necessary. Meanwhile, the United Kingdom, France, and People's Republic of China had already tested nuclear weapons, and dozens of others nations had the potential capability to develop these lethal weapons.³⁷ The need for accountability for nuclear materials production, and the possibility of illegal stockpiles or concealed weapons-manufacturing sites, highlighted the benefits of flexibility and practicality in negotiations.³⁸ Consequently, attempts at negotiating limited or partial measures became the primary focus of negotiations. This focus was predicated on an underlying hope that gradual progress toward complete disarmament could be accomplished by limiting the scope of agreements (thereby dividing the nuclear arms threat into "pieces").³⁹

From this point on, arms control negotiations progressed in three areas. A 1985 Congressional Report, *The Fundamentals of Nuclear Arms Control*, astutely categorized nuclear arms control agreements into three categories: (1) non-armament agreements, which limit militarization from certain areas; (2) confidence-building measures, which reduce the risk of war; and (3) arms-limitation agreements, which constrain development, testing, and deployment of nuclear weapons technologies.⁴⁰

A. *Non-Armament Agreements*

During the period from 1959 to 1968, multilateral negotiations resulted in several non-armament agreements. In 1959, for example, the multilateral Antarctic Treaty established a non-armament agreement which demilitarized the Antarctic, rendering the area off-limits for any but peaceful purposes. Such non-armament treaties were "designed to keep free of conflict and

³⁶ See THE AMERICAN ATOM, *supra* note 24, at 194.

³⁷ GRAHAM & LAVERA, *supra* note 20, at 2.

³⁸ See ACDA, *supra* note 1, at 3-4.

³⁹ See *id.*

⁴⁰ 1985 NUCLEAR ARMS CONTROL REPORT, *supra* note 10, at IX-X. The authors have adopted these categories from the 1985 Congressional Nuclear Arms Control Report for use in this Article.

nuclear weaponry the environments that science ha[d] made newly accessible and significant, and whose resources must be preserved for all—for example, outer space or the seabed—or geographic regions where nuclear weapons ha[d] not been introduced—Antarctica and Latin America.”⁴¹ The Antarctic Treaty was followed by the Latin American Nuclear-Free Zone Treaty of 1967 (prohibiting the introduction, use, and threat of use of nuclear weapons in Latin America), the Outer Space Treaty of 1967 (prohibiting the presence and use of weapons of mass destruction in outer space and limiting the moon to peaceful uses), and the Nuclear Non-Proliferation Treaty (NPT) of 1968 (maintaining the non-nuclear-weapon status of nations).⁴² Each of these agreements focused on keeping certain areas free of armaments. The parties to them attempted to restrict the expansion of nuclear arms to certain geographical areas, and thereby fulfilled a sub-issue within the overall threat of nuclear arms and the generalized goal of complete disarmament.

The Latin American Nuclear-Free Zone Treaty of 1967 (also known as the Treaty of Tlatelolco) was the first of the nuclear-weapon-free-zone (NWFZ) treaties.⁴³ Such agreements were designed:

[T]o enhance international regulation of nuclear arms by establishing geographical regions wherein the testing, possession, and stationing of nuclear weapons are prohibited. . . . [to] reduce the likelihood that states in th[at]

⁴¹ ACDA, *supra* note 1, at 4.

⁴² 1985 NUCLEAR ARMS CONTROL REPORT, *supra* note 10, at X. The NPT “called for non-nuclear-weapon states to forgo development of nuclear weapons and to expose their nuclear power facilities to international safeguards and inspections.” *Id.* Although parties to the NPT included many nations:

The continued absence of two nuclear weapons states (the [People’s Republic of China] and France), the one previously nonnuclear power to subsequently conduct a known nuclear test (India), and a number of potential nuclear powers (including Libya, Pakistan, Israel, Taiwan, South Korea, South Africa, Argentina, and Brazil) from the group of nations committed to the treaty . . . limit[ed] its effectiveness.

Id. In 1977, the Agreement between the United States and the International Atomic Energy Agency for the Application of Safeguards in the United States (U.S.–IAEA Safeguards Agreement), a follow-on to the NPT, described the process of selecting U.S. facilities in which to apply the full regime of IAEA safeguards procedures, including routine inspections. *See* ACDA, *supra* note 1, at 163.

⁴³ *See* GRAHAM & LAVERA, *supra* note 20, at 3-4, 41. The Latin American NWFZ treaty was followed by the South Pacific NWFZ treaty in 1985, Southeast Asia in 1995, and Africa in 1996. *See id.* at 41.

region[] will be compelled to seek nuclear weapons in response to a neighbor, thereby decreasing their probability of becoming involved in a nuclear war.⁴⁴

Ambassador Thomas Graham, Jr. has called the NWFZ treaty process “a regional security idea to limit the risk that others near you may obtain nuclear arms”⁴⁵ and “the back-door route toward the elimination of nuclear weapons.”⁴⁶

On July 1, 1968, the United States signed the Nuclear Non-Proliferation Treaty (NPT).⁴⁷ The NPT represented the first major effort by the international community of nations to limit the proliferation of weapons of mass destruction. Article VII of the treaty, for example, authorized states to establish NWFZs in their territories.⁴⁸ By the early 1960s, there were five declared nuclear powers—the United States, United Kingdom, Soviet Union, China, and France—and growing international concern that this number could increase.⁴⁹ The NPT, which entered into force on March 5, 1970, recorded the “bargain”⁵⁰ between the declared nuclear states and the non-nuclear states: the declared nuclear states agreed not to transfer nuclear weapons to non-nuclear states,⁵¹ while at the same time working towards the goal of eventual nuclear disarmament;⁵² the non-nuclear states agreed not to acquire nuclear weapons⁵³ and to accept full-scope safeguards

⁴⁴ *Id.* at 41.

⁴⁵ Interview with Thomas Graham, Jr., Ambassador to the International Atomic Energy Agency (IAEA), in Bethesda, Md. (Dec. 29, 2006) [hereinafter Graham Interview] (Ambassador Graham’s professional history also includes: Legal Advisor to the U.S. Strategic Arms Limitation Talks (SALT) II Delegation (1974–79), Senior Arms Control Agency Representative to the U.S. Intermediate-Range Nuclear Forces Delegation (1981–82), Legal Advisor to the U.S. Nuclear and Space Arms Delegation (1985–88), and the Senior Arms Control Agency Representative and Legal Advisor to the U.S. Delegation to the Conventional Armed Forces in Europe (CFE) Treaty Negotiation (1989–90), and Legal Advisor to the U.S. Delegation to the NPT Review Conference (1980)).

⁴⁶ THOMAS GRAHAM, JR., *DISARMAMENT SKETCHES: THREE DECADES OF ARMS CONTROL AND INTERNATIONAL LAW* 19 (2002).

⁴⁷ Treaty on the Non-Proliferation of Nuclear Weapons, *opened for signature* July 1, 1968, 21 U.S.T. 483, 729 U.N.T.S. 161 [hereinafter Nuclear Non-Proliferation Treaty].

⁴⁸ *See id.* art. VII.

⁴⁹ *See* William Epstein, *The Non-Proliferation Treaty and the Review Conferences: 1965 to the Present*, in 2 *ENCYCLOPEDIA OF ARMS CONTROL AND DISARMAMENT* 855-62 (Richard Dean Burns ed., 1993).

⁵⁰ *See Nuclear Nonproliferation Treaty*, U.S. DEP’T OF STATE, <http://www.state.gov/t/isn/npt/index.htm> (last visited Feb. 2, 2012).

⁵¹ *See* Nuclear Non-Proliferation Treaty, *supra* note 47, art. I.

⁵² *See id.* art. VI.

⁵³ *See id.* art. II.

on all their peaceful nuclear activities and facilities.⁵⁴ While the number of nuclear weapon states—both declared and undeclared—has increased since 1970, the NPT remains the cornerstone of international efforts to prevent the further spread of nuclear weapons and, with over 180 parties, it is the most widely adhered-to arms control agreement in history.⁵⁵

In the NPT itself, the parties further restrained nuclear arms expansion by prohibiting countries from spreading nuclear weapons technology. The parties negotiated the NPT due to U.S. and Soviet concerns regarding China's nuclear weapons testing.⁵⁶ Non-weapons states saw nuclear weapon capability as the "ultimate indicia of respect" as a "powerful" or "big" world power.⁵⁷ To achieve a consensus, weapon states had to entice the non-weapon states with a balanced commitment that would eliminate the political attractiveness of possession of the weapons themselves.⁵⁸ Article VI of the NPT was that key provision, requiring the leading "proliferation concern"—i.e., the United States—to ultimately relinquish its nuclear arms program.⁵⁹ Although the five nuclear weapons states promised in Article VI to negotiate to end the arms race, reduce nuclear armaments, and eliminate the nuclear arsenals,⁶⁰ this was not the crucial bargaining provision. The overall objective to eliminate the nuclear program of the key arms leader, the United States, was more important and there has been consistent support for this goal with each Presidential Administration.⁶¹

With this multilateral agreement, non-nuclear weapon states

⁵⁴ See *id.* art. III.

⁵⁵ See LAWRENCE SCHEINMAN, WEAPONS OF MASS DESTRUCTION COMM'N, ARTICLE IV OF THE NPT: BACKGROUND, PROBLEMS, SOME PROSPECTS (2004), available at <http://www.blixassociates.com/wp-content/uploads/2011/03/No5.pdf>.

