From Start to Finish: A Historical Review of Nuclear Arms Control Treaties and Starting over with the New START

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

By
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On 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.³

The nuclear age actually began 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.⁴ That test validated the design and functioning of the plutonium implosion device nicknamed “Fat Man” because of the round shape of the bomb casing.⁵ The Trinity Explosion produced a 21 kiloton blast, or an explosion equal to 21,000 tons of TNT.⁶ A “Fat Man” implosion bomb was used on August 9, 1945 against Nagasaki, killing an estimated 40,000 people.⁷ This bombing, combined with the use of the “Little Boy” uranium bomb against


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³ UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY. ARMS CONTROL AND DISARMAMENT AGREEMENTS: TEXTS AND HISTORIES OF THE NEGOTIATIONS 1 (1996) [hereinafter ARMS CONTROL AND DISARMAMENT AGREEMENTS].


⁶ Id.

⁷ Id.
Hiroshima three days earlier, killed approximately 110,000 people and led to the end of World War II in the Pacific. The “explosion over Hiroshima,” and the detonation on Nagasaki three days later catalyzed global collective action to address nuclear arms control. Unfathomable dimensions of possible destruction transformed the concepts of waging war and maintaining peace and the public understood the risk.

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 1925–2010 can be segmented into distinct periods reflecting different approaches to the threat of nuclear arms. The following distinct stages developed with changing focused objectives: 1) concentrating on comprehensive disarmament (1925-1959); 2) to attempts at implementing partial measures to achieve nuclear arms control (1959-1968); 3) to bilateral talks (enhancing stability as well as maintaining world order and non-proliferation) (1968-1979); 4) to a period when the United States and the Union of Soviet Socialist Republics engaged in reassessing and repositioning (1980-1991); 11 to a period of uncertainty with the impact of the dissolution of the Soviet Union on the Strategic Arms Reduction Talks (START) and corresponding treaties (1991-2009); to the most recent developments with the expiration of the START Treaty.

8 Id.; GAILEY, supra note 4, at 488, 490.

9 The White House Press Release on Hiroshima, Statement of President Truman, August 6, 1945, 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.


10 ARMS CONTROL AND DISARMAMENT AGREEMENTS, supra note 3, at 1.

This article provides a historical review, describing nuclear arms control agreements that helped diminish the nuclear arms threat and build up. As negotiations evolved throughout history, the United States and Soviet Union undertook a nuclear arms race, each striving to gain a military advantage over the other by building more and more nuclear weapons and the means to deliver them, a debate began to unfold about a different means of dealing with the nuclear arms race: arms control. Essentially, collective nuclear arms control responses from 1925 – 1991 evolved into three types of responses focusing on: 1) nonarmament; 2) confidence-building measures; and, 3) arms limitations.¹²

After 1991, the focus became arms reduction which initially began as a bilateral measure, but has 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, the two parties were eventually drawn to the negotiating table in the late 1960s to discuss limits on strategic nuclear weapons.¹³ The result was the Strategic Arms Limitation Talks (SALT) Treaties, 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 built on previous experience, and how world events impacted negotiations supporting the parties to achieve agreement, and what we can expect in the future of nuclear arms control.

I. 1925 – 1959: COMPREHENSIVE DISARMAMENT FOCUS

Prior to 1945 and the nuclear era, global collective agreements regarding disarmament and arms control primarily resulted from constraints victors imposed upon the defeated, rather than mutually negotiated agreements.¹⁴ From 1926 to 1934 disarmament discussions (including the League of Nations-sponsored multilateral general disarmament conferences) revolved around reducing weapons, armed forces (predominantly naval), and use of poison gases (such as in World War I) and bacteriological weapons.¹⁵

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

¹² These categories reflect those presented in the 1985 Congressional Nuclear Arms Control Report. See id. at Executive Summary, 1.


¹⁴ ARMS CONTROL AND DISARMAMENT AGREEMENTS, supra note 3, at 1.

¹⁵ Id.
influence, relied on agendas focusing on comprehensive disarmament, and resulted in participants’ weaponry growing in size, sophistication, and lethality.16

Following the 1945 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 reducing armed forces without weakening any one nation’s security.17 The world grappled with the inherent difficulty of “promoting the peaceful uses of the atom, without easing the proliferation of nuclear weapons, ultimately [leading] the Truman administration to propose the Baruch [P]lan.”18

By 1946, U.S. representative, Bernard Baruch presented the United Nations Atomic Energy Commission with a plan to place the world atomic resources under the purview of an independent international authority.19 According to the proposal, the International Atomic Development Authority would have exclusive control or ownership of atomic resources production – mining to manufacturing—to imminent destruction.20 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 parties21 that would destroy existing bombs and stop manufacturing weapons.22 Essentially, the United States would abandon its nuclear weapons program once all other states accepted international control over their programs.23 The Soviet Union declined to hand over its “atomic future” to a majority vote of the United Nations Security Council24 and opposed the staging, ownership, and enforcement provisions of the Baruch Plan.25


17 ARMS CONTROL AND DISARMAMENT AGREEMENTS, supra note 3, at 3.


19 ARMS CONTROL AND DISARMAMENT AGREEMENTS, supra note 3, at 2.

20 Id. at 2.

21 Id. at 3.

22 THE AMERICAN ATOM, supra note 9, at 70.

23 GRAHAM & LAVERA, supra note 18.

24 Id.

25 ARMS CONTROL AND DISARMAMENT AGREEMENTS, supra note 3, at 2.
During the years following the end of 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. Perhaps most alarming, the number of nations possessing these fearsome weapons expanded, first evidenced by the detonation of a nuclear weapon by the Soviet Union on August 29, 1949.26 Thus, Cold War rivals, the United States and Soviet Union, began their race to develop more lethal weapons and more advanced weapon delivery systems. By 1953, these rivals owned and had exploded hydrogen bombs, thus initiating the arms race.

