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Arms Control and Nonproliferation: A Catalog of Treaties and Agreements

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Summary

Arms control and nonproliferation efforts are two of the tools that the United States has used to implement its national security strategy. Although some believe these tools do little to restrain the behavior of U.S. adversaries, while doing too much to restrain U.S. military forces and operations, many others see them as an effective means to promote transparency, ease military planning, limit forces, and protect against uncertainty and surprise. Arms control and nonproliferation efforts have produced formal treaties and agreements, informal arrangements, and cooperative threat reduction and monitoring mechanisms.

The United States and the Soviet Union began to sign agreements limiting their strategic offensive nuclear weapons in the early 1970s. Progress in negotiating and implementing these agreements was often slow, and subject to the tenor of the broader U.S.-Soviet relationship. As the Cold War drew to a close in the late 1980s, the pace of negotiations quickened, with the two sides signing treaties limiting intermediate-range and long-range weapons. Since then, a series of progressive U.S.-Russian agreements reduced both sides' nuclear stockpiles and delivery vehicles. U.S.-Russian arms control cooperation has sharply deteriorated in recent years, as has Russian compliance with long-standing arms control commitments. Following Russia's full-scale invasion of Ukraine and the further deterioration in U.S.-Russia relations in 2022, the prospect for new arms control negotiations and bilateral strategic risk reduction measures is uncertain, at least in the short- to medium-term. Nevertheless, the United States has sought to engage in bilateral and multilateral diplomatic efforts to reduce the risk of conflict involving the employment of nuclear weapons.

The United States is a prominent actor in an international regime that attempts to limit the spread of nuclear weapons to new countries, or nuclear "nonproliferation." This regime includes formal treaties, international organizations that monitor compliance, and export control arrangements. The Nuclear Non-Proliferation Treaty (NPT) serves as the cornerstone of this regime, with all but four states participating in it. The International Atomic Energy Agency monitors nuclear energy programs to make sure they remain peaceful, and helps countries develop and access the benefits of nuclear science. Other measures, such as sanctions, interdiction efforts, and informal cooperative endeavors, also seek to slow or stop the spread of nuclear materials and the means to produce nuclear and other weapons of mass destruction, as well as their means of delivery.

The international community has adopted a number of agreements that address nonnuclear weapons. The Chemical Weapons and Biological Weapons Conventions prohibit both types of weapons. Other arrangements seek to slow the spread of technologies that countries could use to develop advanced conventional weapons. The United States and international partners have also worked to prevent terrorist access or use of nuclear, biological, or chemical weapons, known collectively as weapons of mass destruction (WMD).

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Introduction

National Security, Arms Control, and Nonproliferation

For much of the past century, U.S. national security strategy focused on several core, interrelated objectives. These include enhancing U.S. security at home and abroad; promoting U.S. economic prosperity; and promoting free markets and democracy around the world. The United States has used unilateral and multilateral mechanisms to achieve these objectives, with varying amounts of emphasis at different times. These mechanisms have included a range of military, diplomatic, and economic tools.

One of these core objectives—enhancing U.S. security—generally is interpreted as the effort to protect the nation's interests and includes, for instance, protecting the lives and safety of Americans; maintaining U.S. sovereignty over its values, territory, and institutions; and promoting the nation's well-being. The United States has wielded a deep and wide range of military, diplomatic, and economic tools to protect and advance its security interests. These include, for instance, the deployment of military forces to deter, dissuade, persuade, or compel others; the formation of alliances and coalitions to advance U.S. interests and counter aggression; and the use of U.S. economic power to advance its agenda or promote democratization, or to impose sanctions or withhold U.S. economic support to condemn or punish states hostile to U.S. interests.

In this context, arms control and nonproliferation efforts are two of the tools that the United States has occasionally used to implement its national security strategy. The United States generally does not pursue these arrangements as ends in and of themselves, and many argue that they should not become more important than the strategy behind them. But, in many cases, their effective employment can be critical to the success of that broader strategy. They can serve as a complement to, rather than a substitute for, military or economic efforts.

Arms control has been broadly defined as "all the forms of military cooperation between potential enemies in the interest of reducing the likelihood of war, its scope and violence if it occurs, and the political and economic costs of being prepared for it."[1] Effective arms control measures might enhance U.S. national security in a number of ways. For example, many arms control agreements can include monitoring mechanisms that can provide early warning of efforts to evade or ignore the obligations. These mechanisms can also promote transparency in a way that might increase U.S. knowledge about and understanding of the size, makeup, and operations of an opposing military force. This might not only ease U.S. military planning, but could also reduce an opponent's incentives for and opportunities to attack U.S. forces, or the forces of its friends and allies. Transparency and confidence-building measures might also build confidence among wary adversaries. Negotiators can also design arms control measures to complement U.S. force structure objectives by limiting or restraining U.S. and other countries' forces. During times of declining defense budget resources, arms control measures may also help ensure reciprocity in force reductions. Indeed, some analysts consider such arms control measures essential to the success of national military objectives.

[1] Thomas C. Schelling and Morton H. Halperin, *Strategy and Arms Control* (Twentieth Century Fund: New York, 1961), p. 2.

Similarly, U.S. national security policy has sought to prevent the further spread of nuclear and other weapons of mass destruction (WMD)[2] and their means of delivery through a variety of *non- and counter-proliferation tools*. For one reason, proliferation can exacerbate regional tensions that might escalate to conflict and involve or threaten U.S. forces or those of its allies and partners. Proliferation might also introduce new and unexpected threats to U.S. allies or the U.S. homeland. Furthermore, proliferation can greatly complicate U.S. national military strategy, force structure design, and conduct of operations. These weapons could also pose a threat to the U.S. homeland if they were acquired by terrorists or subnational groups. Hence, the United States employs diplomatic, economic, and military tools to restrain these threats and enhance its national security.

Critics of arms control and nonproliferation arrangements often argue that the United States should not limit its own forces or flexibility in exchange for the promise that others might do so as well. They also argue that, absent stringent enforcement mechanisms that force other states to comply with their obligations, these agreements can become unbalanced, with the United States abiding by the terms while others fail to do so.

Other U.S. efforts—such as economic, military, or security assistance—may also help slow the proliferation of nuclear weapons. Alliances and security assurances, sometimes called a "nuclear umbrella" are another way to dissuade a country from pursuing an independent nuclear weapon capability. Assuring countries of access to the peaceful uses of nuclear, biological and chemical sciences is a key component of the treaties banning weapons in those categories. Conversely, unilateral or multilateral economic sanctions can be imposed on countries that violate international nonproliferation standards.[3] When diplomacy or sanctions fail, some policymakers have argued that military measures may be necessary to attack nuclear and other weapons of mass destruction and related facilities in states hostile to the United States or its allies. Accurate intelligence is a key component of both diplomatic and military approaches to nonproliferation.

A concept closely related to ideas involving the limits on or the prevention of spread of certain military capabilities is *disarmament,* which involves the complete elimination of certain military capabilities. In the past, U.S. policies have either pursued or supported certain types of disarmament among two or more countries, or more broadly for certain categories of weapons such as chemical or biological weapons.

Role of Congress

The United States has led and participated in numerous arms control and nonproliferation efforts over the past 60 years. These efforts have produced formal treaties and agreements that impose restrictions on U.S. military forces and activities, informal arrangements and guidelines that the United States has agreed to observe, and unilateral restraints on military forces and activities that the United States has adopted either on its own or in conjunction with reciprocal restraints on other countries' forces and activities. Because these arms control and nonproliferation arrangements affect U.S. national security, military programs, force levels, and defense spending, Congress has shown a continuing interest in the implementation of existing agreements and the prospects for further negotiations.

[2] See W. Seth Carus, *Defining "Weapons of Mass Destruction,"* National Defense University occasional paper 8, January 2012, https://ndupress.ndu.edu/Portals/68/Documents/occasional/cswmd/CSWMD_OccationalPaper-8.pdf.

[3] For background on the use of U.S. sanctions in proliferation cases, see CRS Report RL31502, *Nuclear, Biological, Chemical, and Missile Proliferation Sanctions: Selected Current Law*, by Dianne E. Rennack.

Congress plays a key role in developing and enacting economic sanctions legislation against foreign governments for the proliferation of nuclear, chemical, and biological weapons and their delivery systems. Congress has also assessed executive branch implementation of export control laws.[4]

Members of Congress have also proposed and developed programs implemented by the executive branch to reduce nuclear and other WMD threats to U.S. national security. For example, as the Soviet Union collapsed in late 1991, many Members of Congress grew concerned that deteriorating social and economic conditions would affect control over Soviet weapons of mass destruction, leading to loss of control or proliferation to other states or nonstate actors.[5] Congress has provided funding and conducted oversight of these cooperative threat-reduction and nonproliferation assistance programs over time, as their geographic scope has expanded worldwide and mission evolved to meet current threats.[6]

Key issues in this area that the 118th Congress might consider include Iran's potential to develop nuclear weapons; North Korea's growing nuclear weapons program; U.S. civilian nuclear cooperation agreements; and tensions between India and Pakistan, as amplified by their nuclear weapons programs. Congress may also consider how cooperation under the international nonproliferation regimes can be leveraged to prevent nuclear terrorism, how the United States could cooperate with allies and partners to mitigate the potential impacts of emerging technologies on international security, and whether and how the United States could engage with Russia and China to reduce the risk of nuclear war. Congress will continue to examine budget requests for executive branch programs supporting U.S. implementation of treaty commitments, nonproliferation assistance to international partners, and counterproliferation measures, as well as funding for international organizations implementing relevant treaties.

Arms Control and Nonproliferation since the Cold War

During the Cold War, arms control played a key role in the relationship between the United States and Soviet Union. Although the agreements rarely forced either side to accept significant changes in its planned nuclear forces, the arms control process, and the formal negotiations, were often one of the few channels for communication between the United States and Soviet Union. Further, the United States participated in many multilateral regimes that sought to limit the spread of nuclear, chemical, and biological weapons and their means of delivery. Beginning in the early 1990s, it also extended assistance to Russia and other former Soviet states in an effort to reduce the threat that these weapons might fall into the hands of hostile states or nonstate actors. It has explored the possible use of similar tools to provide other states with assistance in containing and controlling weapons and weapons-grade materials.[7]

[4] See **Appendix C**; CRS Report RL31502, *Nuclear, Biological, Chemical, and Missile Proliferation Sanctions: Selected Current Law*, by Dianne E. Rennack; and CRS Report R41438, *North Korea: Legislative Basis for U.S. Economic Sanctions*, by Dianne E. Rennack.

[5] In December 1991, Congress authorized the transfer of $400 million from the FY1992 Department of Defense (DOD) budget to help the republics that inherited the Soviet nuclear and chemical weapons stockpile—Russia, Kazakhstan, Ukraine, and Belarus—transport and dismantle these weapons. This effort grew substantially, with Congress appropriating more than $1 billion each year for programs administered by the DOD, the State Department, and the Department of Energy (DOE).

[6] For background information and more detail about these programs, see CRS Report R43143, *The Evolution of Cooperative Threat Reduction: Issues for Congress*, by Mary Beth D. Nikitin and Amy F. Woolf.

[7] See CRS Report R43143, *The Evolution of Cooperative Threat Reduction: Issues for Congress*, by Mary Beth D. Nikitin and Amy F. Woolf.