⁵⁶ Interview with Dr. Barry M. Blechman, Board Member, Dep't of Def. Policy Bd., in Washington, D.C. (Feb. 15, 2007) [hereinafter Blechman Interview] (former Assistant Director of the U.S. Arms Control and Disarmament Agency (1977), Deputy Chairman of the U.S. Delegation for Negotiations on Arms Transfers, and Member of the Commission to Assess the Ballistic Missile Threat to the United States (Rumsfeld Commission 1998)).

⁵⁷ Graham Interview, *supra* note 45; GRAHAM, *supra* note 46, at 327.

⁵⁸ Graham Interview, *supra* note 45.

⁵⁹ Blechman Interview, *supra* note 56.

⁶⁰ GRAHAM & LAVERA, *supra* note 20, at 2.

⁶¹ Blechman Interview, *supra* note 56. This provision has been the subject of some controversy. For example, even though the United States has not conducted nuclear arms testing since 1992, and by 2012 will have reduced its arsenal by 80%, some contend that the United States has not fulfilled its obligation to *eliminate* the nuclear weapons program. *Id.*

agreed never to acquire nuclear weapons,⁶² while nuclear weapon states agreed “to share the benefits of peaceful nuclear technology and to engage in disarmament negotiations aimed at the ultimate elimination of nuclear weapons.”⁶³ Parties used these non-armament agreements to limit expansion of the nuclear arms threat and associated risks. The NWFZ treaties provided area security for nations, while the NPT provided overall assurance that nuclear weapon states would not pass on their capabilities.⁶⁴

B. Confidence-Building Measures

The Cuban Missile Crisis⁶⁵ in October 1962 highlighted the “imminence of nuclear war” among superpower leaders and “stimulated a new willingness to explore bilateral approaches to tension reduction and crisis management.”⁶⁶ Additionally, the world watched and wondered about the potential risk of nuclear war, whether caused by accident, misunderstanding, or intentional acts of aggression. In response to the public and political prominence of this life-threatening issue, two international

⁶² See Nuclear Non-Proliferation Treaty, *supra* note 47, art. II.

⁶³ GRAHAM, *supra* note 46, at 327.

⁶⁴ After the international community had addressed the threat posed by the proliferation of nuclear weapons with the NPT, the related threat posed by the proliferation of missiles and missile technology was also recognized. As a result, the Missile Technology Control Regime (MTCR) was established in 1987. See MTCR, <http://www.mtcr.info/english/index.html> (last visited Jan. 8, 2012). The MTCR is a non-legally binding political arrangement among nations that are suppliers of missile technology who share the common goal of preventing the proliferation of missiles and missile technology. *Id.* Its current membership is 34 nations. *Id.* The Regime consists of a common export policy, set forth in the *MTCR Guidelines*, which is applied to a common list of controlled items, set forth in the *MTCR Equipment and Technology Annex*, that represents virtually all of the equipment and technology that would be needed for missile development, production and operation. *Id.* Each member nation pledges to implement export controls on these items in accordance with their national legislation. *Id.* The United States has done so by means of the Arms Export Control Act, 22 U.S.C. §§ 2751–2799 (2006). Under the *MTCR Guidelines*, all missile and missile technology exports are to be subjected to a “case-by-case” review and all Category I exports—complete missile systems and major components thereof—are to be subjected to a “strong presumption” of denial. *MTCR Guidelines and the Equipment, Software and Technology Annex*, MTCR, <http://www.mtcr.info/english/guidelines.html> (last visited Jan. 8, 2012).

⁶⁵ The Cuban Missile Crisis entailed thirteen days following the United States’ discovery of the Soviet Union’s strategic offensive missiles positioned in Cuba, and involved the U.S. naval quarantine of Soviet shipments to Cuba launched in response, which resulted in the Soviet withdrawal of missiles. See GRAHAM T. ALLISON, *ESSENCE OF DECISION: EXPLAINING THE CUBAN MISSILE CRISIS 1-2* (1971).

⁶⁶ 1985 NUCLEAR ARMS CONTROL REPORT, *supra* note 10, at X.

agreements were established: the Hot Line Agreement and the Limited Test Ban Treaty.⁶⁷

The confidence-building agreement known as the “Hot Line” Agreement of 1963 (the Memorandum of Understanding Between the United States and the Union of Soviet Socialist Republics regarding the Establishment of a Direct Communications Link)⁶⁸ established an emergency link between the two superpowers. This first bilateral agreement limited the risk of war by establishing a direct, rapid, and reliable emergency communications link between the Soviet Union and the United States for use during a “military crisis which might appear directly to threaten the security of either of the states involved and where such developments were taking place at a rate which appeared to preclude the use of normal consultative procedures.”⁶⁹

In addition to stimulating the United States and Soviet Union to establish bilateral, confidence-building agreements, the Cuban Missile Crisis, a watershed event, also generated arms-limitations measures. This international crisis yielded increased public knowledge about and intensified global attention to the nature and effects of radioactive fallout and the potential for cumulative environmental contamination and resultant genetic damage.⁷⁰

C. Arms-Limitation Agreements

The 1962 Cuban Missile Crisis changed the arms-control negotiating context. This decisive event added a sense of urgency and provided a more vivid perception of the risks and capabilities involved. Public recognition of and concern regarding the threat of nuclear arms led to support for an international collective agreement.

In the mid-1950s, fallout from U.S. and Soviet testing incidents caused radioactive debris to fall on a Japanese fishing

⁶⁷ See *Hot Line Agreement: Narrative*, U.S. DEP'T OF STATE, <http://www.state.gov/t/isn/4785.htm#narrative> (last visited Feb. 2, 2012); *Limited Test Ban Treaty: Narrative*, U.S. DEP'T OF STATE, <http://www.state.gov/t/isn/4797.htm#narrative> (last visited Feb. 2, 2012).

⁶⁸ Memorandum of Understanding Between the United States of America and the Union of Soviet Socialist Republics Regarding the Establishment of a Direct Communications Link, U.S.-U.S.S.R., June 20, 1963, 472 U.N.T.S. 163 [hereinafter *Hot Line Agreement*].

⁶⁹ ACDA, *supra* note 1, at 19 (quoting U.S., *Working Paper on the Reduction of the Risk of War Through Accident, Miscalculation, or Failure of Communication* (Dec. 12, 1962) (submitted to the Eighteen-Nation Disarmament Committee)).

⁷⁰ See ACDA, *supra* note 1, at 24.

vessel in the South Pacific (U.S. test) and Japan proper experienced “rain containing radioactive debris” (Soviet test).⁷¹ As a result, the United States, Soviet Union, United Kingdom, China, and France began negotiating an agreement to end nuclear testing and established the arms-limitation measure known as the Limited Test Ban Treaty (LTBT) of 1963 (Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water).⁷² Since then, a total of 116 parties have signed on to this treaty.⁷³

The parties initially disagreed as to compliance verification provisions, including the system of controls and inspection.⁷⁴ This disagreement was motivated by concern about “clandestine violation[s],” due to a lack of verification capability or adequate seismic detectors to identify underground testing.⁷⁵ The United States demanded “onsite inspection to detect covert testing, especially underground,” while the Soviets resisted onsite inspections.⁷⁶ After high-level, three-power talks with the United States, Soviet Union, and France,⁷⁷ President Kennedy suggested removing underground testing from the scope of the agreement and the parties overcame the stalemate over verification.⁷⁸

Consequently, the LTBT prohibits nuclear testing or any other nuclear explosion in the atmosphere, outer space, and under water, or anywhere else if it would result in “radioactive debris . . . outside the borders of the state conducting the explosion.”⁷⁹ According to Acting Secretary of State Ball, “[t]he phrase ‘any other nuclear explosion’ includ[ed] explosions for peaceful

⁷¹ *See id.* at 29.

⁷² Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water, Aug. 5, 1963, 480 U.N.T.S. 43.

⁷³ *See* GRAHAM & LAVERA, *supra* note 20, at 31.

⁷⁴ *See* ACDA, *supra* note 1, at 25.

⁷⁵ *See* GRAHAM & LAVERA, *supra* note 20, at 29-30. The issue regarding detection of underground testing also delayed achieving consensus during the multilateral Comprehensive Test Ban Treaty (CTBT) negotiation, but the parties gained confidence in verification capabilities with improved technology of seismic detectors. Blechman Interview, *supra* note 56. The parties ultimately achieved consensus and signed the CTBT in 1996. *History of the CTBT: Fact Sheet*, U.S. DEP'T OF STATE (Dec. 6, 2011), <http://www.state.gov/t/avc/rls/159263.htm>.

⁷⁶ 1985 NUCLEAR ARMS CONTROL REPORT, *supra* note 10, at XI.

⁷⁷ *See* GRAHAM & LAVERA, *supra* note 20, at 30 (“In 1960, France conducted its first nuclear test in the Sahara Desert . . .”).

⁷⁸ *See id.* at 30.