The arms race as a method to maintain peace served as the foundation for the “deterrence” theory.27 In 1954, Secretary of 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.”28

Although nations throughout the world remained apprehensive about possible proliferation – the expanding possession of weapons – concern also existed regarding testing of nuclear weapons and the risk of radioactive debris and accidents, either due to human error or miscalculation, mechanical failure or malfunction, or an unauthorized or misinterpreted action.29 From 1956–1962, 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.30 In return, the recipient nations fulfilled United States-required safeguards such as inspectors continually monitoring the transferred technology to ensure its peaceful use.31

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 – 1958.32


27 THE AMERICAN ATOM, supra note 9, at 193-94.

28 Id. at 192-93.

29 ARMS CONTROL AND DISARMAMENT AGREEMENTS, supra note 3, at 88.

30 GRAHAM & LAVERA, supra note 18.

31 Id.

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

From the late 1950s to 1960s, global arms control negotiations moved from focusing on the generalized commitment of comprehensive disarmament – disarming the world – to a more focused approach of deterrence, i.e., preventing use of nuclear weapons. With the development of intercontinental 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.\(^{33}\)

By 1964, the arms race between the United States and Soviet Union reached a point that curtailment became necessary, while the United Kingdom, France, and People’s Republic of China had already tested nuclear weapons and dozens of others had the potential capability to develop these lethal weapons.\(^{34}\) Accountability for nuclear materials production and the possibility of illegal stockpiles or concealed weapons manufacturing sites highlighted the need for flexibility and practicality in negotiations.\(^{35}\) Consequently, attempts at negotiating limited or partial measures became the primary focus of negotiations, with the underlining hope for gradual progress by limiting the scope of agreements (thereby dividing the nuclear arms threat into “pieces”) while maintaining an overall, generalized goal of complete disarmament.\(^{36}\)

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 the following three categories: 1) nonarmament agreements, limiting militarization from certain areas; 2) confidence-building measures, reducing the risk of war; and 3) arms-limitation agreements, constraining developing, testing, and deploying of nuclear weapons technologies.\(^{37}\)

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.

\(^{33}\) THE AMERICAN ATOM, supra note 9, at 194.

\(^{34}\) GRAHAM & LAVERA, supra note 18.

\(^{35}\) ARMS CONTROL AND DISARMAMENT AGREEMENTS, supra note 3 at 3-4.

\(^{36}\) Id.

\(^{37}\) 1985 Congressional Nuclear Arms Control Report, Part I, supra note 11, at Executive Summary IX-X. I have adopted these categories from the 1985 Congressional Nuclear Arms Control Report for use in this study.
A. NONARMAMENT AGREEMENTS

During the period from 1959 to 1968, multilateral negotiations resulted in several nonarmament agreements. For example, in 1959, the multilateral Antarctic Treaty established a nonarmament agreement which demilitarized the Antarctic, setting the area off-limits for anything but peaceful purposes.

Such nonarmament treaties were “designed to keep free of conflict and nuclear weaponry the environments that science . . . 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 [had] not been introduced – Antarctica and Latin America.”

The Antarctic Treaty was followed by the Latin American Nuclear-Free Zone Treaty of 1967 (prohibiting introduction, use, threat of use of, nuclear weapons in Latin America), the Outer Space Treaty of 1967 (prohibiting weapons of mass destruction in outer space and limiting the moon to peaceful uses), and the Nuclear Non-Proliferation Treaty (NPT) of 1968 (maintaining non-nuclear-weapon status of nations).

Each of these agreements focused on keeping certain areas free from armaments. The parties 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.

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38 ARMS CONTROL AND DISARMAMENT AGREEMENTS, supra note 3, at 4.

39 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.” 1985 Congressional Nuclear Arms Control Report, Part I, supra note 11, at X. Although this agreement included many nations,

[t]he 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, however, limit[ed] its effectiveness.

Id. In 1977, the Agreement between the United States of America 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 to select U.S. facilities in which to apply the full regime of IAEA safeguards procedures, including routine inspections. ARMS CONTROL AND DISARMAMENT AGREEMENTS, supra note 3, at 163.
The Latin American Nuclear-Free Zone Treaty of 1967 was the first of the nuclear-weapon-free-zone (NWFZ) treaties, which were designed “to 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 that [region] will be compelled to seek nuclear weapons in response to a neighbor, thereby decreasing their probability of becoming involved in a nuclear war.”

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

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

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40 The Latin American NWFZ treaty was followed by the South Pacific NWFZ treaty in 1985, Southeast Asia in 1995, and Africa in 1996. GRAHAM & LAVERA, supra note 18, at 41.

41 Id.


weapons and, with over 180 parties, it is the most widely adhered to arms control agreement in history.

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 concerns of the United States and Soviet Union regarding China’s nuclear weapons testing.\(^{46}\) Non-weapons states saw nuclear weapon capability as the “ultimate indicia of respect” as a “powerful” or “big” world power.\(^{47}\) 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.\(^{48}\) Article VI of the NPT was that key provision which required the leading “proliferation concern” – the United States – to ultimately relinquish its nuclear arms program.\(^{49}\) 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,\(^{50}\) 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.\(^{51}\)

With this multilateral agreement, non-nuclear weapon states agreed never to acquire nuclear weapons, 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.”\(^{52}\) Parties used these nonarmament agreements to limit expansion of the nuclear arms threat and associated risks. The NWFZ treaties provided area security for nations,

\(^{46}\) Interview with Dr. Barry M. Blechman 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), currently a Department of Defense Policy Board member (Washington, DC, Feb. 15, 2007) [hereinafter Blechman interview].