The changing international environment in the 1990s led many analysts to believe that the United States and other countries could enter a new era of restraint in weapons deployments, weapons transfers, and military operations. These policies were codified in several treaties signed between 1991 and 1996, such as the Strategic Arms Reduction Treaties (START I and START II), the Chemical Weapons Convention, and the Comprehensive Nuclear Test Ban Treaty. During the **Clinton Administration**, an agreement with North Korea temporarily froze its nuclear weapons production facilities.[8] The NPT was permanently extended in 1995, and the IAEA safeguards regime was strengthened with the Additional Protocol. In 1997, the United States and Russia—the two countries with the largest stockpiles of chemical weapons—both ratified the Chemical Weapons Convention. In December 1997, more than 120 states signed an international agreement banning the use of antipersonnel land mines; however, a number of major countries, including the United States, have so far declined to sign.

Yet, for many, hopes for a new era were clouded by the slow pace of ratification and implementation for many agreements. The 1991 START I Treaty did not enter into force until late 1994; the 1993 START II Treaty never entered into force and was replaced by a new, less detailed Strategic Offensive Reductions Treaty in 2002. India and Pakistan conducted nuclear weapons tests in 1998. Iran and North Korea raised new questions about the viability of the Nuclear Non-Proliferation Treaty and its role in stemming nuclear proliferation. In addition, the U.S. Senate's rejection of the CTBT in 1999, the Bush Administration's withdrawal from the ABM Treaty in 2002, and the U.S. rejection of a verification protocol for the Biological Weapons Convention led some to question the U.S. commitment to the arms control process.

During the **George W. Bush Administration**, the President and many in his Administration questioned the degree to which arms control negotiations and formal treaties could enhance U.S. security objectives. They argued that the United States did not need formal treaties to reduce or restrain its strategic nuclear forces. As a result, President Bush initially intended to reduce U.S. nuclear forces without signing a treaty that would require Russia to do the same. The Bush Administration incorporated these reductions into a formal treaty only after Russia insisted on such a document. Similarly, some in the Bush Administration argued that some formal, multilateral arms control regimes went too far in restraining U.S. options without limiting the forces of potential adversaries. Instead, the Administration preferred, when necessary, that the United States take unilateral military action or join in ad hoc coalitions to stem the proliferation of WMD.[9] During the Bush Administration, the United States outlined new initiatives in nonproliferation policy that took a far less formal approach, with voluntary guidelines and voluntary participation replacing treaties and multilateral conventions, such as the Proliferation Security Initiative or the Global Initiative to Combat Nuclear Terrorism. The U.S. government also increased its efforts domestically and in partnership with other countries to address the potential risks of WMD terrorism problem following the September 11, 2001, terrorist attacks.

The **Obama Administration** sought to enhance the role of arms control and nonproliferation agreements in U.S. national security policy, highlighting this in its Nuclear Posture Review

[8] See CRS Report R45033, *Nuclear Negotiations with North Korea,* by Mark E. Manyin and Mary Beth D. Nikitin.

[9] The absence of confidence in arms control during the George W. Bush Administration extended to the State Department, where the Administration removed the phrase "arms control" from all bureaus that were responsible for this policy area. The focus remained on nonproliferation, but it was seen as a policy area that no longer required formal treaties to meet its objectives. This changed with the Obama Administration. The State Department restored the phrase "arms control" to some bureau titles, and "arms control" was again listed as a central issue on the State Department website.

(NPR).[10] In a speech in Prague in April 2009, the President outlined an agenda that included the pursuit of a new strategic arms control treaty with Russia, efforts to secure the ratification and entry into force of the Comprehensive Test Ban Treaty, and the eventual negotiation of a Fissile Material Control Treaty. President Obama also convened an international nuclear security summit, in April 2010, in an effort to win global cooperation in efforts to contain and eliminate vulnerable nuclear materials. The United States participated in three additional nuclear security summits through April 2016. President Obama also pledged to take a number of steps to strengthen the Nuclear Non-Proliferation Treaty in conjunction with its review conference in May 2010.[11] In 2010, the United States and Russia signed the New START Treaty. They completed the implementation of its reductions in 2018. During President Obama's second term, the United States highlighted concerns with Russia's compliance with past agreements. Specifically, the United States accused Russia of violating the 1987 Intermediate-range Nuclear Forces (INF) Treaty and the 1992 Open Skies Treaty. Some have argued that these actions, when combined with Russia's annexation of Crimea and invasion of Ukraine in early 2014, indicated the start of Russia's rejection of the web of arms control and security agreements that have contributed to U.S., Russian, and European security for the past two decades. On the other hand, in 2015, the United States, Russia, and others reached an agreement with Iran that restricted Iran's nuclear program and introduced new, extensive international monitoring mechanisms to ensure that Iran does not acquire a nuclear weapon.

The **Trump Administration** offered some support for existing arms control and nonproliferation tools. It noted, in the 2018 Nuclear Posture Review, that the United States continued to support the goals of the 1968 Nuclear Non-Proliferation Treaty and that it would continue to abide by the terms of the 2010 New START Treaty.[12] At the same time, the Administration stated that, in the current international security environment, the United States might be better served by bolstering its military capabilities than by negotiating additional limits or reductions.

The Trump Administration, like the Bush Administration, voiced skepticism about the role that arms control and nonproliferation agreements can play in strengthening U.S. national security. This view reflected growing concerns about Russian compliance with existing arms control agreements, but also derived from the view that arms control does too much to restrict U.S. flexibility and too little to limit the capabilities of other nations. Moreover, while some would argue that growing tensions between the United States and Russia strengthen the case for further negotiated limits on U.S. and Russian forces, the Trump Administration, echoing an Obama Administration argument, noted that Russia was not willing to pursue such agreements. In response to these views, and after years of trying to convince Russia to return to compliance with the INF Treaty, the United States suspended its participation in INF and withdrew from the treaty on August 2, 2019. It also questioned whether the Open Skies Treaty served U.S. national security interests and withdrew from that treaty on November 22, 2020. President Trump's approach to diplomatic engagement with North Korea failed to resolve the nuclear crisis with that country, and the Trump Administration withdrew U.S. support for the agreement with Iran.

Although the Trump Administration did not support the full five-year extension of New START, it did pursue discussions with Russia and also sought to replace New START with a broader

[10] U.S. Department of Defense, *Nuclear Posture Review Report,* April 2010, https://dod.defense.gov/Portals/1/features/defenseReviews/NPR/2010_Nuclear_Posture_Review_Report.pdf.

[11] The White House Office of the Press Secretary, "Remarks By President Barack Obama In Prague As Delivered," April 5, 2009, https://obamawhitehouse.archives.gov/the-press-office/remarks-president-barack-obama-prague-delivered.

[12] U.S. Department of Defense, *Nuclear Posture Review*, 2018, https://media.defense.gov/2018/Feb/02/2001872886/-1/-1/1/2018-NUCLEAR-POSTURE-REVIEW-FINAL-REPORT.PDF.

agreement that would limit all types of Russian nuclear weapons, including shorter-range nonstrategic weapons, but it made no progress in convincing Russia to pursue this objective. It also suggested that China participate in the arms control process because it is modernizing and expanding its nuclear forces. China rejected this invitation, noting that it deploys a far smaller number of nuclear weapons than the United States or Russia.

The **Biden Administration** signaled a renewed interest in the use of arms control and nonproliferation measures to bolster U.S. national security. On January 21, 2021, the Administration announced that the United States would support a five-year extension of the New START Treaty. After this extension and their June 2021 meeting in Geneva, President Biden and Russia's President Vladimir Putin agreed that the United States and Russia would engage in "an integrated bilateral Strategic Stability Dialogue" that would "seek to lay the groundwork for future arms control and risk reduction measures." The United States and Russia held two rounds of talks in July and September 2021. They did not schedule any more talks in this forum after Russia began its invasion of Ukraine in February 2022. Russia announced in February 2023 that it would suspend its participation in the New START Treaty.

The Biden Administration's 2022 Nuclear Posture Review stated that "arms control, risk reduction, and nuclear non-proliferation" are "mutually reinforcing tools for preserving stability, deterring aggression and escalation, and avoiding arms racing and nuclear war."[13] The review, and the Administration's approaches, have focused on bilateral and multilateral risk reduction. For example, the Administration approached China with a proposal to begin a dialogue on strategic stability in late 2021. In the absence of interest from Russia and China, the Administration has pursued engagement with these and other nuclear weapons powers in the P5 Process. It has sought to engage broadly with the international community on the responsible military use of artificial intelligence (AI) and space security. Moreover, the Administration has also indicated that it would be willing to rejoin the agreement with Iran, if Iran resumed compliance with its obligations. In the meantime, North Korea has continued to advance its nuclear weapons and missile programs and has not agreed to resume dialogue over its nuclear program despite offers by the United States.[14]

Report Overview

This report provides an overview of some of the key arms control and nonproliferation agreements and endeavors of the past 50 years. It is divided into six sections. The first section focuses on ongoing U.S. bilateral and multilateral risk reduction efforts. The second section describes multilateral nuclear nonproliferation efforts as well as programs to counter WMD proliferation, covering both formal treaties and less formal arrangements that have been initiated in recent years. The third section reviews treaties and agreements that seek to eliminate certain types of WMD and other weapons. The fourth section highlights export control regimes. The fifth section focuses on arms control in the Euro-Atlantic region. The final section describes arms control efforts between the United States and the states of the former Soviet Union.

The report concludes with several appendices. These provide a list of relevant treaties and agreements that the United States is a party to, a description of the treaty ratification process, and

[13] U.S. Department of Defense, *Nuclear Posture Review*, 2022, p. 16, https://media.defense.gov/2022/Oct/27/2003103845/-1/-1/1/2022-NATIONAL-DEFENSE-STRATEGY-NPR-MDR.PDF.

[14] U.S. Congress, Senate Committee on Foreign Relations, Nominations, The Honorable Kurt Campbell to be Deputy Secretary of State, 118th Cong., 1st sess., December 7, 2023.

a list of the bilateral and international organizations tasked with implementation of arms control and nonproliferation efforts.

Strategic Stability Dialogue and Risk Reduction

U.S.-Russian Arms Control after New START

In April 2021, President Biden and President Putin discussed their "intent to pursue a strategic stability dialogue on a range of arms control and emerging security issues, building on the extension of the New START Treaty."[15] (For additional information on the New START Treaty, see "2010s: New START.") The two presidents met in Geneva in June 2021 and released a Joint Statement on Strategic Stability outlining a path forward for nuclear arms control and risk reduction. Between July 2021 and January 2022, U.S. and Russian delegations met three times in the framework of the Strategic Stability Dialogue. In early September 2021, Bonnie Jenkins, the U.S. Under Secretary of State for International Security and Arms Control, noted that the United States would seek to capture new kinds of intercontinental-range nuclear delivery systems and nonstrategic nuclear weapons in the upcoming talks.[16] Russia appeared to favor a broader agenda; Foreign Minister Sergey Lavrov noted that the discussions should include everything that "influences strategic stability," including "nuclear and non-nuclear weapons, offensive and defensive weapons."[17] For Russia, this list included ballistic missile defense, long-range strategic conventional arms, and weapons in space.

In early 2022, as part of an effort to prevent Russia's renewed invasion of Ukraine, the Biden Administration expressed a willingness to address mutual security and strategic stability concerns with Russia.[18] At a January 2022 meeting of the U.S.-Russia Strategic Stability Dialogue, the two countries discussed possible agreements on "the future of certain missile systems in Europe," reducing the risk of dangerous air and sea incidents, and setting "reciprocal limits on the size and scope of military exercises."[19] A follow-on U.S. proposal, in coordination with NATO, addressed "measures to increase confidence regarding military exercises and maneuvers in Europe, ... arms control related to missiles in Europe, ... and ways to increase transparency and stability."[20] High-level U.S. officials have communicated with Russian counterparts regarding nuclear issues, according to press reports, but no broader strategic stability dialogue has taken place since January 2022.[21]

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[15] White House, "Readout of President Joseph R. Biden, Jr. Call with President Vladimir Putin of Russia," April 13, 2021.