⁷⁹ ACDA, *supra* note 1, at 27.

purposes.”⁸⁰ The latter distinction attempted to avoid “the difficulty of differentiating between weapon test explosions and peaceful explosions without additional controls.”⁸¹

IV. 1969–1979: BILATERAL APPROACH BEGINS

A. *Non-Armament Agreements*

Following the LTBT in 1963, some global fear faded, risks became less obvious, civil defense drills stopped in the United States, and other international concerns rose to the forefront of the global agenda when nuclear weapons testing went underground.⁸² Nevertheless, scientific advancements in oceanographic technology, interest in the ocean floor as a resource, concern about potential disputes due to the absence of established rules of law, and fear that aggressive parties could use this new environment for military installations or nuclear weapons launching sites, led to the Seabed Treaty of 1971.⁸³

Similar to the Antarctic Treaty of 1959, Outer Space Treaty of 1967, and NWFZ treaties, the Treaty on the Prohibition of the Emplacement of Nuclear Weapons and Other Weapons of Mass Destruction on the Seabed and the Ocean Floor and in the Subsoil Thereof (Seabed Treaty)⁸⁴ is a non-armament treaty. The parties faced difficulties in defining territorial waters, but ultimately agreed to a twelve-mile limit, corresponding with the definition of territorial sea in the Convention on the Territorial Sea.⁸⁵

Prior to establishing an agreement, the parties also engaged in extensive, intense discussions regarding verification provisions.⁸⁶ The Soviets proposed verification measures similar to the Outer Space Treaty—with all installations and structures open to inspection when reciprocal rights are granted—but the United States opposed such a provision because the seabed, unlike the

⁸⁰ *Id.* at 27 (quoting Acting Secretary of State Ball’s report to President Kennedy) (internal quotation marks omitted).

⁸¹ *Id.* (quoting Acting Secretary of State Ball’s report to President Kennedy) (internal quotation marks omitted).

⁸² Graham Interview, *supra* note 45; Blechman Interview, *supra* note 56.

⁸³ See ACDA, *supra* note 1, at 80.

⁸⁴ Treaty on the Prohibition of the Emplacement of Nuclear Weapons and Other Weapons of Mass Destruction on the Seabed and the Ocean Floor and in the Subsoil Thereof, Feb. 11, 1971, 955 U.N.T.S. 115.

⁸⁵ See GRAHAM & LAVERA, *supra* note 20, at 284.

⁸⁶ See ACDA, *supra* note 1, at 80.

moon, is fraught with national jurisdiction claims of the area.⁸⁷ The parties finally agreed to verification provisions which allowed the parties to use their own verification means, other parties' assistance, or international procedures. Thus, parties were given the ability to fulfill obligations without interfering with other, legitimate, seabed activities.⁸⁸

B. Confidence-Building Measures

Between 1969 and 1979, the superpowers also established three bilateral confidence-building agreements: the Agreement on Measures to Reduce the Risk of Nuclear War Between the United States of America and the Union of Soviet Socialist Republics (Accidents Measures Agreement) (1971);⁸⁹ the Agreement Between the United States of America and the Union of Soviet Socialist Republics on Measures to Improve the U.S.A.-USSR Direct Communications Link ("Hot Line" Modernization Agreement) (1971);⁹⁰ and, the Prevention of Nuclear War Agreement (1973).⁹¹ The two superpowers designed these agreements to build trust and confidence in each other.

With the Accident Measures Agreement (AMA) and the Hot Line Modernization Agreement, the parties attempted to reduce risks associated with nuclear arms. By signing the AMA, the parties committed to: maintain and improve organizational and technical safeguards against accidental or unauthorized nuclear weapons use; immediately notify the other country of any accidental, unauthorized, or unexplained incident involving possible nuclear weapon detonation which might cause a risk of nuclear war; and, to provide advanced notice of any planned missile launches beyond territorial limits in the other party's direction.⁹²

⁸⁷ See GRAHAM & LAVERA, *supra* note 20, at 284.

⁸⁸ See *id.*

⁸⁹ Agreement on Measures to Reduce the Risk of Outbreak of Nuclear War, Sept. 30, 1971, 807 U.N.T.S. 57.

⁹⁰ Agreement Between the United States of America and the Union of Soviet Socialist Republics on Measures to Improve the U.S.-U.S.S.R. Direct Communications Link, Sept. 30, 1971, 806 U.N.T.S. 402. Technological advancements in satellite communications since the 1963 Hot Line prompted the Hot Line Modernization Agreement, which established operation, equipment, and cost allocations to form two satellite communications circuits between the United States and the Soviet Union. See ACDA, *supra* note 1, at 91.

⁹¹ Agreement on the Prevention of Nuclear War, June 22, 1973, 24 U.N.T.S. 1478.

⁹² See ACDA, *supra* note 1, at 88.

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In 1973, the Prevention of Nuclear War Agreement again instituted procedures to ensure international cooperation and reduce the risk of nuclear war. The Prevention Agreement, a bilateral agreement between the two superpowers, set forth a code of conduct, such as refraining from the threat or use of force toward the opposing signatory and toward third party countries to avoid nuclear war. The agreement thereby had multilateral implications and imposed a commitment to consult in the event of nuclear confrontation.⁹³

C. Arms-Limitation Agreements

Despite the “narrow avoidance of worldwide thermonuclear destruction” during the 1962 Cuban Missile Crisis and the resultant bilateral confidence-building agreements and arms-limitations measures described above, the arms race between the two superpowers “spurred on.”⁹⁴ In response, between 1969 and 1972, the United States and Soviet Union convened the Strategic Arms Limitation Talks I (SALT I) to address “this phenomenon of an all-out, uncontrolled, dangerous nuclear arms race.”⁹⁵

By the late 1950s, both nations had developed and flight tested ballistic missiles with range and payload capabilities sufficient to deliver a nuclear weapon from each nation to the territory of the other.⁹⁶ These “intercontinental ballistic missiles” (ICBM) represented the mating of mankind’s most fearsome weapon, the nuclear weapon, to the most advanced weapon delivery system yet devised, the ICBM.⁹⁷ Each nuclear-armed missile was a weapon system of awesome destructive power. Yet, as both the United States and the Soviet Union embarked on massive ICBM-production programs in the early 1960s, neither side felt significantly safer, due to the massive arsenal being built by their opponent. Thus, each felt compelled to build and deploy more and more missiles. By the late 1960s, each nation had over

⁹³ See *id.* at 128.

⁹⁴ GRAHAM, *supra* note 46, at 36.

⁹⁵ *Id.*

⁹⁶ See Robert S. Norris & Hans M. Kristensen, *Nuclear Notebook: Nuclear U.S. and Soviet/Russian Intercontinental Ballistic Missiles, 1959–2008*, BULL. ATOMIC SCIENTISTS, Jan.–Feb. 2009, at 62, 64–66, available at <http://bos.sagepub.com/content/65/1/62.full.pdf+html>.

⁹⁷ See John B. Rhineland, *Arms Control in the Nuclear Age*, in JOHN NORTON MOORE ET. AL., NATIONAL SECURITY LAW 551-60 (1990) (discussing the concept of the ICBM in greater detail).

one thousand nuclear-armed ICBMs aimed at the other.⁹⁸

The escalating nuclear arms race was a source of growing concern to senior U.S. officials, as was the mounting evidence of Soviet construction of rudimentary anti-ballistic missile (ABM) systems around Leningrad and Moscow.⁹⁹ Because of concern that an ABM race between these two nations could be strategically destabilizing, as well as concern over the mounting cost of the ongoing arms race, the two nations agreed to engage in offensive and defensive arms limitation talks.¹⁰⁰ The result was the SALT talks which began in November 1969,¹⁰¹ lasted three years, and produced three agreements: the Interim Agreement, the ABM Treaty, and SALT II.

The bilateral SALT I negotiations were focused on limiting strategic offensive and defensive weapons delivery vehicles.¹⁰² SALT I resulted in two finalized agreements: (1) the Interim Agreement on Offensive Arms I (Interim Agreement) (1972);¹⁰³ and (2) the Anti-Ballistic Missile Treaty (ABM Treaty) (1972).¹⁰⁴ The Interim Agreement restrained the rivalry between the United States and Soviet Union by limiting *offensive* strategic weaponry on land and submarine-based offensive nuclear weapons.¹⁰⁵ The ABM Treaty limited ABM *defensive* systems (designed to intercept strategic ballistic missiles).¹⁰⁶

The Interim Agreement was to remain in force for five years.

⁹⁸ *Id.* at 63. See also Fen Osler Hampson, *SALT I: Interim Agreement and ABM Treaty*, in SUPERPOWER ARMS CONTROL: SETTING THE RECORD STRAIGHT 65, 71 (Albert Carnesale & Richard N. Haass eds., 1987).

⁹⁹ See Norris & Kristensen, *supra* note 96, at 66.

¹⁰⁰ See *id.* at 68. See also CALVO-GOLLER & CALVO, *supra* note 28, at 15-16.

¹⁰¹ See Hampson, *supra* note 98, at 71. See also CALVO-GOLLER & CALVO, *supra* note 28, at 11-13.

¹⁰² See GRAHAM, *supra* note 46, at 36; GRAHAM & LAVERA, *supra* note 20, at 306.

¹⁰³ Interim Agreement Between the United States of America and the Union of Soviet Socialist Republics on Certain Measures with Respect to the Limitation of Strategic Offensive Arms, U.S.-U.S.S.R., May 26, 1972, 23 U.S.T. 3462 [hereinafter Interim Agreement].