\(^{47}\) Graham interview, supra note 42; GRAHAM, supra note 43, at 327.

\(^{48}\) Graham interview, supra note 42.

\(^{49}\) Blechman interview, supra note 46.

\(^{50}\) GRAHAM & LAVERA, supra note 18, at 2.

\(^{51}\) Blechman interview, supra note 46. 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 the United States has not fulfilled its obligation to eliminate the nuclear weapons program. Id.

\(^{52}\) GRAHAM, supra note 43, at 327.
while the NPT provided overall assurance that nuclear weapon states would not pass on their capabilities.\textsuperscript{53}

\section*{B. CONFIDENCE-BUILDING MEASURES}

The Cuban Missile Crisis\textsuperscript{54} 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.”\textsuperscript{55} Additionally, the world watched and wondered about the potential risk of nuclear war either from accident, misunderstanding, or intentional acts of aggression. In response to the public and political prominence of this life-threatening issue, two international agreements were established: the Hot Line Agreement and the Limited Test Ban Treaty.

Specifically, the confidence-building agreement known as the “Hot Line” Agreement of 1963 (Memorandum of Understanding Between the United States and the Union of Soviet Socialist Republics regarding the Establishment of a Direct Communications Link) established an emergency link between the superpowers. This first bilateral agreement limited the risk of war by establishing a direct, rapid, reliable, emergency communications link between the Soviets and the United States for use during a “military crisis which might appear directly to threaten the

\begin{footnotes}
\item[53] 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. The result was the establishment of the Missile Technology Control Regime (MTCR) in 1987. See MTCR website at http://www.mtcr.info/english/index.html. 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. \textit{Id.} Its current membership is 34 nations. \textit{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. \textit{Id.} Each member nation pledges to implement export controls on these items in accordance with their national legislation. The U.S. has done so by means of the Arms Export Control Act. 22 U.S.C. § 2751 et.seq. 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. See MTCR Guidelines at http://www.mtcr.info/english/index.html.

\item[54] The Cuban Missile Crisis entailed thirteen days when the United States discovered the Soviet Union’s strategic offensive missiles positioned in Cuba, and the United States in turn responded with a naval quarantine of Soviet shipments to Cuba, resulting in the Soviet withdrawal of missiles. GRAHAM T. ALLISON, ESSENCE OF DECISION: EXPLAINING THE CUBAN MISSILE CRISIS 1-2 (1971).

\item[55] 1985 Congressional Nuclear Arms Control Report, Part I, \textit{supra} note 11, at X-XI.
\end{footnotes}
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.”

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

C. ARMS-LIMITATION AGREEMENTS

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

Thus, several original parties established the arms-limitation measure known as the Limited Test Ban Treaty (LTBT) 1963 (Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water) and 116 parties have since signed on to this treaty. Initially, the United States, Soviet Union, United Kingdom, Canada, and France, began negotiating an agreement to end nuclear testing after United States and Soviet testing incidents resulted in radioactive debris contamination where fallout contaminated a Japanese fishing vessel in the South Pacific (U.S. test) and Japan experienced rain containing radioactive debris (Soviet test).

The parties initially disagreed as to compliance verification provisions, including the system of controls and inspection. The parties were concerned about “clandestine violations” due to a lack of verification capability or adequate seismic detectors to identify underground testing. The United States demanded “onsite inspection to detect covert testing, especially

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56 ARMS CONTROL AND DISARMAMENT AGREEMENTS, supra note 1, at 19 (quoting the United States working paper submitted to The Eighteen Nation Disarmament Committee, Dec. 12, 1962).

57 Id. at 24.

58 GRAHAM & LAVERA, supra note 18, at 31.

59 Id. at 29.

60 ARMS CONTROL AND DISARMAMENT AGREEMENTS, supra note 3, at 25.

61 GRAHAM & LAVERA, supra note 18, at 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
underground” while the Soviets resisted onsite inspections. After high-level three-power talks with the United States, Soviet Union, and France (France conducted nuclear testing in 1960), President Kennedy suggested removing underground testing from the scope of the agreement and the parties overcame the stalemate over verification.

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 . . . ‘includ[ing] explosions for peaceful purposes.’” The latter distinction attempted to avoid “‘the difficulty of differentiating between weapon test explosions and peaceful explosions without additional controls.’”

III. 1968 – 1979: BILATERAL APPROACH BEGINS

A. NONARMAMENT AGREEMENTS

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 following the LTBT in 1963. 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.

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 or Seabed Treaty reflects a nonarmament treaty. The parties faced difficulties in defining territorial waters and finally agreed to a twelve-mile limit, corresponding with the definition of territorial sea in the Convention on the Territorial Sea.

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63 GRAHAM & LAVERA, supra note 18, at 30.

64 ARMS CONTROL AND DISARMAMENT AGREEMENTS, supra note 3, at 24, 27 (quoting Acting Secretary of State Ball’s report to President Kennedy).

65 Id. at 27 (quoting Acting Secretary of State Ball’s report to President Kennedy).

66 Graham interview, supra note 43; Blechman interview, supra note 46.

67 ARMS CONTROL AND DISARMAMENT AGREEMENTS, supra note 3, at 80.

68 GRAHAM & LAVERA, supra note 18, at 284.
Prior to establishing an agreement, the parties also engaged in extensive, intense discussions regarding verification provisions. 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 moon, is fraught with national jurisdiction claims of the area. The parties finally agreed to verification provisions which allowed the parties to use their own verification means, other parties’ assistance, or international procedures; thus, providing parties the ability to fulfill obligations without interfering with other, legitimate, seabed activities.