[16] U.S. Department of State, "Under Secretary Bonnie Jenkins' Remarks: Nuclear Arms Control: A New Era?," September 6, 2021, https://www.state.gov/under-secretary-bonnie-jenkins-remarks-nuclear-arms-control-a-new-era/.

[17] "Strategic Stability Must be the Focus of Russia-US Negotiations, Says Lavrov," TASS, May 17, 2021, https://tass.com/politics/1290491.

[18] U.S. Department of State, "Deputy Secretary Wendy R. Sherman at a Press Availability," January 12, 2022, and U.S. Department of State, "Secretary Antony J. Blinken at a Press Availability," January 26, 2022.

[19] U.S. Department of State, "Briefing with Deputy Secretary Wendy R. Sherman on the U.S.-Russia Strategic Stability Dialogue," January 10, 2022; U.S. Department of State, "Online Press Briefing with Julianne Smith, U.S. Ambassador to NATO," January 11, 2022; and U.S. Department of State, "Deputy Secretary Wendy R. Sherman at a Press Availability," January 12, 2022.

[20] U.S. Department of State, "Secretary Antony J. Blinken at a Press Availability," January 26, 2022.

[21] Vivian Salama and Michael R. Gordon, "Senior White House Official Involved in Undisclosed Talks with Top Putin Aides," *The Wall Street Journal*, November 7, 2022, and Shannon Bugos, "U.S., Russia Discuss Threats of Nuclear Use," *Arms Control Today*, November 17, 2022.

On February 21, 2023, President Putin announced that Russia was "suspending participation" in the New START Treaty.[22] The Russian Ministry of Foreign Affairs stated that Russia would observe treaty limits and would not withdraw from the treaty, but would also not participate in on-site inspections, data notifications, or consultative meetings.[23] The Ministry of Foreign Affairs also stated that Russia "will continue to strictly comply with the quantitative restrictions stipulated in the Treaty for strategic offensive arms within the life cycle of the Treaty," and "continue to exchange notifications of ICBM and SLBM launches with the United States in accordance with the relevant Soviet-U.S. agreement signed in 1988."[24] On March 15, 2023, the State Department called the announcement "legally invalid," since the New START Treaty does not have a provision for suspension.[25] The United States also announced it "will likewise not provide its biannual data update to Russia."[26] The State Department has indicated, however, that, like Russia, the United States will "provide notification of ICBM and SLBM launches in accordance with the 1988 Ballistic Missile Launch Notification Agreement and to provide notifications of exercises in accordance with the 1989 Agreement on Reciprocal Advance Notification of Major Strategic Exercises."[27] (For additional information on the New START Treaty, see "2010s: New START.")

Biden Administration officials have said in a variety of fora that the United States was willing to return to such talks with Russia, without preconditions. For example, National Security Advisor Jake Sullivan said in June 2023, "Rather than waiting to resolve all of our bilateral differences—the United States is ready to engage Russia now to manage nuclear risks and develop a post-2026 arms control framework. We are prepared to enter into those discussions."[28] The United States sent a formal proposal to Russia in September 2023 for "a nuclear arms control dialogue" concerning New START compliance, a post-New START framework, and "managing nuclear risks," National Security Council (NSC) Senior Director Pranay Vaddi explained during a January 2024 event.[29] Russia has made "no specific proposals" concerning these topics, Vaddi added.[30] Russia formally declined the U.S. proposal in December 2023.[31] Russian President Putin suggested in a February 2024 speech that Russia would not be open to discussions on strategic

[22] President of Russia, "Presidential Address to the Federal Assembly," February 21, 2023.

[23] Ministry of Foreign Affairs of the Russian Federation, "Foreign Ministry Statement in Connection with the Russian Federation Suspending the Treaty on Measures for the Further Reduction and Limitation of Strategic Offensive Arms (New START)," February 21, 2023.

[24] Ibid.

[25] U.S. Department of State, "Russian Noncompliance with and Invalid Suspension of the New START Treaty," March 15, 2023.

[26] U.S. Department of State, Press Briefing, March 28, 2023.

[27] U.S. Department of State, Report On The Reasons That Continued Implementation Of The New START Treaty is in The National Security Interest Of The United States, July 26, 2023, https://www.state.gov/report-on-the-reasons-that-continued-implementation-of-the-new-start-treaty-is-in-the-national-security-interest-of-the-united-states/.

[28] "Remarks by National Security Advisor Jake Sullivan for the Arms Control Association's Annual Forum," White House press release, June 2, 2023, https://www.whitehouse.gov/briefing-room/speeches-remarks/2023/06/02/remarks-by-national-security-advisor-jake-sullivan-for-the-arms-control-association-aca-annual-forum/.

[29] "The U.S. Arms Control Agenda: A Discussion with NSC Senior Director Pranay Vaddi," YouTube video, 5:00, posted by Center for Strategic & International Studies, January 18, 2024, https://www.youtube.com/watch?v=luoCT5Mz0N8.

[30] Ibid.

[31] "Ministry of Foreign Affairs of the Russian Federation, Russia Foreign Minister Sergey Lavrov's Statement and Answers to Media Questions During a News Conference on Russia's Foreign Policy Performance in 2023," January 18, 2024.

stability as long as the United States sought to inflict "strategic defeat" on Russia by providing military aid to Ukraine.[32]

U.S.-China Strategic Stability Talks

In a June 2023 speech, National Security Advisor Jake Sullivan stated that the Biden Administration was interested in engaging "in bilateral arms control discussions with Russia and with China without preconditions." Sullivan highlighted China's unwillingness to "come to the table for substantive dialogue on arms control," and argued that the PRC has declined to share information with the United States regarding its nuclear forces.[33]

In November 2023, the United States and China held their first official dialogue on nuclear arms control since the Obama Administration.[34] A State Department readout stated that the United States and China held a "candid and in-depth discussion on issues related to arms control and nonproliferation as part of ongoing efforts to maintain open lines of communication and responsibly manage the U.S.-PRC relationship."[35] Officials from the United States and China also met in May 2024 in Geneva to discuss artificial intelligence (AI) safety and risk management.[36]

In a June 2024 speech, NSC Senior Director Vaddi stated that "with the PRC, the United States offered a number of specific proposals focused on managing strategic risks in connection with a bilateral consultation held last year."[37] He also stated that "the PRC has shown no interest in engaging on these proposals and rejected holding a follow-on arms control-focused meeting."[38]

The P5 Process

Representatives from the United States, the United Kingdom, France, Russia, and China periodically meet to discuss the NPT, nuclear nonproliferation, and nuclear weapons issues. Since 2007, these meetings of the representatives from the five NPT Nuclear Weapon States (P5), have featured a rotating chair.[39] The group has engaged in confidence-building measures such as the joint adoption of a P5 Glossary of Key Nuclear Terms, which "intended to increase mutual understanding and confidence among the P5 and facilitate discussions" with nonnuclear weapon states.[40] In January 2022, prior to Russia's invasion of Ukraine, the P5 issued a statement on

[32] "Address of President Vladimir Putin to the Russian Federation Federal Assembly" (Выступление Президента Российской Федерации В.В.Путина с Посланием Федеральному Собранию Российской Федерации), February 29, 2024, https://dlib.eastview.com/.

[33] White House, "Remarks by National Security Advisor Jake Sullivan for the Arms Control Association (ACA) Annual Forum," June 2, 2023.

[34] Rajeswari Pillai Rajagopalan, "China-US Nuclear Arms Control Talks: A Much-Needed First Step," *Diplomat*, November 13, 2023.

[35] U.S. Department of State, "Assistant Secretary Mallory Stewart's Meeting with the People's Republic of China's (PRC) Ministry of Foreign Affairs Director-General of Arms Control Sun Xiaobo," November 7, 2023.

[36] The White House, "Statement from NSC Spokesperson Adrienne Watson on the U.S.-PRC Talks on AI Risk and Safety," May 15, 2024, https://www.whitehouse.gov/briefing-room/statements-releases/2024/05/15/statement-from-nsc-spokesperson-adrienne-watson-on-the-u-s-prc-talks-on-ai-risk-and-safety-2/.

[37] Pranay Vaddi, "Adapting the U.S. Approach to Arms Control and Nonproliferation to a New Era," remarks at the Arms Control Association's annual meeting, June 7, 2024, https://www.armscontrol.org/2024AnnualMeeting/Pranay-Vaddi-remarks.

[38] Ibid.

[39] These states are also the five Permanent Members of the UN Security Council, known as the P5.

[40] The glossary was published in Chinese, English, French, and Russian, https://2009-2017.state.gov/documents/organization/243293.pdf. The P5 updated the Glossary in 2021; see https://digitallibrary.un.org/record/3956428?v=pdf.

"preventing nuclear war and avoiding arms races."[41] China is set to be the next chair of the process in August 2024.[42]

Political Declaration on Responsible Military Use of AI and Autonomy

In February 2023, the United States released a document which states that "military use of AI must be in compliance with applicable international law" and occur within a "responsible human chain of command and control."[43] According to the Biden Administration, the declaration "establishes a set of norms for responsible development, deployment, and use of military AI capabilities" to "help responsible states around the globe harness the benefits of AI capabilities—including those enabling autonomous functions and systems for their military and defense establishments—in a responsible and lawful manner."[44] The State Department has also stated that the declaration, which has been endorsed by 54 states as of May 29, 2024, "provides a basis for exchanging best practices and building states' capacities" to allow "endorsing States to share experience and ideas."[45] (For broader context on this framework, see CRS Report R46458, *Emerging Military Technologies: Background and Issues for Congress*.)

The original February 2023 text of the declaration included language which stated that "States should maintain human control and involvement for all actions critical to informing and executing sovereign decisions concerning nuclear weapons employment."[46] This language was consistent with the 2022 NPR and a political statement made by the United States, United

[41] The White House, "Joint Statement of the Leaders of the Five Nuclear-Weapon States on Preventing Nuclear War and Avoiding Arms Races," January 3, 2022, https://www.whitehouse.gov/briefing-room/statements-releases/2022/01/03/p5-statement-on-preventing-nuclear-war-and-avoiding-arms-races/.

[42] Related multilateral dialogues to improve implementation of the NPT include Non-Proliferation and Disarmament Initiative (NPDI), the Stockholm Initiative on Nuclear Disarmament, the International Partnership for Nuclear Disarmament Verification (IPNDV), and Creating an Environment for Nuclear Disarmament (CEND), as well as the Group of Governmental Experts on Disarmament Verification.

[43] The U.S. Department of State, "Keynote Remarks by U/S Jenkins (T) to the Summit on Responsible Artificial Intelligence in the Military Domain (REAIM) Ministerial Segment," February 16, 2023, https://www.state.gov/keynote-remarks-by-u-s-jenkins-t-to-the-summit-on-responsible-artificial-intelligence-in-the-military-domain-reaim-ministerial-segment/; see text of the declaration: The U.S. Department of State, "Political Declaration on Responsible Military Use of Artificial Intelligence and Autonomy," November 9, 2023, https://www.state.gov/political-declaration-on-responsible-military-use-of-artificial-intelligence-and-autonomy-2/.

[44] The White House, "Fact Sheet: Vice President Harris Announces New U.S. Initiatives to Advance the Safe and Responsible Use of Artificial Intelligence," November 1, 2023, https://www.whitehouse.gov/briefing-room/statements-releases/2023/11/01/fact-sheet-vice-president-harris-announces-new-u-s-initiatives-to-advance-the-safe-and-responsible-use-of-artificial-intelligence/.

[45] The U.S. Department of State, "Political Declaration on Responsible Military Use of Artificial Intelligence and Autonomy," May 29, 2024, https://www.state.gov/political-declaration-on-responsible-military-use-of-artificial-intelligence-and-autonomy/.