¹⁰⁴ Treaty Between the United States of America and the Union of Soviet Socialist Republics on the Limitation of Anti-Ballistic Missile Systems, U.S.-U.S.S.R., May 26, 1972, 23 U.S.T. 3435 [hereinafter ABM Treaty].

¹⁰⁵ See ACDA, *supra* note 1, at 110-11.

¹⁰⁶ The ABM Treaty allows each party to have one ABM site to protect its capital city and another to protect its ICBM field, "limits ABM launchers, missiles, and radars, and restricts certain kinds of testing." 1985 NUCLEAR ARMS CONTROL REPORT, *supra* note 10, at 19-20. The 1974 ABM Treaty Protocol further reduced the number of ABM deployment areas to one site only. See also ACDA, *supra* note 1, at 131.

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It “essentially [froze]” the number of strategic ballistic missile launchers (operational and under construction) and allowed an increase in sea-launched ballistic missile (SLBM) launchers “up to an agreed level, for each party only with the dismantling or destruction of a corresponding number of older ICBM or SLBM launchers.”¹⁰⁷ While “modernization and replacement of [strategic] missiles were permitted . . . launchers for light or older ICBMs could not be converted into launchers for modern heavy ICBMs.”¹⁰⁸ The general terms, however, did not alleviate uncertainty regarding the amount of weapons in the Soviet arsenal.¹⁰⁹ This agreement was intended to be a “freeze”—a temporary, stop-gap measure to hold strategic offensive arms at existing levels¹¹⁰ to give arms-control negotiators additional time to address the enormously difficult challenges associated with trying to produce a comprehensive nuclear arms limitation agreement.¹¹¹

When they came to the negotiating table, the parties did not have symmetrical weapon systems or strategic forces, and their defense needs and requirements were materially different—i.e., the United States was obligated to defend overseas allies, while the Soviets had nearby allies.¹¹² Furthermore, “U.S. and Soviet offensive strategic forces differed [significantly from each other because of] . . . historical, geographic,” and other reasons.¹¹³ Since the United States had a “strong tradition of air and naval power,” the United States had advantages in heavy bombers and submarine-launched ballistic missiles (SLBMs).¹¹⁴ Since the Soviet Union had “a large land mass, it concentrated on the development and deployment of land-based strategic ballistic missiles.”¹¹⁵ The result was two strategic-force structures that were difficult to compare for arms limitation purposes. In addition,

The Soviet Union [initially] sought to define as “strategic” any

¹⁰⁷ ACDA, *supra* note 1, at 121. See also Interim Agreement, *supra* note 103, art. III; 1985 NUCLEAR ARMS CONTROL REPORT, *supra* note 10, at 20.

¹⁰⁸ NAT’L ACAD. OF SCIS., *supra* note 14, at 29. See also Interim Agreement, *supra* note 103, arts. IV, II.

¹⁰⁹ See GRAHAM, *supra* note 46, at 43.

¹¹⁰ NAT’L ACAD. OF SCIS., *supra* note 14, at 7-8.

¹¹¹ See *id.* at 29.

¹¹² See GRAHAM & LAVERA, *supra* note 20, at 308.

¹¹³ NAT’L ACAD. OF SCIS., *supra* note 14, at 27.

¹¹⁴ *Id.* at 28.

¹¹⁵ *Id.*

U.S. or Soviet weapon system capable of reaching the territory of the other side. This would have included U.S. forward-based systems, chiefly medium-range bombers based in Europe . . . [that were capable of reaching the Soviet Union] . . . [but] would have excluded Soviet intermediate-range [ballistic] missiles . . . aimed at Western Europe and . . . [incapable of] reach[ing] the United States.¹¹⁶

The Interim Agreement was also significant because it formalized the principle of non-interference with national technical means of verification.¹¹⁷ A number of issues relating to the U.S.–Soviet strategic equation were, for a variety of reasons, not addressed by the Interim Agreement—such as strategic bombers, intermediate-range ballistic missiles, cruise missiles, and multiple independently-targeted reentry vehicles (MIRVs).¹¹⁸ An additional complication was the military commitments made to other nations and alliances—the United States to NATO, and the Soviet Union to the Warsaw Pact. The parties decided, however, to leave these issues for subsequent arms control negotiations.¹¹⁹ The Interim Agreement entered into force on October 3, 1972 and expired on October 2, 1977.

The ABM Treaty was probably the most significant, and certainly the longest-lasting, of the SALT agreements. While the *offensive* part of the strategic equation would take almost twenty years (until START was signed in 1991) to solve, the *defensive* part was solved via negotiation in a mere three years (1969–1972). The ABM Treaty, which was signed and entered into force in 1972, limited the development, testing, and deployment of anti-ballistic missile, or ABM, systems—i.e., systems designed to counter or, “shoot down,” strategic ballistic missiles.¹²⁰ The Treaty imposed limits on the number of ABM interceptors, launchers, and radars that both sides could deploy.¹²¹ It limited where those components could be deployed to each nation’s capital and at one ICBM field of each Party’s choosing.¹²² The ABM Treaty also banned the

¹¹⁶ *Id.*

¹¹⁷ See Interim Agreement, *supra* note 103, art. V.

¹¹⁸ See CALVO-GOLLER & CALVO, *supra* note 28, at 29-39.

¹¹⁹ Rhineland, *supra* note 97, at 603-10.

¹²⁰ *Id.* at 588-95.

¹²¹ See ABM Treaty, *supra* note 104, art. III.

¹²² See *id.* A 1974 Protocol to the Treaty reduced these two choices to one and called upon the Parties to pick which site they would defend. Protocol to the Treaty Between the United States of America and the Union of Soviet Socialist Republics on the

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development, testing, or deployment of “sea-based, air-based, space-based, or mobile land-based” ABM systems or components,¹²³ thus expressing a clear preference for fixed and land-based ABM systems or components. Such limitations supported the Treaty’s verification regime, which, like the Interim Agreement, also reflected the principle of non-interference with national technical means of verification.¹²⁴ The ABM Treaty was unlimited in duration,¹²⁵ subject to review every five years.¹²⁶ Both sides had the right to withdraw from the Treaty on six months’ notice.¹²⁷ The United States exercised its withdrawal right on December 13, 2001.¹²⁸ This decision, which became effective on June 13, 2002, removed a significant impediment to the development, testing, and deployment of U.S. missile defense programs.

In Article VII of the Interim Agreement of SALT I, the parties agreed to continue active negotiations regarding strategic offensive arms. The SALT II negotiations began in 1972, guided by the goal of replacing the Interim Agreement “with a long-term comprehensive [t]reaty providing broad limits on strategic offensive weapons systems.”¹²⁹ The SALT II Treaty¹³⁰ represented a move beyond the arms “freeze” created by the Interim Agreement to a permanent treaty that would provide meaningful reductions in strategic offensive arms. SALT II limited the total number of strategic nuclear launch vehicles held by each party to 2,400 (and reduced to 2,250 after January 1, 1991).¹³¹ Within this aggregate ceiling, the parties agreed to limit launchers of ICBMs and SLBMs equipped with MIRVs, air-to-surface ballistic missile

Limitations of Anti-Ballistic Missile Systems, U.S.-U.S.S.R., arts. I-II, July 3, 1974, 27 U.S.T. 1647. The Soviet Union decided to defend Moscow while the United States chose to defend the ICBM field at Grand Forks, North Dakota. See ACDA, *supra* note 1, at 131.

¹²³ ABM Treaty, *supra* note 104, art. V.

¹²⁴ *Id.* art. XII.

¹²⁵ *Id.* art. XV.

¹²⁶ *Id.* art. XIV.

¹²⁷ See *id.* art. XV, ¶ 2.

¹²⁸ See *ABM Treaty: U.S. Withdrawal Notice*, ACQWEB (Dec. 13, 2001), <http://www.acq.osd.mil/tc/treaties/abm/ABMwithdrawal.htm>.

¹²⁹ ACDA, *supra* note 1, at 189.

¹³⁰ Treaty Between the United States of America and the Union of Soviet Socialist Republics on the Limitation of Strategic Offensive Arms, U.S.-U.S.S.R., June 18, 1979, S. TREATY DOC. No. 96-1 (1979), 18 I.L.M. 1138 [hereinafter SALT II].

¹³¹ *Id.* art. III, ¶¶ 1-2.

equipped with MIRVs, and heavy bombers equipped for long-range cruise missiles to no more than 1,320.¹³² Additional limitations included: maximum throw-weights and launch-weights of light and heavy ICBMs; a limit on the testing and deployment of one "new type" of ICBM; limits on the number of reentry vehicles on certain ICBMs and SLBMs; a ban on the testing and deployment of air-launched cruise missiles with ranges greater than 600 kilometers; a ban on the construction of new ICBM launchers; a ban on heavy, mobile ICBMs and heavy SLBMs; and agreements on data exchanges and advance notification of certain ICBM test launches.¹³³

U.S. President Jimmy Carter and Soviet Chairman Leonid Brezhnev signed the Treaty Between the United States of America and the Union of Soviet Socialist Republics on the Limitation of Strategic Offensive Arms (SALT II) in Vienna, Austria, on June 18, 1979. The submission of SALT II to the U.S. Senate for ratification during the summer of 1979 resulted in a very contentious series of ratification hearings and substantial Senate opposition.¹³⁴ Prospects for Senate ratification were doomed when, in December 1979, Soviet military forces invaded Afghanistan.¹³⁵

After the Soviet invasion of Afghanistan, President Carter asked the Senate to suspend consideration of SALT II.¹³⁶ On July 25, 1980, President Carter signed Presidential Directive 59,¹³⁷ which described the U.S. nuclear-war-fighting policy, including plans for conducting a limited nuclear war.¹³⁸ The United States remained a signatory to SALT II and continued to abide by its numerical limits on strategic nuclear launch vehicles until late

¹³² *Id.* art. V, ¶ 1.