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); 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); and, the Prevention of Nuclear War Agreement (1973). The two superpowers designed these agreements to build trust and confidence.

With the Accident Measures and the Hot Line Modernization Agreements the parties attempted to reduce risks associated with nuclear arms. By signing the Accident Measures Agreement, the parties committed to maintain and improve organizational and technical safeguards against accidental or unauthorized nuclear weapons use; to 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.

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.

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

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69 ARMS CONTROL AND DISARMAMENT AGREEMENTS, supra note 3, at 80.

70 GRAHAM & LAVERA, supra note 18, at 284.

71 Id.

72 ARMS CONTROL AND DISARMAMENT AGREEMENTS, supra note 3, at 88.

73 Id. at 91.
avoid nuclear war, thereby having multilateral implications, and imposed a commitment to consult in the event of nuclear confrontation.\textsuperscript{74}

C. ARMS-LIMITATION AGREEMENTS

Despite the “narrow avoidance of worldwide thermonuclear destruction” during the 1962 Cuban Missile Crisis and the bilateral, confidence-building agreements and arms-limitations measures (previously described) the Crisis generated, the arms race between the two superpowers “spurred on.”\textsuperscript{75} In response, between 1969 and 1972, the United States and Soviet Union convened the Strategic Arms Limitation Talks I (SALT) to address “this phenomenon of an all-out, uncontrolled, dangerous nuclear arms race.”\textsuperscript{76}

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.\textsuperscript{77} 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. Each nuclear-armed missile was a weapon system of awesome destructive power. Yet, as both the U.S. and the Soviet Union embarked on massive ICBM production programs in the early 1960s, neither side felt significantly safer as a result because of the massive arsenal being built by their opponent and thus each side felt compelled to build and deploy more and more missiles. By the late 1960s, each side had deployed over a thousand nuclear-armed ICBMs aimed at each other.\textsuperscript{78}

This escalating 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.\textsuperscript{79} 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 on-going arms race, the two nations agreed to engage in offensive and defensive arms limitation talks.\textsuperscript{80} The result was the SALT talks which began in November 1969,\textsuperscript{81} lasted three years, and produced three agreements: the Interim Agreement, the ABM Treaty, and SALT II.

\textsuperscript{74} Id. at 128.

\textsuperscript{75} GRAHAM, supra note 43, at 36.

\textsuperscript{76} Id.

\textsuperscript{77} Bulletin of the Atomic Scientists, January/February 2009 at 64-66.

\textsuperscript{78} Id. at 63. See also ALBERT CARNESALE AND RICHARD N. HAASS, SUPERPOWER ARMS CONTROL: SETTING THE RECORD STRAIGHT 71 (1988).

\textsuperscript{79} Bulletin of the Atomic Scientists, supra note 77, at 66.

\textsuperscript{80} Id.
The bilateral SALT I negotiations were focused on limiting strategic offensive and defensive weapons delivery vehicles. SALT I resulted in two finalized agreements consisting of: 1) the Interim Agreement on Offensive Arms I (1972) and 2) the Anti-Ballistic Missile (ABM) Treaty (1972). The first agreement restrained the rivalry between the United States and Soviet Union by limiting offensive strategic weaponry on land and submarine-based offensive nuclear weapons. The latter agreement limited ABM (designed to intercept strategic ballistic missiles) defensive systems.

The Interim Agreement on Offensive Arms essentially froze the number of strategic ballistic missile launchers (operational and under construction) and allowed an increase in sea-launched ballistic missile (SLBM) launchers to an agreed level for each party only with a dismantling or destroying of an equal number of older ICBM or SLBM launchers, but the general terms allowed for uncertainty regarding the amount of weapons in the Soviet arsenal. This agreement was intended to be a temporary, stop-gap measure to “freeze” strategic offensive arms at existing levels to give arms control negotiators additional time to address the enormously difficult challenges associated with trying to produce a comprehensive nuclear arms limitation agreement.

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, with the United States obligated to defend overseas allies while the Soviets had nearby allies. Furthermore, U.S. and Soviet strategic offensive forces differed significantly from each other because of historic, geographic and other reasons. Since the United States had a strong

81 Id. at 71.
82 GRAHAM, supra note 43 at 36; GRAHAM & LAVERA, supra note 18, at 306.
83 ARMS CONTROL AND DISARMAMENT AGREEMENTS, supra note 3, at 110-11.
84 The agreement allows each party to have one ABM site to protect its capital and another to protect its ICBM field, and limits ABM launchers, missiles, and radars, and restricts certain testing. 1985 Congressional Nuclear Arms Control Report, Part I, supra note 11, at 20. The 1974 ABM Treaty Protocol further reduced the number of ABM deployment areas to one site only. ARMS CONTROL AND DISARMAMENT AGREEMENTS, supra note 3, at 131.
85 Id. at 121.
86 GRAHAM, supra note 43, at 43.
87 NATIONAL ACADEMY OF SCIENCES, supra note 13, at 29.
88 GRAHAM & LAVERA, supra note 18, at 308.
89 NATIONAL ACADEMY OF SCIENCES, supra note 13, at 27.
tradition of air and naval power, the United States had advantages in heavy bombers and submarine-launched ballistic missiles (SLBMs). Since the Soviet Union had a large land mass, it concentrated on the development and deployment of land-based strategic ballistic missiles. 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 U.S. or Soviet weapon system capable of reaching the territory of the other side. This would have included U.S. forward-based medium-range bombers in Europe that were capable of reaching the Soviet Union but would have excluded Soviet intermediate-range ballistic missiles aimed at Europe that were incapable of reaching the U.S. Thus, the goal of the Interim Agreement, which was to remain in force for five years, was to cap at existing levels the number of strategic ballistic missile launchers, operational or under construction, on each side. Construction of additional SLBM launchers was permitted, up to an agreed level, if an equal number of older ICBM or SLBM launchers were destroyed. While modernization and replacement of strategic missiles was permitted, launchers for light, older ICBMs could not be converted into launchers for more modern heavy ICBMs. A significant step by the Interim Agreement was that it formalized the principle of non-interference with national technical means of verification. 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). 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 left these issues for subsequent arms control negotiations and 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 solving the offensive part of the strategic equation would take almost twenty years (until START was signed in 1991), the defensive part of the strategic relationship was solved in a negotiation lasting a mere three years: 1969 to 1972. The ABM

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90 Id.