[46] See quote in Mike Corder, "US launches artificial intelligence military use initiative," *Military Times*, February 17, 2023, https://www.militarytimes.com/news/2023/02/17/us-launches-artificial-intelligence-military-use-initiative/.

Kingdom, and France at 2022 NPT Review Conference.[47] The current version of the declaration no longer includes this language.[48]

Space Issues

The United States advocates for improving coordination and developing norms for responsible behavior in space. For example, the United States announced a unilateral moratorium on direct-ascent destructive ASAT capacity in April 2022.[49] All the G7 countries have made national commitments not to conduct such tests.[50] In 2024, CD member states, led by the United States, created an Open-Ended Working Group (OEWG) on Reducing Space Threats. The U.S. representative to the CD summarized the U.S. approach, which is shared by allies, "to create pragmatic and effective initiatives to discuss current security threats in outer space and approaches to mitigate them ... through norms, rules and principles of responsible behaviors."[51]

The International Nuclear Nonproliferation Regime

The Nuclear Non-Proliferation Treaty (NPT)

The Nuclear Non-Proliferation Treaty (NPT), which entered into force in 1970 and was extended indefinitely in 1995, is the centerpiece of the nuclear nonproliferation regime. The treaty currently has 191 states parties. It is complemented by International Atomic Energy Agency (IAEA) safeguards, national export control laws, coordinated export control policies under the Nuclear Suppliers Group, U.N. Security Council resolutions, and ad hoc initiatives. The NPT recognizes five states (the United States, Russia, France, the United Kingdom, and China) as nuclear weapon states—a distinction that is carried over in other parts of the regime and in national laws. According to open sources, three states that have not signed the NPT—India, Israel, and Pakistan—possess significant nuclear weapon capabilities. North Korea, which had signed the NPT but withdrew in 2003, possesses a small number of nuclear weapons and continues to develop its delivery systems.[52] Several countries, including Argentina, Brazil, and South Africa, abandoned their nuclear weapons programs and joined the NPT in the 1990s. Others—Ukraine, Belarus, and Kazakhstan—gave up former Soviet weapons on their territories and joined the NPT as nonnuclear weapon states in the 1990s.

[47] See U.S. Department of Defense, "2022 Nuclear Posture Review," p. 13 (p. 49 of PDF), https://media.defense.gov/2022/Oct/27/2003103845/-1/-1/1/2022-NATIONAL-DEFENSE-STRATEGY-NPR-MDR.PDF, and "Principles and responsible practices for Nuclear Weapon States," working paper submitted by France, the United Kingdom of Great Britain and Northern Ireland, and the United States of America at the Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, July 29, 2022, https://reachingcriticalwill.org/images/documents/Disarmament-fora/npt/revcon2022/documents/WP70.pdf.

[48] The U.S. Department of State, "Political Declaration on Responsible Military Use of Artificial Intelligence and Autonomy," November 9, 2023, https://www.state.gov/political-declaration-on-responsible-military-use-of-artificial-intelligence-and-autonomy-2/.

[49] "Fact Sheet: Vice President Harris Advances National Security Norms in Space," whitehouse.gov, April 18, 2022.

[50] "Statement of the G7 Non-proliferation Directors Group," April 17, 2023, https://www.state.gov/statement-of-the-g7-non-proliferation-directors-group/.

[51] "Explanation of Vote- UNFC October 2023 Cluster 3 – Outer Space," U.S. Mission to International Organizations in Geneva, November 1, 2023, https://geneva.usmission.gov/2023/11/01/explanation-of-vote-unfc-october-2023-cluster-3-outer-space/.

[52] North Korea announced its withdrawal from the NPT in 2003 and subsequently tested two nuclear explosive devices, but whether the country remains an NPT state-party is unclear.

The NPT is nearly universal—only India, Pakistan, Israel, and North Korea are not parties to it. The NPT prohibits nonnuclear weapon states (NNWS) parties from acquiring nuclear weapons.[53] The treaty prohibits the nuclear weapon states (NWS) from transferring nuclear weapons to NNWS or assisting such states with the manufacture or other acquisition of nuclear weapons. The NWS are also required to facilitate "the fullest possible exchange of equipment, materials and scientific and technological information for the peaceful uses of nuclear energy" (NPT, Article IV-2). The NWS, defined as any state that tested a nuclear explosive before 1967, also agree to "pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament" (NPT, Article VI). A P-5 process involving NWS meets to coordinate and advance transparency and disarmament steps by all five nuclear weapon states. Many NNWS have often expressed dissatisfaction with the apparent lack of progress toward disarmament. An NPT Review Conference is held every five years to review its operation, and preparatory committee meetings are held in each of the three years leading up to the Review Conference.[54]

The International Atomic Energy Agency (IAEA)

The International Atomic Energy Agency (IAEA) was established in 1957 to assist states in their peaceful nuclear programs (primarily research and nuclear power programs) and to safeguard nuclear materials from these peaceful programs to ensure that they are not diverted to nuclear weapons uses. As of July 2024, it has 178 member states.[55] The IAEA safeguards system relies on data collection, review, and periodic inspections at declared facilities. The IAEA may also inspect other facilities if it suspects undeclared nuclear materials or weapons-related activities are present.

The NPT requires NNWS to conclude a comprehensive safeguards agreement with the IAEA. Such agreements are designed to enable the IAEA to detect the diversion of nuclear material from peaceful purposes to nuclear weapons uses, as well as to detect undeclared nuclear activities and material. Comprehensive safeguards agreements "provide for" the IAEA's "right and obligation to ensure that safeguards will be applied" to all nuclear material of potential proliferation concern "in all peaceful nuclear activities within the territory of the State, under its jurisdiction or carried out under its control anywhere."[56] All five nuclear weapons states have concluded a voluntary offer agreement under which they have agreed to safeguards on certain nuclear material and facilities used for peaceful purposes. Non-NPT states may also conclude an item-specific safeguards agreement.

NNWS are required to declare and submit all nuclear materials in their possession to regular IAEA inspections to ensure that sensitive nuclear materials and technologies are not diverted from civilian to military purposes. Some states who are not parties to the NPT (India, Israel, Pakistan) are members of the IAEA and allow inspections of some, but not all, of their nuclear activities. The IAEA also provides technical assistance for peaceful applications of nuclear technology in such fields as energy, medicine, agriculture, and research.

[53] The NPT defines nuclear-weapon states as those that exploded a nuclear weapon or other nuclear explosive device prior to January 1, 1967: China, France, Russia, the United Kingdom, and the United States. All other NPT states parties are nonnuclear-weapon states.

[54] See https://www.state.gov/nuclear-nonproliferation-treaty/.

[55] See https://www.iaea.org/about/governance/list-of-member-states.

[56] INFCIRC/153. Available at https://www.iaea.org/sites/default/files/publications/documents/infcircs/1972/infcirc153.pdf.

After the 1991 Persian Gulf War, IAEA inspection teams working with the U.N. Special Commission on Iraq (UNSCOM) revealed an extensive covert nuclear weapons program that had been virtually undetected by annual inspections of Baghdad's declared facilities. This knowledge inspired efforts to strengthen the IAEA's authority to conduct more intrusive inspections of a wider variety of installations, to provide the agency with information about suspected covert nuclear activities, and to provide the IAEA with the resources and political support needed to increase confidence in its safeguards system. In 1997, the IAEA adopted an "Additional Protocol" that would give the agency greater authority and access to verify nuclear declarations. The protocol enters into force for individual NPT states upon ratification. All five nuclear weapon states have concluded an Additional Protocol under their voluntary offer agreements. As of March 2023, an Additional Protocol has entered into force for 141 countries and Euratom.[57]

The IAEA has had an expanded mission in recent years, increasingly called upon to implement nuclear and radiological security-related activities. The IAEA also faces a potential worldwide expansion in the number of nuclear power plants it will need to monitor. The United States funds approximately one-quarter of the IAEA's annual budget (assessed contribution) and additional voluntary (extra budgetary) contributions for specific activities, such as nuclear security.[58]

Comprehensive Test Ban Treaty (CTBT)

The Comprehensive Test Ban Treaty (CTBT) is a treaty to ban all nuclear explosions.[59] It opened for signature in 1996 but has not yet entered into force. In the years since the treaty opened for signature, India, Pakistan, and North Korea have conducted explosive nuclear tests. The United States has signed the treaty but has not ratified it. As of April 2024, 187 states had signed and 178 had ratified the CTBT. For the treaty to enter into force, 44 specified states must ratify it. Of these, 35 have ratified. India, North Korea, and Pakistan have not signed the treaty. China, Egypt, Iran, Israel, and the United States have signed but not ratified. The Russian Federation revoked its ratification from the CTBT in November 2023 and remains a signatory. CTBT states have held conferences every two years since 1999 to discuss how to accelerate entry into force.

Parties to the treaty agree "not to carry out any nuclear weapon test explosion or any other nuclear explosion." The treaty establishes a Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO) of all member states to implement the treaty. The CTBTO Preparatory Commission (PrepCom) oversees a Conference of States Parties, an Executive Council, and a Provisional Technical Secretariat. The latter operates an International Data Center to process and report on data from an International Monitoring System (IMS). A protocol details the monitoring system and inspection procedures. The CTBTO Preparatory Commission conducts work to prepare for entry into force, such as building and operating the IMS (see below).

The United States is party to previous treaties that have restricted nuclear testing: the 1963 Limited Test Ban Treaty bars explosions in the atmosphere, in outer space, and under water; the 1974 U.S.-U.S.S.R. Threshold Test Ban Treaty bans underground nuclear weapons tests having an explosive force of more than 150 kilotons; and the 1976 Peaceful Nuclear Explosions Treaty limits the explosive yield of underground nuclear explosions.

[57] See https://www.iaea.org/topics/additional-protocol.

[58] See also CRS Report R44384, *IAEA Budget and U.S. Contributions: In Brief*, by Paul K. Kerr, Mary Beth D. Nikitin, and Luisa Blanchfield.

[59] See also CRS Report RL33548, *Comprehensive Nuclear-Test-Ban Treaty: Background and Current Developments*, by Mary Beth D. Nikitin, and CRS In Focus IF11662, *U.S. Nuclear Weapons Tests*, by Mary Beth D. Nikitin and Amy F. Woolf.

In 1992, Congress passed and President George H.W. Bush signed into law the Hatfield-Exon-Mitchell Amendment establishing a temporary and unilateral moratorium on underground testing of U.S. nuclear weapons (P.L. 102-377, §507).[60] It also directed the Administration to negotiate a comprehensive test ban treaty by 1996.

The United States was the first country to sign the CTBT in 1996. President Clinton submitted the treaty to the Senate for advice and consent to ratification in 1997 (P.L. 102-377). The Senate rejected the treaty by a vote of 48 for, 51 against, and one present, on October 13, 1999. Although the treaty has not entered into force, each subsequent U.S. President has indicated that the United States will continue to observe its unilateral moratorium.

While the CTBT remains on the calendar of the Senate Foreign Relations Committee, no Administration since has sought the Senate's consent for ratification. The Trump Administration's February 2018 Nuclear Posture Review said that "although the United States will not seek ratification of the Comprehensive Nuclear Test Ban treaty, it will continue to support the Comprehensive Nuclear Test Ban Treaty Organization Preparatory Committee as well as the International Monitoring System and International Data Center."[61] The Biden Administration's 2022 Nuclear Posture Review said the United States would continue "to observe a moratorium on nuclear explosive testing," work toward the entry into force of the CTBT, and support the continued development of the CTBTO PrepCom's monitoring and verification mechanisms.