¹³³ See Dan Caldwell, *From SALT to START: Limiting Strategic Nuclear Weapons*, in 2 ENCYCLOPEDIA OF ARMS CONTROL AND DISARMAMENT 895-907 (Richard Dean Burns ed., 1993). See also Stephen J. Flanagan, *SALT II*, in SUPERPOWER ARMS CONTROL: SETTING THE RECORD STRAIGHT 105-34 (Albert Carnesale & Richard N. Haass eds., 1987); NAT'L ACAD. OF SCIS., *supra* note 14, at 32-35.

¹³⁴ See Caldwell, *supra* note 133, at 903-07.

¹³⁵ *Id.* See also NAT'L ACAD. OF SCIS., *supra* note 14, at 19-20.

¹³⁶ See 1985 NUCLEAR ARMS CONTROL REPORT, *supra* note 10, at 29.

¹³⁷ For the text of this directive, see *Presidential Directive/NSC-59: Nuclear Weapons Employment Policy*, JIMMY CARTER LIBR. & MUSEUM (July 25, 1980), <http://www.jimmycarterlibrary.gov/documents/pddirectives/pd59.pdf>.

¹³⁸ See L. Hagen, *Comments on Presidential Directive 59, 1980*, in THE AMERICAN ATOM: A DOCUMENTARY HISTORY OF NUCLEAR POLICIES FROM THE DISCOVERY OF FISSION TO THE PRESENT 210-11 (Philip L. Cantelon et al. eds., 2d ed. 1991).

1986.¹³⁹ Despite SALT II's failure to enter into force, the Treaty represented pioneering concepts that were carried over into the subsequent START Treaty, such as the "existing type" concept as a means of determining accountability of the treaty over certain systems, focusing on launchers as a way of limiting ballistic missiles, and the formulation of warhead attribution rules designed to track the military capability of each covered system and to limit the testing activities that could be undertaken with each covered system.¹⁴⁰

President Reagan, a 1979 member of the Committee on the Present Danger (an anti-SALT, anti-arms control, anti-Soviet, non-profit, private organization) and opponent of SALT in 1980,¹⁴¹ succeeded Carter and called for the modernization of nuclear defenses.¹⁴² Although he chose not to revive SALT II, President Reagan ensured that the United States did not deploy troops exceeding SALT II limits, as long as the Soviets did so, as well.¹⁴³ The Soviet Union also agreed to adhere to SALT II's terms, and the un-ratified agreement continued to guide national policy for both parties.¹⁴⁴

The Nuclear Freeze Movement arose in response to the Senate's failure to ratify SALT II and Presidential Directive 59. The faction's goals included urging the superpowers to freeze nuclear-weapons testing and production, missile deployment, and the development of new aircraft delivery systems.¹⁴⁵ The Freeze Movement gained substantial public support in the early 1980s, which led the Democratic Party to adopt the Freeze positions as part of its campaign platform in 1984.¹⁴⁶

¹³⁹ See Caldwell, *supra* note 133, at 907.

¹⁴⁰ See Treaty Between the United States of America and the Union of Soviet Socialist Republics on the Reduction and Limitation of Strategic Offensive Arms, U.S.-U.S.S.R., art. III, ¶¶ 9, 6, 4, July 31, 1991, S. TREATY DOC. No. 102-20 (1991) [hereinafter START I].

¹⁴¹ See KENNETH L. ADELMAN, *THE GREAT UNIVERSAL EMBRACE: ARMS SUMMITRY—A SKEPTIC'S ACCOUNT* 251 (1989).

¹⁴² See 1985 NUCLEAR ARMS CONTROL REPORT, *supra* note 10, at XIII.

¹⁴³ See *id.* at 29; ACDA, *supra* note 1, at 190.

¹⁴⁴ See ACDA, *supra* note 1, at 190.

¹⁴⁵ See DAVID ADAMS, *THE AMERICAN PEACE MOVEMENTS* 15 (electronic ed. 2002) (1985), available at <http://www.culture-of-peace.info/apm/chapter6-15.html> (last visited Jan. 12, 2012); Blechman Interview, *supra* note 56.

¹⁴⁶ See Lawrence S. Wittner, *What Activists Can Learn from the Nuclear Freeze Movement*, HIST. NEWS NETWORK (Aug. 18, 2003, 1:38 PM), <http://hnn.us/articles/1636.html>.

Other arms-limitation agreements during this period—both of which were bilateral—included the Threshold Test Ban Treaty (TTBT) (1974),¹⁴⁷ and the Peaceful Nuclear Explosion (PNE) Treaty (1976).¹⁴⁸ President Nixon's involvement in the Watergate scandal caused the TTBT to be “hastily thrown together in a month in Moscow at [Secretary of State] Kissinger's urging, to give Nixon something to sign at the 1974 Summit,” one month before Nixon's resignation.¹⁴⁹ Consequently, the TTBT did not address peaceful nuclear explosions, considered “a pie in the sky.”¹⁵⁰ The PNE followed after two more years of negotiations, delayed mainly because the Soviets initially held fast to the idea of using nuclear explosions to dig a major canal.¹⁵¹

These companion agreements filled the void remaining after the LTBT, which only addressed above-ground testing limits. Together, the TTBT and PNE “extended the limited test ban to underground tests—whether of weapons or ‘peaceful’ devices—of more than 150 kilotons.”¹⁵² The TTBT prohibited underground tests with yields exceeding 150 kilotons (approximately 150,000 tons of TNT), and thus set forth “a nuclear threshold,”¹⁵³ limiting the explosive force of any new nuclear warheads and bombs.¹⁵⁴ The PNE provided the same restrictions on peaceful underground nuclear explosions for civilian development projects.¹⁵⁵

¹⁴⁷ Treaty Between the United States of America and the Union of Soviet Socialist Republics on the Limitation of Underground Nuclear Weapons Tests, U.S.-U.S.S.R., July 3, 1974, S. TREATY DOC. No. 101-19 (1990) (entered into force Dec. 11, 1990) [hereinafter Threshold Test Ban Treaty].

¹⁴⁸ Treaty Between the United States of America and the Union of Soviet Socialist Republics on Underground Nuclear Explosions for Peaceful Purposes, U.S.-U.S.S.R., May 28, 1976, 15 I.L.M. 891, 1714 U.N.T.S. 432 [hereinafter Peaceful Nuclear Explosion Treaty].

¹⁴⁹ GRAHAM, *supra* note 46, at 61.

¹⁵⁰ *Id.*

¹⁵¹ *Id.*

¹⁵² 1985 NUCLEAR ARMS CONTROL REPORT, *supra* note 10, at XII.

¹⁵³ ACDA, *supra* note 1, at 133.

¹⁵⁴ See Threshold Test Ban Treaty, *supra* note 147, art. I, ¶ 1.

¹⁵⁵ See Peaceful Nuclear Explosion Treaty, *supra* note 148, art. III, ¶ 2; 1985 NUCLEAR ARMS CONTROL REPORT, *supra* note 10, at 22. The subsequent protocol to the PNE Treaty “provided for limited onsite inspection under very specific circumstances.” *Id.*

Although not directly related to nuclear arms control, two other agreements were signed during the period from 1969 to 1979. Pursuant to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction (Biological Weapons Convention), *opened for signature* Apr. 10, 1972, 1015 U.N.T.S. 163, a multilateral agreement signed in 1972, parties agreed to stop “develop[ing], produc[ing], stockpil[ing], or acquir[ing] biological agents or

The TTBT and PNE served to limit the expanding weapons technology by restricting or ‘capping’ the explosive force of the weapons. As they had done before, the parties used agreement to restrain the threat of nuclear arms and arms capabilities. Thus, by limiting weapons capabilities, the parties were able to stem the growth of the nuclear arms threat.¹⁵⁶

V. 1980–1991: REPOSITIONING

A. Confidence-Building Measures

Several confidence-building measures (some multilateral, others bilateral), designed to reduce the risk of war, were established from 1980 to 1991.

In 1980, the multilateral Nuclear Material Convention¹⁵⁷: (1) provided minimum physical-protection levels for the international transport of nuclear material; (2) set forth “a general framework for cooperation among states in the protection, recovery, and return of stolen nuclear material”; and (3) listed certain offenses for which offenders would be subject to extradition or prosecution.¹⁵⁸

In 1984, the bilateral Hot Line Expansion Agreement¹⁵⁹ upgraded the U.S.–U.S.S.R. Hot Line, increasing communications equipment speed and adding facsimile and graphic material

toxins ‘of types [and qualities] . . . no[t] justifi[ed] for prophylactic, protective, and other peaceful purposes,’ as well as weapons and means of delivery.” ACDA, *supra* note 1, at 96. In 1977, under the multilateral Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques (Environmental Modification Convention), *opened for signature* May 18, 1977, 31 U.S.T. 333, 1108 U.N.T.S. 151, parties agreed not to use climate modification techniques for military or hostile purposes even if such techniques became feasible in the future. *See* ACDA, *supra* note 1, at 153.