91 Id. at 28.

92 Id.

93 Id.

94 Id. at 29.


96 Id. See also Interim Agreement on Offensive Arms I, supra note 95, at art. IV, II.

97 Interim Agreement on Offensive Arms I, supra note 95, at art. V.
Treaty, which was signed and entered into force in 1972, limited the development, testing, and deployment of anti-ballistic missile, or ABM, systems—systems designed to counter or, “shoot down,” strategic ballistic missiles. The ABM Treaty imposed limits on the number of ABM interceptors, launchers and radars both sides could deploy.\(^9\) It limited where those components could be deployed: at both the nation’s capital and at an ICBM field of the Party’s choosing. A 1974 Protocol to the Treaty reduced these two choices to one and called upon the Parties to pick which site they would defend. The Soviet Union decided to defend Moscow while the U.S. chose to defend the ICBM field at Grand Forks, North Dakota. This Treaty also banned the development, testing or deployment of ABM systems or components that are sea-based, air-based, space-based, or mobile land-based, thus expressing a clear preference for ABM systems or components that were fixed and land-based.\(^9\) 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.\(^10\) The Treaty was of unlimited duration, subject to review every five years.\(^11\) Both sides had the right to withdraw from the Treaty on six months notice, a right that the United States exercised on December 13, 2001.\(^12\) 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 and SALT II began in 1972 with the goal to replace the Interim Agreement “with a long-term comprehensive [t]reaty providing broad limits on strategic offensive weapons systems.”\(^13\)

The SALT II Treaty represented an effort by the United States and the Soviet Union to move beyond the arms “freeze” called for by the Interim Agreement to a permanent treaty that would provide for meaningful reductions in strategic offensive arms. SALT II placed a limit of 2,400 (to later be reduced to 2,250) on the total number of strategic nuclear launch vehicles held by each side.\(^14\) Within this ceiling, no more than 1,320 ICBMs, SLBMs, and long-range


\(^9\) Id. at art. V

\(^10\) Id. at art. XII.

\(^11\) Id. at arts. XV and XIV.

\(^12\) Id. at art. XV, para. 2. For text of withdrawal notice, see: http://www.dod.gov/acq/acic/treaties/abm/ABMwithdrawal.htm

\(^13\) ARMS CONTROL AND DISARMAMENT AGREEMENTS, supra note 1, at 110-11.

bombers could be equipped with MIRVs or long-range cruise missiles. Additional limitations included ceilings on the throw-weight and launch-weight 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, as well as agreements on data exchanges and advance notification of certain ICBM test launches.

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 (i.e., SALT II) in Vienna on June 18, 1979. When SALT II was submitted to the U.S. Senate for ratification during the summer of 1979, the result was a very contentious series of ratification hearings and substantial Senate opposition. Prospects for Senate ratification were doomed when, in December 1979, Soviet military forces invaded Afghanistan.

With the Soviet invasion of Afghanistan, President Carter asked the Senate to suspend considering the SALT II agreement and in July 1980 President Carter signed Presidential Directive 59, describing the United States’ nuclear, war-fighting policy including plans for conducting a limited nuclear war. The United States remained a signatory to the Treaty and continued to abide by its numerical limits on strategic nuclear launch vehicles until late 1986. Despite the failure of SALT II to enter into force, that treaty represented pioneer concepts that were carried over into the 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.

105 Id. at art. V.

106 BURNS, supra note 44, at 895-07. See also CARNESALE AND HAASS, supra note 78, at 105-134 and NATIONAL ACADEMY OF SCIENCES, supra note 13, at 32-35.

107 BURNS, supra note 44, at 903-07.

108 Id. See also NATIONAL ACADEMY OF SCIENCES, supra note 13, at 19-20.

109 1985 Congressional Nuclear Arms Control Report, Part I, supra note 11, at XIII.

110 THE AMERICAN ATOM, supra note 9 at 195, 210 (quoting L. Hagen, PD-59 and the Countervailing Strategy: Continuity or Change?, Department of Defence, Canada: Project Report No. PR 170 (Ottawa, October 1981)).