International Monitoring System

The International Monitoring System (IMS) has been set up over the past 20 years by the Comprehensive Test-Ban Treaty Organization (CTBTO) Preparatory Commission's Provisional Technical Secretariat to detect underground, underwater, or atmospheric nuclear testing. The IMS consists of two types of sensors: (1) a global network of monitoring stations that measure seismic, infrasound, and hydroacoustic signals, and (2) a complement of sensors that detect radionuclides and noble gases in the atmosphere. [62] The IMS is operating about 90% of these stations and laboratories, out of a planned 337, in 89 countries.[63] In total, the IMS is planning for a total of 170 seismic stations, 60 infrasound stations, 11 hydroacoustic stations, 80 radionuclide stations, and 16 radionuclide laboratories. Host countries work with the CTBTO Prep Com to certify the station.

The CTBTO PrepCom does not have legal authority to verify compliance with the treaty, nor does it have the option to launch on-site inspections until after entry into force. The IMS is in testing and provisional operation, and the CTBTO is providing its member states with raw and reviewed data from the International Data Centre (IDC) on event detection and location. Member states are responsible for interpreting the data.

Under the terms of treaty, the member states can use data from the CTBTO combined with National Technical Means (NTM) to determine whether a nuclear test has occurred (characterization and attribution). Since some member states do not have the capability to

[60] See Energy and Water Development Appropriations Act of 1993, P.L. 102-377, §507, 106 Stat. 1315, 1343-44 (1992).

[61] *2018 Nuclear Posture Review*, U.S. Department of Defense, https://www.defense.gov/News/SpecialReports/2018NuclearPostureReview.aspx.

[62] CTBTO, *Overview of the Verification Regime*, https://www.ctbto.org/verification-regime/background/overview-of-the-verification-regime/.

[63] CTBTO, *Station Profiles*, https://www.ctbto.org/verification-regime/station-profiles/.

interpret the raw or reviewed data provided by the International Data Centre in the event bulletins, they may request special processing and analysis from the IDC.

Nuclear-Weapon-Free Zones (NWFZs)

Several regions of the world have treaties in force that ban the development, deployment, and use of nuclear weapons, known as nuclear-weapon-free zones, including Latin America (Treaty of Tlatelolco), Central Asia (Treaty on a Nuclear-Weapon-Free Zone in Central Asia), the South Pacific (Treaty of Rarotonga), Africa (Treaty of Pelindaba), and Southeast Asia (Treaty of Bangkok). Mongolia has declared itself a single-state Nuclear-Weapon-Free Zone.[64] For decades, countries have discussed the establishment of a Middle East WMD-free zone.[65] Also, the Treaty of Antarctica established that Antarctica will be used for peaceful uses only. Nuclear weapons are also banned on the seabed, in outer space, and on the moon by international treaties.

The nuclear-weapon-free zones (NWFZs) reinforce the undertakings of NPT nonnuclear-weapon state members and give confidence at a regional level that states are not seeking nuclear weapons. Each treaty has protocols for nuclear weapon states to ratify. These protocols are pledges that the nuclear weapon states will not base nuclear weapons in the zone, test nuclear weapons in the zone, or use or threaten to use nuclear weapons against the countries in the zone. The "negative security assurance" provided to members of the zone through the nuclear weapon state protocol is considered one of the key benefits of membership for nonnuclear weapon states.

The Obama Administration, as pledged at the 2010 NPT Review Conference, submitted the Protocols to the Treaties of Pelindaba (Africa) and Rarotonga (South Pacific) to the Senate for advice and consent for ratification on May 2, 2011. The United States signed the protocols at the time these treaties were open for signature (April 11, 1996, for the Treaty of Pelindaba and August 6, 1985, for the Treaty of Rarotonga). The other four nuclear weapon states besides the United States (China, France, Russia, United Kingdom) have ratified those protocols.

Southeast Asia NWFZ. In August 2011, the United States along with the other four NPT nuclear weapon states began consultations with the SEANWFZ countries regarding the NWS protocols to that agreement.[66] No nuclear weapon states have signed the SEANWFZ Protocol to date, and ASEAN countries have called on all to do so "immediately."[67]

Central Asian NWFZ. The five nuclear-weapon states announced their signature of the CANWFZ Protocol at the NPT Preparatory Committee meeting in May 2014.[68] The Obama Administration submitted the CANWFZ Protocol to the Senate for its advice and consent to

[64] In September 2012, the five nuclear weapon states recognized Mongolia as a single-state nuclear-weapon-free zone by signing parallel declarations formally acknowledging this status. U.S. Department of State, "Five Permanent UN Representatives Support Mongolia's Nuclear-Weapons-Free Status," Media Note, September 18, 2012, https://2009-2017.state.gov/r/pa/prs/ps/2012/09/197873.htm.

[65] For background, see United Nations Institute for Disarmament Research, Middle East WMD-Free Zone website, https://unidir.org/programme/middle-east-weapons-of-mass-destruction-free-zone.

[66] "Statement on Nuclear-Free Zones in Asia and Africa," White House Press Release, May 2, 2011, http://www.whitehouse.gov/the-press-office/2011/05/02/statement-nuclear-free-zones-asia-and-africa.

[67] "FM Marsudi: Southeast Asian Region Must Remain Free of Nuclear Weapons," Ministry of Foreign Affairs of the Republic of Indonesia, July 11, 2023, https://kemlu.go.id/portal/en/read/4926/berita/fm-marsudi-southeast-asian-region-must-remain-free-of-nuclear-weapons.

[68] https://2009-2017.state.gov/r/pa/prs/ps/2014/05/225681.htm.

ratification on April 27, 2015.[69] The presidential letter said that the protocol would require "no changes in U.S. law, policy or practice."

Table 1. U.S. Adherence to Nuclear-Weapon-Free Zone Protocols

	Year Treaty Opened for Signature/Entered into Force	Year United States Signed Protocols	Year United States Ratified Protocols
Treaty of Tlatelolco (Latin America)	1967/1969	Protocol I: 1977 Protocol II: 1968	Protocol I: 1981 Protocol II: 1971
Treaty on a Nuclear-Weapon-Free Zone in Central Asia	2006/2009	5/6/14	Not ratified, submitted to the Senate, April 25, 2015
Treaty of Rarotonga (South Pacific)	1985/1986	Protocol I, II & III: 1996	Not ratified, submitted to the Senate, May 2, 2011
Treaty of Pelindaba (Africa)	1996/2009	Protocols I & II: 1996	Not ratified, submitted to the Senate, May 2, 2011
Treaty of Bangkok (Southeast Asia)	1995/1997	Not signed	Not ratified

Fissile Material Production Cutoff Treaty (FMCT)

The United States first proposed that the international community negotiate a ban on the production of fissile material (plutonium and enriched uranium) that could be used in nuclear weapons over 50 years ago. Negotiators of the NPT realized that fissile material usable for nuclear weapons could still be produced under the guise of peaceful nuclear activities. Consequently, a fissile material production ban, or FMCT, has remained on the long-term negotiating agenda at the Conference on Disarmament (CD) in Geneva. These negotiations have been largely stalled since 1993. In 1995, in conjunction with the indefinite extension of the NPT, the CD agreed to the "Shannon Mandate," named after then-Canadian disarmament ambassador Gerald Shannon, which called for a "non-discriminatory, multilateral and internationally and effectively verifiable treaty banning the production of fissile material for nuclear weapons or other nuclear explosive devices."

The Clinton Administration supported the Shannon Mandate. The George W. Bush Administration undertook a comprehensive review in 2004 of the U.S. position on the FMCT and concluded that, although such a ban would be useful in creating "an observed norm against the production of fissile material intended for weapons," such a ban is inherently unverifiable. The Bush Administration proposed a draft treaty in May 2006 that contained no verification measures. In contrast, the Obama Administration supported the negotiation of an FMCT with verification measures on the basis of the Shannon mandate. In April 2019, then-Assistant Secretary of State Christopher Ford stated that the Trump Administration would "continue to support the commencement of negotiations on an FMCT." During the Trump Administration, as stated by Assistant Secretary of State Christopher Ford on April 25, 2018, the United States continued "to support the commencement of negotiations on an FMCT." Secretary of State Antony Blinken argued in a February 22, 2021, speech to the CD that "it's finally time to negotiate a treaty banning the production of fissile material for use in nuclear weapons."[70] U.S. Undersecretary of

[69] Senate Consideration of Treaty Document 114-2; Message to the Senate: Protocol to the Nuclear-Weapon-Free Zone in Central Asia, Office of the President, April 27, 2015, https://www.whitehouse.gov/the-press-office/2015/04/27/message-senate-protocol-treaty-nuclear-weapon-free-zone-central-asia.

[70] Secretary of State Antony J. Blinken, Remarks at the High-Level Segment of the Conference on Disarmament, February 22, 2021, https://geneva.usmission.gov/2021/02/22/secretary-blinken-cd/.

State for Arms Control and International Security Ambassador Bonnie Jenkins said to the CD on February 27, 2023, "We can and should start by immediately commencing negotiations on a non-discriminatory, multilateral, and internationally and effectively verifiable treaty banning the production of fissile material for use in nuclear weapons or other nuclear explosive devices."[71]

In addition to verification provisions, another key sticking point has been whether such a treaty would seek to include existing stocks of fissile material.[72] The United States has strongly objected to such an approach.[73] The Shannon Mandate states that it "does not preclude any delegation" from proposing the inclusion of existing stocks in the negotiations. Pakistan, which is widely regarded as the main opponent to the start of negotiations, argues that a treaty on fissile material should not only prohibit the production of new material, but should also require states with such material to reduce their stocks. This may be partly due to its concerns over strategic parity with India.[74] Some observers have also argued that a forum other than the CD might be better for such treaty negotiations because the conference operates on the basis of consensus and any one member, as seen with Pakistan, can block negotiations.

Several U.N. General Assembly resolutions have established expert groups to make recommendations on a way forward. These groups have been geographically diverse and have included nuclear weapon and nonnuclear weapon states. Canada chaired a U.N. group of governmental experts on the FMCT from 2014 to 2015. A 2016 U.N. General Assembly resolution requested that the Secretary-General establish a "high-level fissile material cut-off treaty (FMCT) expert preparatory group" to "examine" the experts' group report, as well as "consider and make recommendations on substantial elements of a future non-discriminatory, multilateral and internationally and effectively verifiable treaty banning the production of fissile material for nuclear weapons or other nuclear explosive devices, on the basis" of the Shannon Mandate. The 25-member group issued a report in 2018 that provides a "menu of potential treaty elements that would facilitate the task of future negotiators" and covers scope, definitions, verification, and legal and institutional arrangements.[75] The report recommended that negotiations take place "without delay" in the Conference on Disarmament, but the CD has not begun talks.

In March 2024, Japan announced the "FMCT Friends." According to the Japanese Foreign Ministry, FMCT Friends is "a cross-regional group with the participation of both nuclear-weapon States and non-nuclear-weapon States which aims to maintain and enhance political attention on an FMCT and to contribute to expand the support for the negotiation of an FMCT. Member countries are Australia, Brazil, Canada, France, Germany, Italy, Japan, Netherlands, Nigeria, Philippines, United Kingdom and United States of America."[76]

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[71] Under Secretary for Arms Control and International Security, Ambassador Bonnie Jenkins, Remarks to the Conference on Disarmament, February 27, 2023, https://geneva.usmission.gov/2023/02/27/under-secretary-of-state-bonnie-jenkins-remarks-to-the-conference-on-disarmament/.

[72] According to nongovernmental sources, over a dozen countries have some stocks of weapons-usable material. See the data by country at International Panel on Fissile Materials, https://fissilematerials.org/.