¹⁵⁶ Kenneth Adelman, U.N. Ambassador and Director of the Arms Control and Disarmament Agency (1983–87) for President Reagan, asserts otherwise, stating that “halting nuclear testing would actually increase the number of nuclear weapons and make future nuclear arms less safe No one advocates stopping the testing of ships or guns or planes—indeed, we would never purchase a car that had not been fully tested” ADELMAN, *supra* note 141, at 31.

¹⁵⁷ Convention on the Physical Protection of Nuclear Material, Mar. 3, 1980, 1456 U.N.T.S. 125.

¹⁵⁸ ACDA, *supra* note 1, at 218.

¹⁵⁹ Agreement Between the United States of America and the Union of Soviet Socialist Republics to Expand the U.S.–U.S.S.R. Direct Communications Link, July 17, 1984, *available at* <http://dosfan.lib.uic.edu/acda/treaties/hotexpa.htm>.

transmission capability.¹⁶⁰

With the 1987 Nuclear Risk Reduction Centers Agreement,¹⁶¹ the United States and the Soviet Union established centers connected by facsimile to supplement communications between the nations. The Agreement also provided the capacity for government-to-government notifications, communications, and information exchanges required by other arms control and confidence-building agreements.¹⁶²

In 1986, further measures were established “to increase openness and predictability about military activities in Europe, with the aim of reducing the risk of armed conflict” there.¹⁶³ State members of the Conference on Security and Co-operation in Europe, including the United States, Soviet Union, France, and United Kingdom, drafted the Document of the Stockholm Conference on Confidence- and Security-Building Measures and Disarmament in Europe Convened in Accordance with the Relevant Provisions of the Concluding Document of the Madrid Meeting of the Conference on Security and Cooperation in Europe.¹⁶⁴ The Document established notification, observation, forecasting, and onsite inspection procedures for military activities (exceeding a certain number of troops) in Europe.¹⁶⁵

In 1988, the superpowers agreed to another confidence-building measure, the Ballistic Missile Launch Notification Agreement.¹⁶⁶ This bilateral treaty attempted to limit the risk of nuclear war, due to “misinterpretation, miscalculation, or accident,” by requiring parties to provide advance notification prior to launching intercontinental ballistic missiles and

¹⁶⁰ See ACDA, *supra* note 1, at 228.

¹⁶¹ Agreement Between the United States of America and the Union of Soviet Socialist Republics on the Establishment of Nuclear Risk Reduction Centers, U.S.-U.S.S.R., Sept. 15, 1987, 27 I.L.M. 76.

¹⁶² See ACDA, *supra* note 1, at 246.

¹⁶³ *Id.* at 231.

¹⁶⁴ Document of the Stockholm Conference on Confidence- and Security-Building Measures and Disarmament in Europe Convened in Accordance with the Relevant Provisions of the Concluding Document of the Madrid Meeting of the Conference on Security and Cooperation in Europe, Sept. 19, 1986, 26 I.L.M. 190 (entered into force Jan. 1, 1987).

¹⁶⁵ See ACDA, *supra* note 1, at 232.

¹⁶⁶ Agreement Between the United States of America and the Union of Soviet Socialist Republics on Notifications of Launches of Intercontinental Ballistic Missiles and Submarine-Launched Ballistic Missiles, U.S.-U.S.S.R., May 31, 1988, 27 I.L.M. 1200.

submarine-launched ballistic missiles.¹⁶⁷

B. Arms-Limitation Agreements

The Reagan Administration reformulated the existing negotiations scheme into the 1982–1991 Strategic Arms Reduction Talks (START) and the Intermediate-Range Nuclear Forces Treaty (INF) (1987), which were designed “to limit the actual weapons, the warheads, ‘which are what kill people,’ as distinguished from the . . . approach of the Nixon, Ford, Carter administrations, which only limited the delivery vehicles—missiles and bombers.”¹⁶⁸ SALT I & II:

[H]ad used launchers (i.e., ICBM silos, SLBM tubes, and bombers) as the object of . . . limitation . . . to a certain degree because of monitoring capabilities. However, the advent of deploying multiple warheads on missiles . . . had reduced the relevance of this measure. To the Reagan administration, it was essential to address the weapons themselves, especially the highly accurate ICBM warheads.¹⁶⁹

The first years of these negotiations achieved little progress, in part because of the U.S. deployment of intermediate-range nuclear forces in Europe.¹⁷⁰ This weapons installation not only represented a major distraction from the task of limiting strategic arms, but also had a chilling effect on U.S.–Soviet relations.¹⁷¹ The pace and progress of strategic arms negotiations between these two nations gained traction in the mid-1980s.¹⁷² In 1983, President Reagan announced the Strategic Defense Initiative, which called for development of a missile defense system that would render nuclear weapons “impotent and obsolete.”¹⁷³ In 1985, President Reagan and Chairman Gorbachev met for the first time at the Geneva Summit, and established a personal relationship that would prove enormously important later on.¹⁷⁴ Significantly, they

¹⁶⁷ ACDA, *supra* note 1, at 347.

¹⁶⁸ GRAHAM, *supra* note 46, at 58. Ambassador Thomas Graham, Jr. asserts that the Reagan approach is the same as the Interim Agreement and SALT II because “warheads are counted on the basis of their association with missiles and the missiles on the basis of their association with launchers . . .” *Id.*

¹⁶⁹ 1985 NUCLEAR ARMS CONTROL REPORT, *supra* note 10, at 31.

¹⁷⁰ *See* Caldwell, *supra* note 133, at 908.

¹⁷¹ *See id.*

¹⁷² *See id.* at 908-09.

¹⁷³ *Id.* at 908.

¹⁷⁴ *See id.* at 909.

“agreed that ‘a nuclear war cannot be won and must never be fought.’”¹⁷⁵ Additionally, they affirmed their mutual goals of working towards an INF accord and limiting strategic offensive arms.¹⁷⁶

Reagan and Gorbachev met again in October 1986 at the Reykjavik Summit for what would be a meeting characterized by “dramatic and far-reaching [arms control] proposals.”¹⁷⁷ By the end of the meeting, the two sides had agreed on an outline for a START Treaty contemplating reductions in strategic nuclear delivery vehicles to 1,600 and a ceiling on deployed nuclear warheads of 6,000.¹⁷⁸ “[T]he Reykjavik Summit was the true watershed of modern arms control”¹⁷⁹ when the Soviet Union General Secretary Mikhail Gorbachev and U.S. President Reagan became “negotiators-in-chief,”¹⁸⁰ agreeing “to equal global ceilings of systems capable of carrying 100 INF missile warheads, none of which would be deployed in Europe. . . . [and the Soviets] proposed a freeze on shorter-range missile deployments”¹⁸¹ The INF was a success story that evolved from the Reykjavik Summit because Gorbachev agreed in principle to the INF’s intrusive on-site inspection provisions.¹⁸²

In 1987, the parties signed the INF arms-limitation agreement. In the late 1970s, the Soviet Union had decided to forward-deploy the SS-20 missile—an intermediate-range missile with three nuclear warheads capable of striking the capitals of Western Europe.¹⁸³ The resulting international tensions, which were complicated by a growing European peace movement, moved NATO to call for a “‘dual track’ strategy”¹⁸⁴ to deal with this threat: arms control negotiations between the United States and Soviet Union, combined with the deployment of U.S. Pershing II missiles and ground-launched cruise missiles, both of which were

¹⁷⁵ *Id.*

¹⁷⁶ *See id.*

¹⁷⁷ *Id.*

¹⁷⁸ *See id.* at 909-10.

¹⁷⁹ GRAHAM, *supra* note 46, at 124.

¹⁸⁰ ADELMAN, *supra* note 141, at 63.

¹⁸¹ ACDA, *supra* note 1, at 253.

¹⁸² *See* GRAHAM, *supra* note 46, at 125.

¹⁸³ *See* Janne E. Nolan, *The INF Treaty: Eliminating Intermediate-Range Nuclear Missiles, 1987 to the Present*, in 2 *ENCYCLOPEDIA OF ARMS CONTROL AND DISARMAMENT* 955-64 (Richard Dean Burns ed., 1993).

¹⁸⁴ ACDA, *supra* note 1, at 252.

nuclear-armed.¹⁸⁵ The arms control negotiations began in December 1981 and had to overcome numerous obstacles, disagreements, and one Soviet walk-out.¹⁸⁶ Nonetheless, they eventually led to agreement on what was referred to as the “double-zero” option: the complete elimination of all intermediate-range and shorter-range nuclear missiles.¹⁸⁷ The resultant INF Treaty¹⁸⁸ required each party to destroy its 500- and 5,500-kilometer ground-launched ballistic and cruise missiles, as well as associated launchers, support structures, and equipment.¹⁸⁹ Within a three-year elimination period—commencing on June 1, 1988, the date the Treaty entered into force—the two sides eliminated all Pershing II and SS-20 missiles and other systems covered by the Treaty.¹⁹⁰

The INF Treaty was ground-breaking in the history of arms control negotiations between the nuclear superpowers because it gave both sides their first experience with on-site inspection—a verification technique that was almost unthinkable at the time in the Cold War. Other firsts attributed to the INF Treaty were establishment of the Nuclear Risk Reduction Centers in the capitals of both sides and the routine exchange of launch notifications—accomplished through those Nuclear Risk Reduction Centers—for missile launches permitted by the INF Treaty under limited circumstances, for research and development purposes.¹⁹¹ Its most significant accomplishment, however, was eliminating an entire class of weapons—intermediate-range nuclear missiles.