111 BURNS, supra note 44, at 903-07.
President Reagan, a 1979 member of the anti-SALT, anti-arms control, anti-Soviet, non-profit, private organization, Committee on the Present Danger, and opponent of SALT in 1980\textsuperscript{112} succeeded Carter and called for modernizing nuclear defenses.\textsuperscript{113} Although he chose not to revive SALT II, surprisingly, President Reagan ensured the United States did not deploy troops exceeding SALT II limits, as long as the Soviets did so, as well.\textsuperscript{114} The Soviet Union also agreed to follow the Treaty terms, and the un-ratified agreement continued to guide national policy for both parties.\textsuperscript{115}

In response to the Senate’s failure to ratify SALT II and Presidential Directive 59 in 1980, the Nuclear Freeze Movement developed in the United States to urge the superpowers to freeze nuclear weapons testing, production, missile deployment, and new aircraft delivery systems.\textsuperscript{116} The Freeze Movement gained large support from the public and the Democratic Party adopted the Freeze positions as part of its campaign platform in 1984.\textsuperscript{117}

Other arms-limitation agreements during this period (both bilateral) included the Treaty Between the United States of America and the Union of Soviet Socialist Republics on the Limitation of Underground Nuclear Weapon Tests – “Threshold Test Ban Treaty” (TTBT) (1974) and the Treaty Between the United States of America and the Union of Soviet Socialist Republics on Underground Nuclear Explosions for Peaceful Purposes – “Peaceful Nuclear Explosion (PNE) Treaty” (1976). 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 find Nixon something to sign at the Summit” one month before Nixon’s resignation.\textsuperscript{118} Consequently, the TTBT did not address peaceful nuclear explosions considered a “pie in the sky” and the PNE followed after two more years of negotiations which were mainly delayed because the Soviets initially held fast to the idea of using explosions to dig a major canal.\textsuperscript{119}


\textsuperscript{113} 1985 Congressional Nuclear Arms Control Report, Part I, supra note 11, at XIII.

\textsuperscript{114} Id. at 29.

\textsuperscript{115} ARMS CONTROL AND DISARMAMENT AGREEMENTS, supra note 3, at 190.


\textsuperscript{117} Lawrence S. Wittner, What Activists Can Learn from the Nuclear Freeze Movement, George Mason University’s History News Network, Aug. 18, 2003 \url{http://hnn.us/articles/1636.html}.

\textsuperscript{118} GRAHAM, supra note 43, at 61.

\textsuperscript{119} Id.
These companion agreements filled the void remaining after the LTBT 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.”120 The TTBT prohibited tests with yields exceeding 150 kilotons (approximately 150,000 tons of TNT), and thus, set forth a nuclear “threshold,” reducing the explosive force of any new nuclear warheads and bombs.121 The PNE provided the same restrictions on peaceful underground nuclear explosions for civilian development projects.122

These treaties served to limit the expanding weapons technology by restricting or “capping” the explosive force of the weapons. Again, the parties used agreement to restrain the threat of nuclear arms and arms capabilities. By limiting weapons capabilities, the parties stemmed the growth of the nuclear arms threat.123

IV. 1980 – 1991: REPOSITIONING
A. CONFIDENCE-BUILDING MEASURES

Several confidence-building measures, reducing the risk of war, were established from 1980 – 1991, some multilateral, some bilateral. In 1980, the multilateral Nuclear Material Convention: 1) provided for minimum physical protection levels for international transport of nuclear material; 2) set forth a general framework for cooperation among states in protecting,

120 1985 Congressional Nuclear Arms Control Report, Part I, supra note 11, at XIII.

121 ARMS CONTROL AND DISARMAMENT AGREEMENTS, supra note 3, at 133.

122 1985 Congressional Nuclear Arms Control Report, Part I, supra note 11, at 22. The subsequent protocol provided for limited (under specific circumstances) onsite inspection. Id. Although not directly related to nuclear arms control, two other agreements were signed during the period from 1969 to 1979. For example, 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” a multilateral agreement signed in 1972, parties agreed to stop developing, producing, stockpiling, or acquiring biological agents or toxins of types and qualities not justified for “‘prophylactic, protective, and other peaceful purposes,’ as well as weapons and means of delivery.” ARMS CONTROL AND DISARMAMENT AGREEMENTS, supra note 3, 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,” parties agreed not to use climate modification techniques for military or hostile purposes even if such techniques became feasible in the future. Id. at 153.

123 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 112, at 31.
recovering, and returning stolen nuclear material; and, 3) listed certain offenses for which offenders would be subject to extradition or prosecution.\textsuperscript{124}

In 1984, the bilateral Agreement between the United States of America and the Union of the Socialist Republics to Expand the U.S.-U.S.S.R. Direct Communications Link --“Hot Line Expansion Agreement” -- upgraded the Hot Line, increasing communications equipment speed and adding facsimile and graphic material transmission capability.\textsuperscript{125}

With the Nuclear Risk Reduction Centers Agreement in 1987, the United States and the Soviet Union established centers connected by facsimile to supplement communications and provide capabilities for government-to-government notifications, communications, and information exchange required pursuant to arms control and confidence-building agreements.\textsuperscript{126}

In 1986, further measures were established to increase openness and predictability about military activities in Europe to reduce the risk of armed conflict in Europe.\textsuperscript{127} Specifically, the parties (States of the Conference on Security and Co-operation in Europe, including the United States, Soviet Union, France, and United Kingdom) with 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” established notification, observation, forecasting, and onsite inspection procedures for military activities (exceeding a certain number of troops) in Europe.\textsuperscript{128}

In 1988, the superpowers agreed to another confidence-building measure with the Ballistic Missile Launch Notification Agreement. This bilateral treaty attempted to limit the risk of nuclear war (due to misinterpretation, miscalculation, or accident) by requiring parties to notify in advance when launching intercontinental ballistic missiles and submarine-launched ballistic missiles.\textsuperscript{129}

\section*{B. ARMS-LIMITATION AGREEMENTS}

The Reagan Administration reformulated the strategic arms negotiations into the 1982-1991 Strategic Arms Reduction Talks (START) and the Intermediate-Range Nuclear Forces

\textsuperscript{124} ARMS CONTROL AND DISARMAMENT AGREEMENTS, \textit{supra} note 3, at 218.

\textsuperscript{125} \textit{Id.} at 228.

\textsuperscript{126} \textit{Id.} at 246.

\textsuperscript{127} \textit{Id.} at 231.