[73] The states advocating inclusion of stocks refer to such a treaty as the Fissile Material Treaty (FMT). For U.S. policy, see, U.S. Permanent Representative to the CD Ambassador Bruce Turner, "Remarks to the Conference on Disarmament on a Fissile Material Cutoff Treaty," March 12, 2024, https://geneva.usmission.gov/2024/03/12/remarks-to-the-conference-on-disarmament-on-a-fissile-material-cutoff-treaty/.

[74] Zia Mian and A.H. Nayyar, "Playing the Nuclear Game: Pakistan and the Fissile Material Cutoff Treaty," *Arms Control Today*, April 2010.

[75] United Nations General Assembly document A/73/159, July 13, 2018.

[76] "Foreign Minister Kamikawa's attendance at the United Nations Security Council (UNSC) Ministerial Meeting," Ministry of Foreign Affairs of Japan, March 18, 2024, https://www.mofa.go.jp/dns/ac_d/pageite_000001_00216.html.

The Outer Space Treaty

The Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies (The Outer Space Treaty) entered into force in 1967. As of May 2024, there are 115 parties and 89 signatories to the treaty.[77] Among other provisions, the treaty bans the orbiting or stationing on celestial bodies (including the moon) of nuclear weapons or other weapons of mass destruction. The Outer Space Treaty does not ban the placement of other weapons in outer space.

The 1997 UN General Assembly adopted a resolution (52/37) that aimed at Preventing an Arms Race in Outer Space, known as PAROS. The Conference on Disarmament subsequently reestablished an ad hoc committee to conduct negotiations related to the peaceful use of outer space. In coordination with the United Nations Committee on the Peaceful Uses of Outer Space (COPUOS), the United Nations Conference on Disarmament (CD) facilitates multilateral discussions on the peaceful use of outer space. Countries continue to debate how to approach these growing challenges. Russia and China advocate for a formal treaty, and presented a draft Prevention of an Arms Race in Space (PAROS) Treaty to the CD in 2008.[78] The United States prefers to develop norms surrounding the use of outer space.

Following concerns raised by U.S. officials in 2024 about the possibility of Russian deployment of a nuclear-armed satellite in space, the United States and Japan introduced a UN Security Council resolution in April 2024 that underlined the "shared goal of preventing an arms race in outer space and the obligations of all States Parties to comply with the Outer Space Treaty, including not to place in orbit around the Earth any objects carrying nuclear weapons or any other kinds of WMD. It further calls on UN Member States to not develop any nuclear weapons, or other kinds of WMD, that are specifically designed to be placed in orbit around the Earth."[79]

Efforts to Counter Nuclear and Other WMD Terrorism and Proliferation

Convention on the Physical Protection of Nuclear Material (CPPNM)

The Convention on the Physical Protection of Nuclear Material (CPPNM), adopted in 1987, sets international standards for nuclear trade and commerce. The CPPNM established security requirements for the protection of nuclear materials against terrorism; parties to the treaty agree to report to the IAEA on the disposition of nuclear materials being transported and agree to provide appropriate security during such transport. As of April 2024, 164 countries are party to the CPPNM.

The United States had advocated strengthening the treaty by extending controls to domestic security. In July 2005, states parties convened to extend the convention's scope in an amendment that covers not only nuclear material in international transport, but also nuclear material in

[77] See https://treaties.unoda.org/t/outer_space.

[78] United Nations General Assembly: Conference of Disarmament, February 2008, https://undocs.org/pdf?symbol=en/CD/1839.

[79] "Joint Statement on Behalf of the United States and Japan on the Draft Security Council Resolution on Weapons of Mass Destruction in Outer Space," United States Mission to the United Nations Press Release, April 19, 2024. The resolution was vetoed by the Russian Federation, China abstained, and all other members voted in favor.

domestic use, storage, and transport, as well as the protection of nuclear material and facilities from sabotage. President George W. Bush submitted the amendment to the Senate in September 2007 (Treaty Doc. 110-6), and the Senate approved a resolution of advice and consent to ratification on September 25, 2008.

The new rules come into effect once two-thirds of the states parties of the convention have ratified the amendment. The United States submitted its instrument of ratification to the Amendment on July 31, 2015. As of April 2024, 136 states had deposited their instruments of ratification, acceptance, or approval of the amendment with the depositary. The amendment entered into force on May 8, 2016, following the deposit of the instrument of ratification by Nicaragua, the 102nd state. Congress needed to approve implementing legislation before the United States could deposit its instrument of ratification to the amendment. In the 112th Congress, the Obama Administration submitted draft implementing legislation to the Senate Judiciary Committee in April 2011. The House passed implementing legislation in the 112th Congress, but the Senate did not take action. In the 113th Congress, the House passed the Nuclear Terrorism Conventions Implementation and Safety of Maritime Navigation Act of 2013 (H.R. 1073) in May 2013, which approved implementing legislation for the CPPNM Amendment and the Nuclear Terrorism Convention (as well as agreements on maritime security). The Senate did not take action.

In the 114th Congress, implementing legislation for three nuclear terrorism-related conventions, called the Nuclear Terrorism Conventions Implementation and Safety of Maritime Navigation Act (H.R. 1056), was incorporated into Title VIII of the USA Freedom Act of 2015 (P.L. 114-23), which became law on June 2, 2015 (H.R. 2048).

A Conference of the Parties to the Amendment to the Convention on the Physical Protection of Nuclear Material reviewed the amendment in March 2022.[80]

International Convention for the Suppression of Acts of Nuclear Terrorism (ICSANT)

The U.N. General Assembly adopted the International Convention for the Suppression of Acts of Nuclear Terrorism (also known as the Nuclear Terrorism Convention) in 2005 after eight years of debating a draft treaty proposed by Russia in 1997.[81] Disputes over the definition of terrorism, omitted in the final version, and over the issue of nuclear weapons use by states, complicated the discussions for many years. After the September 11, 2001, terrorist attacks, states revisited the draft treaty and reached agreement. The convention entered into force in July 2007. There were 124 states parties as of April 2024.

The United States has strongly supported ICSANT, and President Bush was the second to sign it (after Russian President Putin) on September 14, 2005. The Senate recommended advice and consent on September 25, 2008 (Treaty Doc. 110-4).

Congress was to also approve implementing legislation before the United States could deposit its instrument of ratification to the convention. In the 112th Congress, the Obama Administration submitted draft legislation to the Senate Judiciary Committee in April 2011. The House passed implementing legislation in the 112th Congress, but the Senate did not take action. In the 113th

[80] Outcome Document, 2022 Conference of the Parties to the Amendment to the Convention on the Physical Protection of Nuclear Material March 28 to April 1, 2022, Vienna, Austria, ACPPNM/RC/2022/4, accessed at https://www.iaea.org/events/acppnm2022.

[81] See full text at http://untreaty.un.org/English/Terrorism/English_18_15.pdf.

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United Nations Security Council Resolution 1540 (UNSCR 1540)

In April 2004, the U.N. Security Council adopted Resolution 1540 (UNSCR 1540), which requires all states to "criminalize proliferation, enact strict export controls and secure all sensitive materials within their borders."[82] UNSCR 1540 called on states to enforce effective domestic controls over WMD and WMD-related materials in production, use, storage, and transport; to maintain effective border controls; and to develop national export and trans-shipment controls over such items, all of which should help interdiction efforts. The resolution did not provide any enforcement authority, nor did it specifically mention interdiction. About two-thirds of all states have reported to the United Nations on their efforts to strengthen defenses against WMD trafficking. A Group of Experts assesses implementation of the measures. UNSC Resolution 2663 (2022) unanimously extended the mandate of the 1540 Committee for 10 years, until November 30, 2032.

Multiple U.S. government programs work to enhance export controls in other countries. For example, the State Department's Export Control and Related Border Security Assistance (EXBS) program originally helped the former Soviet states improve their ability to interdict nuclear smuggling. This program has expanded to partner governments around the globe and coordinates export control and related border control assistance across the interagency.[83]

G-7 Global Partnership Against the Spread of Weapons and Materials of Mass Destruction

At their June 2002 summit at Kananaskis, Canada, the then-Group of Eight (United States, Canada, UK, France, Germany, Italy, Japan [G-7] plus Russia [G-8]) formed the Global Partnership (GP) Against the Spread of Weapons and Materials of Mass Destruction.[84] Under this partnership, the United States; other members of the group, including Russia at that time; and the European Union agreed to raise up to $20 billion over 10 years for projects related to

[82] See the 1540 Committee's website: https://www.un.org/en/sc/1540/.

[83] See https://www.state.gov/export-control-and-related-border-security-program/.

[84] http://www.gpwmd.com/.

disarmament, nonproliferation, counterterrorism, and nuclear safety. The United States promised an additional $10 billion in Global Partnership funds in the 2012-2022 timeframe, subject to congressional appropriations. These projects were initially focused on programs in Russia but have expanded globally. Since the 2014 annexation of Crimea, Russia has not participated in the G-8 (now G-7) or the Global Partnership. The Global Partnership originally spurred Russia to take on a greater portion of the financial burden for these projects and increased donor funds from countries other than the United States.

Over the past two decades, the Global Partnership has expanded its donors and its recipients and now consists of 30 partner countries. The G-7 Global Partnership Working Group provides a coordinating mechanism for nonproliferation assistance globally, and sub-working groups concentrate on specific nonproliferation areas. Recent priorities have included biological security, radiological security, and bolstering the international response to chemical weapons attacks. In subsequent communiques, the G-7 reaffirmed their strong commitment to the GP and recognized the importance of continuing this joint effort to reduce WMD threats.

The United States' contribution to the Global Partnership includes the work of nonproliferation, security engagement, and cooperative threat-reduction programs primarily in the Departments of Defense, Energy, and State.

Proliferation Security Initiative (PSI)[85]

President Bush announced the Proliferation Security Initiative (PSI) on May 31, 2003. This initiative is primarily a diplomatic tool developed by the United States to gain support for interdicting shipments of weapons of mass destruction-related (WMD) equipment and materials. Through the PSI, the Bush Administration sought to "create a web of counterproliferation partnerships through which proliferators will have difficulty carrying out their trade in WMD and missile-related technology." The states involved in PSI have agreed to review their national legal authorities for interdiction, provide consent for other states to board and search their own flag vessels, and conclude ship-boarding agreements. The Proliferation Security Initiative is an informal mechanism and has no separate budget or international secretariat. [86]

As of June 2024, 113 countries have committed formally to PSI participation, called "endorsing states."[87] Sixteen "core" countries originally pledged their cooperation in interdicting shipments of WMD materials, agreeing in Paris in 2003 on a set of interdiction principles. The United States has prioritized the conclusion of ship-boarding agreements with key states that have high volumes of international shipping. The United States has signed 11 agreements with Antigua and Barbuda, the Bahamas, Belize, Croatia, Cyprus, Liberia, Malta, the Marshall Islands, Mongolia, Panama, and Saint Vincent and the Grenadines. The PSI Operational Experts Group (OEG) consists of 21 states and acts as a coordinating body. The OEG met in October 2022 after a two-year break due to the COVID-19 pandemic. PSI countries hold high-level political and regionally focused meetings.

Global Initiative to Combat Nuclear Terrorism (GICNT)

In July 2006, Russia and the United States announced the creation of the Global Initiative to Combat Nuclear Terrorism (GICNT) before the G-8 Summit in St. Petersburg. The GCINT

[85] See also CRS Report RL34327, *Proliferation Security Initiative (PSI)*, by Mary Beth D. Nikitin.

[86] The 9/11 Commission Act of 2007 (P.L. 110-53) recommended that PSI be expanded and that coordination within the U.S. government be improved.