VI. 1991–2009: START IN FORCE

In December 1987, Gorbachev came to Washington to sign the INF Treaty and the parties announced an agreement on the START framework. The two sides would still need several years to resolve the remaining issues, most notably the implications

¹⁸⁵ See Nolan, *supra* note 183.

¹⁸⁶ See *id.*

¹⁸⁷ See *id.*

¹⁸⁸ Treaty Between the United States of America and the Union of the Soviet Socialist Republics on the Elimination of Their Intermediate-Range and Shorter-Range Missiles, U.S.-U.S.S.R., Dec. 8, 1987, S. TREATY DOC. No. 100-11 (1988) [hereinafter INF Treaty].

¹⁸⁹ ACDA, *supra* note 1, at 252.

¹⁹⁰ See *id.* at 252.

¹⁹¹ INF Treaty, *supra* note 188, art. VII, ¶ 12, art. XIII, ¶ 2.

posed by the new U.S. effort on missile defense.¹⁹² U.S. President George H.W. Bush and Soviet President Gorbachev finally signed the START Treaty (START I) on July 31, 1991.¹⁹³

START I obligated the superpowers to notify each other of any ICBM or SLBM flight test, including those into the upper atmosphere or space.¹⁹⁴ The Treaty also allowed for the deployment of 1,600 strategic nuclear delivery vehicles with 6,000 accountable warheads.¹⁹⁵ Of these, only 4,900 could be deployed on missiles, and of these 4,900 warheads, only 1,100 could be deployed on mobile ICBMs.¹⁹⁶ The reductions called for by START I were to be carried out in three phases over seven years so that the final 1,600/6,000 numbers were arrived at seven years after entry into force.¹⁹⁷ Pursuant to START I, the parties adopted a verification regime similar to that contained in the INF Treaty regarding data exchanges, on-site inspection, launch notifications, and respect for national technical means of verification.¹⁹⁸ A major difference was START I's rules on telemetry encryption, not present in the INF Treaty, which were designed to prevent both sides from developing and testing new strategic missiles without notifying the other side.¹⁹⁹

Compared to the very limited achievements of the Interim Agreement and the SALT II, START I was a major success. It was the first arms control agreement between the United States and Soviet Union that required the elimination of almost 50% of the deployed warheads both sides possessed. START I was limited in duration to 15 years, with a provision allowing the parties to extend the Treaty for successive 5-year periods.²⁰⁰ While many may have expected that this option would be exercised, that never occurred.

Less than a month after START I had been signed, a group of hard-line Soviet Government officials tried to overthrow the government of President Gorbachev.²⁰¹ Although unsuccessful,

¹⁹² *Id.*

¹⁹³ *See* START I, *supra* note 140.

¹⁹⁴ *See* ACDA, *supra* note 1, at 347.

¹⁹⁵ START I, *supra* note 140, art. II.

¹⁹⁶ *Id.*

¹⁹⁷ *Id.*

¹⁹⁸ *Id.* arts. VIII-XII.

¹⁹⁹ *Id.* art. X.

²⁰⁰ *Id.* art. XVII.

²⁰¹ Caldwell, *supra* note 133, at 911.

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this attempted coup showed how tumultuous the Soviet Government was behind the scenes and the fragility of President Gorbachev's hold on power. This culminated in an unexpected development that greatly complicated the entry into force of the START Treaty: the dissolution of the Soviet Union. This surprising event, which occurred in December 1991, raised significant questions about the status, and even the viability, of START I.

The May 1992 Lisbon Protocol²⁰² addressed these questions when four nations—Belarus, Ukraine, Kazakhstan, and the Russian Federation—agreed to assume the former Soviet Union's START Treaty obligations.²⁰³ START I was still viable but became a multilateral, rather than bilateral, treaty. In addition, Belarus, Ukraine, and Kazakhstan pledged to remove all nuclear weapons from their soil and return them to the Russian Federation.²⁰⁴ These three nations subsequently joined the Nuclear Non-Proliferation Treaty as non-nuclear weapon states.²⁰⁵

Despite the clarity the Lisbon Protocol provided, the START Treaty did not enter into force until December 5, 1994. This delay occurred largely due to the time required for the three nations to complete the process of joining the NPT.²⁰⁶ As a result, START I's seven-year reduction period, as well as the Treaty's fifteen-year duration, began on that date. In addition to the strategic arms limitation and reduction efforts taking place within the Treaty's mechanisms, further arms control efforts were taking place outside of the START Treaty.

Soon after START was signed, President George H.W. Bush and Russian President Boris Yeltsin signed a follow-on treaty, known as START II, on January 3, 1993.²⁰⁷ START II was intended to build on the strategic arms reductions achieved

²⁰² Protocol to the Treaty Between the United States of America and the Union of Soviet Socialist Republics on the Reduction and Limitation of Strategic Offensive Arms, U.S.-U.S.S.R., May 23, 1992, S. TREATY DOC. NO. 102-32 (1992) [hereinafter Lisbon Protocol].

²⁰³ *Id.*

²⁰⁴ *Id.*

²⁰⁵ *Id.*

²⁰⁶ *The Lisbon Protocol at a Glance*, ARMS CONTROL ASS'N, <http://www.armscontrol.org/node/3289> (last visited Jan. 6, 2012).

²⁰⁷ Treaty on the Further Reduction and Limitation of Strategic Offensive Arms, U.S.-Russ., Jan. 3, 1993, S. TREATY DOC. No. 103-1 (1993) [hereinafter START II].

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pursuant to START I by moving toward greater reductions.²⁰⁸ Total deployed warheads were to be reduced from 6,000 under START I to around 3,500.²⁰⁹ Also, ICBMs with MIRVed warheads were banned, although SLBMs with MIRVs were permitted.²¹⁰ START II did not enter into force, however, because the Russian Duma's ratification of START II was made conditional on the U.S. Senate approving certain agreements that the United States and Russian Federation had negotiated to update the ABM Treaty.²¹¹ This approval never occurred because of strong opposition in the Senate to the ABM Treaty.²¹² Accordingly, on June 14, 2002, one day after the U.S. withdrawal from the ABM Treaty had become effective, the Russian Federation announced their withdrawal from START II.²¹³

The Russian Federation's decision to withdraw from START II had little practical consequence because of the Treaty of Moscow (also known as SORT).²¹⁴ This Treaty—signed by President George W. Bush and President Vladimir Putin on May 24, 2002—called for reductions in strategic offensive weapons far beyond those described in START II: total deployed nuclear warheads were to be reduced to a level between 1,700 and 2,200 by December 31, 2012.²¹⁵ The parties agreed that all the other provisions of the 1991 START Treaty would remain in effect, including the verification regime.²¹⁶ This two-page Treaty filled the void left by the demise of START II and carried the SALT/START process forward to the New START Treaty,²¹⁷ which was designed to take the place of the then-expired START

²⁰⁸ *See id.* pmb. (“Desiring to enhance strategic stability and predictability, and, in doing so, to reduce further strategic offensive arms, in addition to the reductions and limitations provided for in the START Treaty . . .”).

²⁰⁹ *Id.* art. I.

²¹⁰ *Id.* art. II.

²¹¹ *See U.S.–Russian Treaties & Agreements*, NTI, http://216.109.75.135/f_wmd411/flb2_2.html (last visited Jan. 6, 2012).

²¹² *See id.*

²¹³ *Id.*

²¹⁴ Treaty Between the United States of America and the Russian Federation on Strategic Offensive Reductions, U.S.-Russ., May 24, 2002, S. TREATY DOC. No. 107-8 (2002) [hereinafter SORT].

²¹⁵ *Id.* art. I.

²¹⁶ *Id.* art. II.

²¹⁷ Treaty Between the United States of America and the Russian Federation on Measures for the Further Reduction and Limitation of Strategic Offensive Arms, art. XIV, ¶ 4, U.S.-Russ., Apr. 8, 2010, S. TREATY DOC. No. 111-5 (2010) [hereinafter New START Treaty].

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Treaty and supersede the Treaty of Moscow upon its entry into force.²¹⁸

In addition to the START I and II Treaty negotiations taking place, on May 31, 2003, President George W. Bush unveiled the Proliferation Security Initiative (PSI), a U.S.-led, “global effort that aims to stop [the] trafficking of weapons of mass destruction (WMD), their delivery systems, and related materials to and from states and non-state actors [that are] of proliferation concern.”²¹⁹ Its legal status is as a non-legally-binding political arrangement among like-minded nations seeking to prevent WMD proliferation through proactive means, including interdiction.²²⁰ When a nation endorses the *PSI Statement of Interdiction Principles*, they commit to: (1) “interdict transfers to and from states and non-state actors of proliferation concern to the extent of their capabilities and legal authorities;” (2) “develop procedures to facilitate exchange of information with other countries;” (3) “strengthen national legal authorities to facilitate interdiction; and” (4) “take specific actions in support of interdiction efforts.”²²¹

More than 90 nations have joined the PSI’s voluntary, non-treaty-based regime.²²² This commitment reflects the international community’s desire to prevent “WMD, their delivery systems, and related materials” from falling into the hands of nations of concern or terrorists.²²³ In effect, the PSI calls upon the international community to use already-available legal tools to enforce their shared non-proliferation goals.²²⁴

²¹⁸ The START Treaty expired on December 5, 2009. See *supra* note 12. See also New START Treaty, *supra* note 217, art. XIV, ¶ 4.