\textsuperscript{128} \textit{Id.} at 232.

\textsuperscript{129} \textit{Id.} at 347.
Treaty (INF) (1987), which were designed “to limit the actual weapons, the warheads, ‘which are what kill people,’ as distinguished from” the Nixon, Ford, Carter Administrations’ approach of only limiting the delivery systems.”

SALT I & II limited launchers (i.e., ICBM silos, SLBM tubes, and bombers) “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.”

The first years of these negotiations achieved little progress, in part because of the U.S. deployment of intermediate-range nuclear forces in Europe, which not only represented a major distraction from the task of limiting strategic arms but also had a chilling effect on U.S.-Soviet relations. The pace and progress of strategic arms negotiations between these two nations began to achieve traction in the mid-1980s. In 1983, President Reagan announced the Strategic Defense Initiative, developing a missile defense system that would render nuclear weapons “impotent and obsolete.” In 1985, President Reagan and Chairman Gorbachev met for the first time at the Geneva Summit. Not only did they establish a personal relationship that would prove enormously important later on, they agreed that “a nuclear war cannot be won and must never be fought.” They affirmed their mutual goal of working towards an INF Treaty and of limiting strategic offensive arms.

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. By the end of the meeting, the two sides had agreed on a framework for a START Treaty built around reductions in strategic nuclear delivery vehicles to 1,600 and a ceiling on deployed nuclear warheads of 6,000. The Reykjavik Summit was “the true watershed of modern arms control” when the Soviet Union General Secretary Mikhail Gorbachev and U.S. President Reagan became “negotiators in chief,” 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 . . . .” The INF was a success

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130 Grahán, supra note 43, 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.


132 Burns supra note 44, at 908.

133 Id. at 909-10.


135 Adelman, supra note 112, at 63.

136 Arms Control and Disarmament Agreements, supra note 3, at 253.
story that evolved from the Reykjavik Summit because during that summit Gorbachev agreed in principle to the INF’s intrusive on-site inspection provisions. 137

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. 138 The resulting international tensions, which were complicated by a growing European peace movement, moved NATO to call for a “dual track” strategy to deal with this threat: arms control negotiations between the U.S. and USSR combined with the deployment of U.S. Pershing II missiles as well as ground-launched cruise missiles, both of which were nuclear-armed. 139 The arms control negotiations began in December 1981 and had to overcome numerous obstacles, disagreements, and one Soviet walk-out; but 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. 140 The resultant 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 (INF), required each party to destroy its 500 and 5,500 kilometer ground-launched ballistic and cruise missiles, as well as their associated launchers, support structures, and equipment. 141 Within a three-year elimination period commencing on the date the Treaty entered into force—June 1, 1988—the two sides eliminated all Pershing II and SS-20 missiles as well as all other systems covered by the Treaty. 142

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 the establishment of the Nuclear Risk Reduction Centers in the capitals of both sides as well as the routine exchange of launch notifications, accomplished through those Nuclear Risk Reduction Centers, for the launches of missiles permitted by the INF Treaty under limited circumstances for research and development purposes. 143 Its most

137 GRAHAM, supra note 43, at 125.

138 BURNS, supra note 44, at 955-64.

139 Id.

140 Id.

141 ARMS CONTROL AND DISARMAMENT AGREEMENTS, supra note 3, at 232.

142 Id.

significant accomplishment, however, was eliminating an entire class of weapons—intermediate-range nuclear missiles.

V. 1991 – 2009: START In Force

In December 1987, Gorbachev came to Washington to sign the INF Treaty and the parties announced an agreement on a START framework. The two sides would still need several years to resolve the remaining issues, most notably the implications posed by the new U.S. effort on missile defense. The President George H.W. Bush and President Gorbachev finally signed the START Treaty (also known as START I) on July 31, 1991.

The START I Treaty obligated the superpowers to notify the other party of any ICBM or SLBM flight test, including those into the upper atmosphere or space. The START Treaty also allowed for the deployment of 1,600 strategic nuclear delivery vehicles with 6,000 accountable warheads. Of these, only 4,900 could be deployed on missiles and out of these 4,900 warheads, only 1,100 could be deployed on mobile ICBMs. The reductions called for by START 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. Pursuant to the START Treaty, the parties adopted a verification regime similar to the regime contained in the INF Treaty regarding data exchanges, on-site inspection, launch notifications and respect for national technical means of verification. A major difference was START’s rules on telemetry encryption, not present in INF, which were designed to prevent both sides from developing and testing new strategic missiles without notifying the other side.

Following the very limited achievements of the Interim Agreement and the SALT II Treaty, START was a major success. It was the first arms control agreement between the U.S. and Soviet Union that required the elimination of almost 50 percent of the deployed warheads both sides possessed on strategic missiles. The START Treaty was limited in duration to 15 years, with a provision allowing the Parties to extend the Treaty for successive five-year

\[144 \text{Id.} \]
\[145 \text{ARMs CONTRol AND DISARMAMENT AGREEMENTS, supra note 3, at 347.} \]
\[147 \text{Id.} \]
\[148 \text{Id.} \]
\[149 \text{Id. at arts. VIII, IX, X, XI, XII.} \]
\[150 \text{Id. at art. X.} \]
While many may have expected that this option would be exercised, that never occurred.

Less than a month after the START Treaty had been signed, a group of hard-line Soviet Government officials tried to overthrow the government of President Gorbachev. Although unsuccessful, this attempted coup showed how tumultuous the Soviet Government was behind the scenes and how fragile President Gorbachev’s hold on power was. 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 of—and even the viability of—the START Treaty.