[87] See also https://www.state.gov/proliferation-security-initiative/ or https://www.psi-online.info/psi-info-en.

website says that its activities have been suspended: "The GICNT is pausing all official meetings of the GICNT and its working groups until further notice. The GICNT welcomes the voluntary commitments of its partner countries in agreeing to host and organize future activities and fully supports their important role in advancing the GICNT's mission."[88]

At the GICNT's first meeting in October 2006, 13 states—Australia, Canada, China, France, Germany, Italy, Japan, Kazakhstan, Morocco, Turkey, the United Kingdom, the United States, and Russia—endorsed a Statement of Principles. As of February 2021, 89 states and six international organizations had agreed to the principles and were Global Initiative partner countries. The International Atomic Energy Agency (IAEA), European Union (EU), Interpol, U.N. Office on Drugs and Crime (UNODC), United Nations Office of Counter-Terrorism (UNOCT), and the United Nations Interregional Crime and Justice Research Institute (UNICRI) have observer status. Morocco chairs the GCINT Implementation and Assessment Group. Three working groups organized workshops and develop policy goals: (1) the Nuclear Detection Working Group (chaired by Finland), (2) the Nuclear Forensics Working Group (chaired by Canada), and (3) the Response Mitigation Working Group (chaired by Argentina). GICNT states convene a plenary session every two years to discuss to evaluate progress and set future goals and priorities.

U.S. officials have described the initiative as a "flexible framework" to prevent, detect, and respond to the threat of nuclear terrorism. It is meant to enhance information sharing and build capacity worldwide. The Statement of Principles pledges to improve each nation's ability to secure radioactive and nuclear material, prevent illicit trafficking by improving detection of such material, respond to a terrorist attack, prevent safe haven to potential nuclear terrorists and financial resources, and ensure liability for acts of nuclear terrorism. Participating states share a common goal to improve national capabilities to combat nuclear terrorism by sharing best practices through multinational exercises and expert-level meetings. Without dues or a secretariat, actions under the initiative take legal guidance from the International Convention on the Suppression of Acts of Nuclear Terrorism, the Convention on the Physical Protection of Nuclear Materials, and U.N. Security Council Resolutions 1540 and 1373.[89]

Weapons Control and Elimination Conventions

Chemical Weapons Convention (CWC)

The Chemical Weapons Convention (CWC) bans the development, production, transfer, stockpiling, and use of chemical and toxin weapons; mandates the destruction of all chemical weapons production facilities; and seeks to control the production and international transfer of the key chemical components of these weapons. Negotiations on such a convention began in 1968 but made little progress for many years.[90] Verification issues, in particular, stalled the talks until the Soviet Union accepted challenge inspections. In September 1992, the Conference on Disarmament agreed on the final draft for the convention, and it opened for signature in January 1993. The treaty entered into force on April 29, 1997. As of April 2024, 193 countries are states parties to the convention. Israel has signed but not ratified the convention. Egypt, North Korea, and South Sudan have not signed the CWC. Under the convention, states parties provide

[88] http://www.gicnt.org.

[89] "U.S.-Russia Joint Fact Sheet on The Global Initiative to Combat Nuclear Terrorism," July 15, 2006, http://www.state.gov/r/pa/prs/ps/2006/69016.htm.

[90] The United States and Soviet Union—possessors of the world's largest chemical weapons stockpiles—also conducted bilateral negotiations from 1976 to 1980.

declarations, which detail chemical weapons-related activities or materials and relevant industrial activities, to the Organization for the Prohibition of Chemical Weapons (OPCW). The OPCW inspects and monitors states parties' facilities and activities that are relevant to the convention.

Limits and Restrictions

Parties to the convention have agreed to cease all offensive chemical weapons research and production and close all relevant facilities. These states agreed to declare all chemical weapons stockpiles; allow an inventory by international inspectors; seal their stocks; and, absent an OPCW-approved extension, destroy their weapons within 10 years. States parties must also destroy all chemical weapons production facilities within 10 years. In "exceptional cases of compelling need," the OPCW may approve the conversion of such facilities to peaceful purposes.

The CWC contains a complex verification regime, with different obligations applying to different types of chemical facilities. The convention establishes three schedules of chemicals, grouped by relevance to chemical weapons production and extent of legitimate peaceful uses. Some facilities are subject to systematic on-site verification; others are subject to periodic verification inspections. Facilities for a third class of chemicals are subject to random or "ad hoc" inspections. Signatories may also request challenge inspections at facilities suspected to be in violation of the convention. The OPCW can carry out these inspections on short notice. Inspected states have the right to negotiate the extent of inspectors' access to any facility but must make every reasonable effort to confirm compliance.[91]

After the use of nerve agent on its territory, the UK called for a Special Session of the OPCW Executive Council in June 2018 to highlight the gravity of chemical weapons use and to call for giving investigators the mandate to attribute an attack when possible. CWC member states approved a decision that granted the OPCW the added authority to attribute chemical attacks under investigation.[92] In addition, the CWC states in November 2019 adopted two decisions that amended Schedule 1 of the CWC's Annex on Chemicals, adding two classes of nerve agents developed during the Cold War—the Novichok class of nerve agents and some carbamate compounds—to the schedule, subjecting them to the CWC's declaration requirements and other restrictions.[93]

United States

The U.S. Senate held hearings and debated the CWC for more than four years before consenting to its ratification on April 24, 1997. Congress passed the CWC implementing legislation, as a part of the FY1999 Omnibus Appropriations Act (P.L. 105-277), in late October 1998. This legislation provides the statutory authority for U.S. domestic compliance with the convention's provisions. The legislation also provides detailed procedures to be used for on-site inspections by the OPCW, including limitations on access and search warrant procedures, should they be required.

The United States encountered difficulties in destroying its Category One chemical weapons stockpile and did not meet its 2007 deadline for doing so. In April 2006, the United States submitted its formal request to extend the final U.S. chemical weapons destruction deadline from

[91] For more information on CWC verification issues, see CRS Report RL31559, *Proliferation Control Regimes: Background and Status*, coordinated by Mary Beth D. Nikitin.

[92] https://www.opcw.org/media-centre/news/2018/06/cwc-conference-states-parties-adopts-decision-addressing-threat-chemical.

[93] https://www.opcw.org/media-centre/news/2019/11/conference-states-parties-adopts-decisions-amend-chemical-weapons.

April 2007 to April 29, 2012, the latest possible date allowed under the CWC.[94] However, Ambassador Eric Javits, then-U.S. Permanent Representative to the OPCW, added that the United States did "not expect to be able to meet that deadline" because Washington had encountered "delays and difficulties" in destroying its stockpile.[95] These delays have generally resulted from the need to meet state and federal environmental requirements and from both local and congressional concerns over the means of destruction.

The 2008 Defense Appropriations Act (P.L. 110-116) required the Defense Department to "complete work on the destruction" of the U.S. chemical weapons stockpile by the 2012 deadline "and in no circumstances later than December 31, 2017." The National Defense Authorization Act for Fiscal Year 2016 (P.L. 114-92) changed this deadline to December 31, 2023. Facilities located in Colorado and Kentucky destroyed the remaining chemical agent stockpiles. The OPCW confirmed that the United States destroyed all of its chemical agent stockpiles as of July 7, 2023.[96]

Status of Chemical Weapons Destruction

According to the OPCW, all of the member-states' declared chemical weapons production facilities have been destroyed or converted for peaceful purposes; as of July 2023, all declared chemical weapons agent stockpiles had been "irreversibly" destroyed.[97] Albania, India, South Korea, and Russia declared possession of chemical weapons by the time of the CWC entry into force. None of these governments destroyed their stocks by the original April 29, 2007, deadline, but all have since done so. The United States also declared possession of chemical weapons and completed the destruction of its stockpile in 2023. Since the treaty's entry into force, Libya has declared and destroyed a chemical weapons stockpile. Then-OPCW Director General Ahmet Üzümcü stated in March 2018 that Iraq had completed destroying its "chemical weapons remnants."[98] The OPCW verified destruction of Syria's declared stockpile, but questions remain about its completeness (see below).

CWC Compliance Issues

Syria[99]

Syria acceded to the CWC as part of a diplomatic effort in the fall of 2013. The United States threatened military action against Syria in response to chemical weapons use against civilians in

[94] Ambassador Eric Javits, U.S. Permanent Representative to the OPCW, Statement Concerning Request to Extend the United States' Destruction Deadline Under the Chemical Weapons Convention, April 20, 2006.

[95] Ibid.

[96] Statement by Ambassador Bonnie Jenkins, Under Secretary of State for Arms Control and International Security, at the Fifth Special Session of the Conference of the States Parties to Review the Operation of the Chemical Weapons Convention, May 12, 2023; "OPCW confirms: All declared chemical weapons stockpiles verified as irreversibly destroyed," *OPCW Press Release*, July 7, 2023, https://www.opcw.org/media-centre/news/2023/07/opcw-confirms-all-declared-chemical-weapons-stockpiles-verified; "US Completes Chemical Weapons Stockpile Destruction Operations," U.S. Department of Defense Press Release, July 7, 2023, https://www.defense.gov/News/Releases/Release/Article/3451920/us-completes-chemical-weapons-stockpile-destruction-operations/.

[97] https://www.opcw.org/media-centre/opcw-numbers.

[98] "OPCW Director-General Congratulates Iraq on Complete Destruction of Chemical Weapons Remnants," March 13, 2018. Iraq had destroyed most of its chemical weapons following the 1991 Persian Gulf War but declared "remnants of chemical weapons" after acceding to the CWC in 2009.

[99] For more information on the history of the chemical weapons in Syria, see CRS Report R42848, *Syria's Chemical Weapons: Issues for Congress*, coordinated by Mary Beth D. Nikitin.

August 2013. The United States withdrew the threat, and Syria agreed to join the CWC and declare and destroy all of its chemical weapons stocks and production facilities. U.N. Security Council Resolution 2118 (2013) mandated that Syria give up all its chemical weapons under Chapter VII provisions of the U.N. Charter and created a mechanism for verifying this process, with a primary role for the OPCW Secretariat.

At the start of its civil war, Syria had more than 1,000 metric tons of chemical warfare agents and precursor chemicals, including several hundred metric tons of the nerve agent sarin, several hundred metric tons of mustard agent in ready-to-use form, and several metric tons of the nerve agent VX. A U.N. and OPCW Joint Mission oversaw the removal and destruction of these chemical weapons agents from Syria, and all Category 1- and 2-declared chemicals were destroyed as of June 2014. Destruction of chemical weapons production facilities is also complete, but serious questions remain over whether Syria has declared all of its chemical weapons stocks. The OPCW's Declaration Assessment Team (DAT) continues to investigate these outstanding issues through interviews and lab analysis of samples from site visits.

A 2023 State Department report assessing CWC compliance[100] says that the United States cannot certify that Syria is in compliance with the CWC, that Syria has been using chemical weapons systematically for years, has not declared "all elements" of its chemical weapons program, and has retained some chemical weapons. Ms. Izumi Nakamitsu, High Representative for Disarmament Affairs, reported in May 2023 that, because of "gaps, inconsistencies and discrepancies that remain unresolved," the OPCW "continues to assess" that Syria's declaration "cannot be considered accurate and complete."[101]

The Syrian government continues to categorically deny that it has used chemical weapons or toxic chemicals, while accusing opposition forces of doing so. The U.N. representatives of the United States, France, and the United Kingdom continue to cite information that, they argue, suggests Syrian government complicity in conducting ongoing chemical attacks, particularly with chlorine. Expert teams affiliated with the Joint U.N. Mission to Investigate Allegations of the Use of Chemical Weapons in the Syrian Arab Republic (JIM) and the OPCW Fact Finding Mission (FFM) in Syria have investigated some of these allegations and have found evidence that in some cases confirms and in others suggests that chemical weapons (such as sarin) and/or toxic chemicals have been used in attacks.[102]

Russia

The CWC Conference of States-Parties gave Russia until December 31, 2009, to destroy 45% of its Category One stockpiles and until April 29, 2012, to destroy the rest.[103] Russia did not meet the 2012 deadline but stated that it planned to destroy its stockpiles by December 31, 2020.[104] In September 2017, the OPCW confirmed that the Russian Federation had totally destroyed its declared chemical weapons stockpile. The OPCW had verified the destruction of 39,967 metric tons of Category 1 chemical weapons at seven facilities. Moscow had previously destroyed its

[100] *Compliance with the Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction Condition (10)(C) Report*, U.S. Department of State, April 2023. The 2024 report echoed this assessment.