²¹⁹ *Proliferation Security Initiative*, U.S. DEP’T OF STATE, <http://www.state.gov/t/isn/c10390.htm> (last visited Jan. 23, 2012).

²²⁰ *Id.*

²²¹ *Id.*

²²² *Id.*

²²³ *Id.*

²²⁴ Another international regime that emerged during this time intended to promote global peace and security was the Hague Code of Conduct against Ballistic Missile Proliferation (HCOC), adopted in November 2002. See *Hague Code of Conduct Against Ballistic Missile Proliferation (HCOC)*, U.S. DEP’T OF STATE, <http://www.state.gov/t/isn/trty/101466.htm> (last updated Oct. 2011) [hereinafter *HCOC*]. Its goal is to bolster efforts to curb ballistic missile proliferation worldwide through commitments, such as providing pre-launch notifications of missile launches, and through transparency measures, such as annual declarations on ballistic missile launches during the preceding year. *Id.* The HCOC was envisioned as a supplement to the MTCR without the more stringent membership process found in the MTCR. See *supra* note 64, for a discussion of the MTCR. HCOC membership is unrestricted and is currently over 125 nations. See

VII. 2009–PRESENT: START EXPIRES AND THE NEW START TREATY ARRIVES

The START Treaty expired by its own terms at midnight December 4, 2009.²²⁵ The United States and Russian Federation had previously announced their desire to conclude a follow-on treaty to replace START, but the negotiations were not concluded until after START had expired.²²⁶ On April 8, 2010, Presidents Obama and Medvedev signed the New START Treaty, signaling a new chapter in the SALT/START process.

The New START Treaty consists of the basic Treaty text, the Protocol containing additional rights and obligations, and a series of Technical Annexes.²²⁷ This new Treaty reduces deployed strategic nuclear warheads to 1,550 and strategic nuclear delivery vehicles to 700 within seven years after it enters into force.²²⁸ This is nearly 75% lower than the START Treaty warhead level and 30% lower than the level the Treaty of Moscow prescribed.²²⁹ Within that Treaty limit, each Party has the ability to determine its own force structure.²³⁰ Similar to the START Treaty's verification regime, New START includes provisions for on-site inspections, exhibitions, data exchanges and notifications, as well as exchanges of telemetry.²³¹ In certain respects, the verification regime is not as extensive as was the verification regime under START. For example, the exchanges of telemetry between the Parties will be on no more than five launches of ICBMs and SLBMs per year.²³² This reflects, among other things, the existence of a new

HCOC, supra.

²²⁵ *U.S.–Russian Treaties & Agreements, supra* note 211.

²²⁶ See Media Note, U.S. Dep't of State, Joint Statement by the Delegations of the Russian Federation and the U.S. on New Start Treaty (May 13, 2010), <http://www.state.gov/r/pa/prs/ps/2010/05/141827.htm>. See also *Gallery: Negotiating New START*, DEF. TREATY INSPECTION READINESS PROGRAM, <http://dtirp.dtra.mil/NC/gallery/newstart.aspx> (last visited Feb. 19, 2012).

²²⁷ See Press Release, White House, Key Facts About the New START Treaty (Mar. 26, 2010), available at <http://www.whitehouse.gov/the-press-office/key-facts-about-new-start-treaty>.

²²⁸ New START Treaty, *supra* note 217, art. II.

²²⁹ See Press Release, White House, *supra* note 227.

²³⁰ *Id.*

²³¹ See New START Treaty, *supra* note 217, arts. XI, VII, IX.

²³² Protocol to the Treaty Between the United States of America and the Russian Federation on Measures for the Further Reduction and Limitation of Strategic Offensive Arms, U.S.-Russ., pt. 7, Apr. 8, 2010, available at <http://www.state.gov/documents/organization/140047.pdf>.

relationship between the United States and the Russian Federation.

On December 22, 2010, the U.S. Senate approved a Resolution of Ratification for the New START Treaty by a vote of 71 to 26.²³³ The ratification hearings were very contentious, reflecting concerns over Russian treaty compliance, missile defense, and nuclear stockpiles.²³⁴ Those concerns were discussed in the Resolution of Ratification, which includes provisions calling for a Presidential certification that U.S. national technical means of verification are sufficient to warn of any Russian preparation to “break out” of the limits of the Treaty and a Presidential certification that the Russian Federation is in compliance with the Treaty.²³⁵ The Russian Duma approved ratification of the New START on January 25, 2011, and the formal instruments of ratification were exchanged on February 5, 2011, at which time the New START Treaty entered into force, for a duration of ten years.²³⁶

VIII. BACK TO THE FUTURE: WHERE WILL WE GO WITH NUCLEAR ARMS CONTROL?

If the New START Treaty should expire after its ten-year duration has run its course, what will happen next? While it is difficult to predict the future of the SALT/START process, there are some predictable paths that might be chosen. For example, the process could take a more multilateral approach to nuclear arms control. A ‘Post-New START Treaty’ could seek to include additional parties, perhaps beginning with the United Kingdom and France, and possibly including the People’s Republic of China, India, and Pakistan—Israel and North Korea would likely not be interested.

Alternatively, a more expansive approach to nuclear arms control could occur. Critics of the New START point out the Treaty’s failure to address tactical nuclear weapons.²³⁷ The

²³³ 156 CONG. REC. S10982 (daily ed. Dec. 22, 2010), 2010 WL 5185224.

²³⁴ See, e.g., *Senate Votes on New START Treaty, McCain and DeMint Lead Opposition* by Gregory Hilton, DC WORLD AFF. BLOG (Sept. 15, 2010), <http://diplomatdc.wordpress.com/2010/09/15/senate-votes-on-new-start-treaty-on-thursday-mccain-and-demint-lead-opposition-by-gregory-hilton>.

²³⁵ 156 CONG. REC. S10982-83 (daily ed. Dec. 22, 2010), 2010 WL 518224 at **3.

²³⁶ New START Treaty, *supra* note 217, art. XIV.

²³⁷ See Ariel Cohen, *The New START Ratification: Russia Tactical Nuke Advantage*

Senate's Resolution of Ratification required a Presidential certification that the United States would initiate negotiations with the Russian Federation regarding an agreement to limit tactical nuclear weapons.²³⁸ A future Post-New START Treaty could also address limits on non-deployed nuclear warheads—warheads that START and New START left unconstrained. This was likely done because, in a nuclear exchange, there would not be sufficient time to retrieve warheads from their storage facilities and mount them on ICBMs in time to launch them at the enemy. As warhead levels drop, the warheads kept in storage could become more significant in the military equation, depending on where they were stored and how difficult it would be (with advances in missile technology) to install them on missiles.

The future could also bring continued reductions in deployed nuclear weapons. But just how low can the United States and Russian Federation go? The United States won World War II in the Pacific with two nuclear weapons.²³⁹ But, the NPT establishes an international goal of “cessation of the nuclear arms race at an early date” followed by “general and complete disarmament.”²⁴⁰ This suggests that additional reductions remain possible.

The SALT/START process has not been without flaws, or without critics. As the United States and Russian Federation move into the second decade of the twenty-first century, one can question whether mature nations such as these continue to need an arms control treaty to guide their actions. One could also question the extent to which the SALT and START Treaties contributed to keeping the peace between the nuclear superpowers over the past forty years. Clearly other factors were at work—e.g., the military might of both sides, skilled and diligent diplomacy, each side's growing economic interests in the other, and the fact that both sides were rational adversaries of one another. Nevertheless, if the SALT and START Treaties made even the slightest contribution to preventing a nuclear war, then that may be reason enough for this process to continue.

Arms control negotiations have moved from focusing on

Should Caution the Senate, FOUNDRY BLOG (Dec. 1, 2010, 2:00 PM), <http://blog.heritage.org/2010/12/01/the-new-start-ratification-russia-tactical-nuke-advantage-should-caution-the-senate>.

²³⁸ 156 CONG. REC. S10982 (daily ed. Dec. 22, 2010), 2010 WL 5185224.

²³⁹ See GAILEY, *supra* note 2.

²⁴⁰ Nuclear Non-Proliferation Treaty, *supra* note 47, art. VI.

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comprehensive disarmament (1925–1958), to attempts at implementing partial measures (1959–1968), to bilateral talks (1969–1979), to reassessment and repositioning by the United States and Union of Soviet Socialist Republics (1980–1991), to the present situation—the United States working with the Russian Federation to achieve strategic arms reductions (1991–present). Essentially, nuclear arms control negotiations continue to be an activity for the superpowers. Perhaps, limiting the response to this global problem to the superpowers, rather than attempting global collective action, is the way of the future. In any case, the key players continue to be responsible for crafting a response, albeit among only themselves.

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