The Lisbon Protocol in May 1992 addressed these questions when four nations – Belarus, Ukraine, Kazakhstan, and the Russian Federation agreed to assume the former Soviet Union’s START Treaty obligations. The START Treaty was still viable but became a multilateral instead of a bilateral treaty. In addition, Belarus, Ukraine, and Kazakhstan pledged to remove all nuclear weapons from their soil and return them to the Russian Federation and they have subsequently joined the Nuclear Non-Proliferation Treaty as non-nuclear weapon states.

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. As a result, the seven-year reduction period the START Treaty called for, as well as the Treaty’s fifteen-year duration period, 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.

As soon as START was signed, from 1991 to 1992 the parties began negotiating the follow-on treaty (i.e., START II) which President George H.W. Bush and Russian President

151 *Id.* art. XVII.

152 BURNS, supra note 44, at 911.


154 *Id.*

155 *Id.*

Boris Yeltsin signed on January 3, 1993. The START II Treaty was intended to build on the strategic arms reductions achieved pursuant to the START Treaty by moving to greater reductions. Total deployed warheads were to be reduced from 6,000 under START to around 3,500. Also, ICBMs with MIRVed warheads were banned although SLBMs with MIRVs were permitted. The START II Treaty 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 try updating the ABM Treaty. This approval never occurred because of strong opposition in the Senate to the ABM Treaty. Accordingly, on June 14, 2002, one day after the United States withdrew from the ABM Treaty, the Russian Federation withdrew from START II.

This decision by the Russian Federation had little practical consequence because of the Treaty of Moscow. This Treaty, which President George W. Bush and President Vladimir Putin signed 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 1700 to 2200 by December 31, 2012. The parties agreed that all the other provisions of the START Treaty would remain in effect, including the verification regime. This two-page Treaty filled the void left by the demise of the START II Treaty and carried the SALT/START process forward to the New START Treaty, which was designed to supersede the START Treaty and the Treaty of Moscow upon its entry into force.

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

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159 Id. at art. II.

160 NTI, supra note 157.

161 Id.


163 Id. at art. II.

concern. 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. 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.

More than 90 nations have joined this voluntary, non-treaty-based regime, reflecting 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. In effect, the PSI calls upon the international community to use their already-available legal tools to enforce their shared non-proliferation goals.

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

The START Treaty expired by its own terms at midnight December 4, 2009. The United States and Russian Federation had announced their desire to conclude a follow-on treaty to replace START but the negotiations were not concluded until after START had expired. And on April 8, 2010, Presidents Obama and Medvedev signed the New START, 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. This new treaty reduces deployed strategic nuclear warheads to 1,550 and strategic nuclear delivery vehicles to 700

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165 State Department Fact Sheet, [http://www.state.gov/t/isn/c10390.htm](http://www.state.gov/t/isn/c10390.htm).

166 Id.

167 Id.

168 Id.

169 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 State Department Fact Sheet, [http://www.state.gov/t/isn/trty/101466.htm](http://www.state.gov/t/isn/trty/101466.htm). 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. HCOC was envisioned as a supplement to the MTCR without the more stringent membership process found in MTCR. See footnote 53 supra for a discussion of MTCR. HCOC membership is unrestricted and is currently over 125 nations. See State Department Fact Sheet, [http://www.state.gov/t/isn/trty/101466.htm](http://www.state.gov/t/isn/trty/101466.htm).
within seven years after it enters into force.\textsuperscript{170} This is nearly three-fourths lower than the
START Treaty warhead level and 30\% lower than the level the Treaty of Moscow prescribed.\textsuperscript{171} Within
that Treaty limit, each Party has the ability to determine its own force structure. 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. 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.\textsuperscript{172} This reflects, among other things, the existence
of a new relationship between the U.S. 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 71-26.\textsuperscript{173} The ratification hearings were very contentious,
reflecting concerns over Russian treaty compliance, missile defense and nuclear stockpiles. 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. 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, its duration being for a period of ten years.\textsuperscript{174}

\section*{VII. 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 in this process that has lasted for years? While it is difficult to predict the
future of the SALT/START process, there are some possible 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 UK and
France and possibly including the People’s Republic of China, India, and Pakistan. (Israel and
North Korea would likely not be interested.)

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. The Senate’s

\begin{footnotesize}

\begin{itemize}
\item\textsuperscript{170} New START Treaty, \textit{supra} note 164, at art. II.
\item\textsuperscript{171} White House Fact Sheet, \url{http://www.whitehouse.gov/the-press-office/key-facts-about-new-start-treaty}.
\item\textsuperscript{172} New START Treaty, \textit{supra} note 164, at Part Seven, Protocol.
\item\textsuperscript{173} 156 CONG. REC. S10982 (Dec. 22, 2010).
\item\textsuperscript{174} Measures for the Further Reduction and Limitation of Strategic Offensive Arms, \textit{supra} note 164, at art. XIV.
\end{itemize}
\end{footnotesize}
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. 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 bring continued reductions in deployed nuclear weapons. But how low can the United States and Russian Federation go? The United States won World War II in the Pacific with two nuclear weapons. The NPT establishes an international goal of “cessation of the nuclear arms race at an early date” followed by “general and complete disarmament.” 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 21st 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—the military might of both sides, skilled and diligent diplomacy, growing economic interests by both sides in each 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.

Nuclear arms control negotiations has moved from focusing on comprehensive disarmament (1925-1959); to attempts at implementing partial measures (1959-1968); to bilateral talks (1968-1979); to the United States and Union of Soviet Socialist Republics reassessing and repositioning (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 a 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 the superpowers.

\[175\] 156 CONG. REC. S10982, supra note 173.

\[176\] GAILEY, supra note 4.

\[177\] Nuclear Non-Proliferation Treaty, supra note 45, at art. VI.