[101] "Briefing to the Security Council on the Implementation of Security Council Resolution 2118 (2013)," Briefing by Ms. Izumi Nakamitsu High Representative for Disarmament Affairs, May 8, 2023.

[102] For more detail on current chemical weapons use and related OPCW and U.N. inspections, see CRS Report RL33487, *Armed Conflict in Syria: Overview and U.S. Response*, coordinated by Carla E. Humud.

[103] *Opening Statement by the Director-General to the Conference of the States*, C-15/DG.14, November 29, 2010.

[104] *Report of the Nineteenth Session of the Conference of the States Parties*, C-19/5, December 5, 2014.

Category 2 and Category 3 chemical weapons stockpiles. Under DOD's Cooperative Threat Reduction Program, the United States and other partner countries provided Russia with considerable financial assistance for chemical weapons destruction.[105] In congressionally mandated annual reports to Congress, the State Department has said it could not certify that the Russian Federation was in compliance with the CWC because Moscow's required declarations of stockpile and development and production facilities were incomplete.[106]

Moreover, Russia "retains an undeclared chemical weapons program" in violation of the CWC, according to U.S. government reports citing a 2018 Russian use of a military-grade nerve agent to attack two individuals in the United Kingdom, as well as an attempted assassination of Russian national Alexey Navalny in August 2020, also using a "novichok" nerve agent.[107] In March 2021, the Biden Administration announced additional sanctions against Russia for the use of a chemical weapon "against its own nationals, in violation of the Chemical Weapons Convention."[108] In May 2024, the Biden Administration issued a determination under the CBW Act of 1991 that said Russia had used "chemical weapon chloropicrin against Ukrainian troops."[109]

Iran

According to an April 2023 State Department report, "Iran is in non-compliance with the CWC" because of the government's failures to declare past chemical weapons transfers, "complete holdings of Riot Control Agents," and at least one chemical weapons production facility.[110]

Burma (Myanmar)

According to an April 2023 State Department report, the United States "certifies that Burma is in non-compliance with the CWC," due to the government's failure to declare its past chemical weapons program and destroy a chemical weapons production facility.[111] The 2024 report reiterated this assessment.

Investigating CW Use

The OPCW has investigated recent cases of chemical weapons use, and Congress may consider whether the OPCW has adequate resources for investigations into recent incidents of chemical weapons use. The OPCW assisted the Malaysian government in its investigation of the February 2017 use of VX there.[112] OPCW Technical Assistance Visit (TAV) teams also aided Iraqi security

[105] CRS Report R43143, *The Evolution of Cooperative Threat Reduction: Issues for Congress*, by Mary Beth D. Nikitin and Amy F. Woolf.

[106] See, for example, *Compliance with the Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons*, April 2023.

[107] Ibid. See also "U.S. Sanctions and Other Measures Imposed on Russia in Response to Russia's Use of Chemical Weapons," fact sheet, U.S. Department of State, March 2, 2021.

[108] "U.S. Sanctions and Other Measures Imposed on Russia in Response to Russia's Use of Chemical Weapons," U.S. State Department Fact Sheet, March 2, 2021, https://www.state.gov/u-s-sanctions-and-other-measures-imposed-on-russia-in-response-to-russias-use-of-chemical-weapons/.

[109] "Imposing New Measures on Russia for its Full-Scale War and Use of Chemical Weapons Against Ukraine," U.S. Department of State, May 1, 2024.

[110] U.S. Department of State, *2023 Condition (10)(C) Annual Report on Compliance with the Chemical Weapons Convention (CWC)*, April 18, 2023.

[111] Ibid.

[112] North Korean agents used the nerve agent VX to assassinate Kim Jong Nam, the half-brother of the North Korean leader, at the Kuala Lumpur International Airport in February 2017; see https://www.opcw.org/fileadmin/OPCW/EC/84/en/Malaysia_ec84_statement.pdf.

forces' investigations and confirmed after a June 2017 visit that a nonstate actor had used sulfur mustard blister agent in northern Iraq. At the UK government's request, the OPCW sent a TAV team to assist with the 2018 investigation of the Skripal poisoning in Salisbury. A second OPCW TAV returned when two other UK citizens, one deceased, were contaminated by the nerve agent. OPCW inspectors concurred with the UK technical analysis of Novichok use in Salisbury.

In 2020, the German government requested technical assistance from the OPCW to help analyze evidence related to the Navalny case under Article 8 of the CWC. The investigation concluded that a Novichok-class nerve agent was used.[113] The Russian government also requested a TAV, and the OPCW has said it would send investigators once Russia met certain legal requirements.[114]

The OPCW has sent multiple investigatory teams to Syria: a Declaration Assessment Team (DAT), to verify Syrian government compliance with the CWC; a Fact-Finding Mission (FFM), tasked with confirming reported incidents of CW use; a UNSC-authorized Joint Investigative Mechanism until 2017; and the OPCW Investigation and Identification Team (IIT) established in 2018.

Biological Weapons Convention (BWC)

In 1969, the Nixon Administration unilaterally renounced U.S. biological weapons (BW). Offensive BW development and production ceased, and destruction of the U.S. BW stockpile began. Simultaneously, the United States pressed the Soviet Union to follow its example. After some delay, agreement was reached, and the Biological Weapons Convention (BWC)[115] was signed in 1972. The United States, after lengthy Senate consultations, ratified the convention in 1975; the BWC entered into force the same year.

The BWC bans the development, production, stockpiling, and transfer of biological weapons, as well as biological agents and toxins. It also bans "equipment or means of delivery designed to use such agents or toxins for hostile purposes or in armed conflict." In addition, the convention requires states parties to destroy all relevant "agents, toxins, weapons, equipment and means of delivery." The BWC permits only defensive biological warfare research (e.g., vaccines, protective equipment) and allows production and stockpiling of BW agents only in amounts justifiable for protective or peaceful purposes. Unlike the Chemical Weapons Convention (CWC), the BWC does not specify particular biological agents but generically defines them as "microbial or other biological agents or toxins whatever their origin or method of production, of types and in quantities that have no justification for prophylactic or peaceful purposes." The convention does not contain any independent verification or enforcement mechanisms.[116]

[113] "OPCW Issues Report on Technical Assistance Requested by Germany," October 6, 2020, https://www.opcw.org/media-centre/news/2020/10/opcw-issues-report-technical-assistance-requested-germany.

[114] See also "The Case of Mr. Navalny," OPCW website, https://www.opcw.org/media-centre/featured-topics/case-mr-alexei-navalny, and CRS Insight IN10936, *Resurgence of Chemical Weapons Use: Issues for Congress*, by Mary Beth D. Nikitin.

[115] The agreement is more formally known as the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction. The text of the BWC and associated documents are available at http://www.un.org/disarmament/WMD/Bio/index.shtml.

[116] Article V of the convention does speak to the issue of compliance, stating that the States Parties "undertake to consult one another and to cooperate in solving any problems which may arise in relation to the objective of, or in the application of the provisions of, the Convention. Consultation and Cooperation pursuant to this article may also be undertaken through appropriate international procedures within the framework of the United Nations and in accordance with its Charter."

Review Conferences

BWC member states periodically discuss maintaining the treaty's relevance in the face of major scientific and technological change and exchange biosecurity best practices. The Ninth BWC Review Conference took place from November 28 to December 16, 2022.

The Fifth Review Conference of the BWC, which took place in November 2001, ended in disarray, with the parties unable to agree upon a final declaration. The primary deadlock was the issue of an adaptive protocol to the convention, intended to enhance its enforcement. In July 2001, after almost seven years of negotiations, the United States declared the 200-page protocol unacceptable as basis for further negotiation. A Bush Administration review concluded that the draft protocol would not provide adequate security against covert violations, yet could endanger the security of U.S. biodefense programs and U.S. commercial proprietary information. Alone in its complete rejection of the draft protocol, the United States came under widespread international criticism, including from close allies, for jeopardizing the future of biological arms control. In response, the Administration put forward several proposals at the 2001 Review Conference, urging their adoption by BWC State Parties at the national level. These included the following:

- Criminalization of BWC violations and expedited extradition procedures for violators.
- United Nations investigation of suspicious disease outbreaks or alleged BW use.
- Procedures for addressing BWC compliance concerns.
- Improved international disease control.
- Improved security over research on pathogenic organisms.

The Review Conference was unable to reach a compromise final declaration on future activities satisfactory to all state parties and adjourned until November 2002. Confronted with the U.S. position, the chairman of the 2002 Review Conference presented a minimal program emphasizing only annual meetings to discuss strengthening national laws and ways to respond to BW attacks. These were endorsed by the United States and accepted by the conference.

The Sixth BWC Review Conference, held in December 2006, could not reach consensus on a comprehensive set of guidelines for national implementation of the convention; the United States and nonaligned governments were unable to overcome differences concerning technology transfer control issues. The assumption of U.S. opposition also precluded consideration of enhanced verification or enforcement provisions for the convention. The conference, however, did establish a new program of work for annual meetings, which took place before the Seventh Review Conference in December 2011. The meetings included discussion and information exchanges on a variety of issues, including domestic enforcement of BWC provisions, pathogen security, and oversight of potentially dual-use research. The United States required, however, that these sessions be prohibited from reaching binding decisions. Beginning in 2007, the BWC states parties have met annually.

The Obama Administration chose not to support revival of the negotiations on a BWC verification protocol, then-Under Secretary for Arms Control and International Security Ellen Tauscher announced in a December 9, 2009, address to the BWC states parties. The Administration has "determined that a legally binding protocol would not achieve meaningful verification or greater security," she explained, adding that

> [t]he ease with which a biological weapons program could be disguised within legitimate activities and the rapid advances in biological research make it very difficult to detect

> violations. We believe that a protocol would not be able to keep pace with the rapidly changing nature of the biological weapons threat.

Tauscher articulated the U.S. position that "confidence in BWC compliance should be promoted by enhanced transparency about activities and pursuing compliance diplomacy to address concerns." Pointing out that part of the November 2009 U.S. National Strategy for Countering Biological Threats[117] was to "reinvigorate" the BWC, Tauscher exhorted the convention's states parties to join the United States in "increasing transparency, improving confidence building measures and engaging in more robust bilateral compliance discussions." She proposed such measures as increasing participation in the convention's confidence-building measures,[118] as well as bilateral and multilateral cooperation in such areas as pathogen security and disease surveillance and response.

The Seventh Review Conference took place from December 5 to 22, 2011. The conference participants decided to continue the above-described intersessional process, with some changes. For example, the annual meetings would address three standing agenda items: cooperation and assistance, review of relevant scientific and technological developments, and strengthening national implementation. In addition, during the intersessional program, the parties were to discuss enabling fuller participation in BWC-related confidence-building measures and strengthening implementation of BWC Article VII.[119]

During the Eighth Review Conference, which took place from November 7 to 25, 2016, participants decided that the governments would hold several annual meetings. The first meeting was to "seek to make progress on issues of substance and process for the period before the next Review Conference, with a view to reaching consensus on an intersessional process," according to the final conference document.[120] During that meeting of States Parties, which took place from December 4-8, 2017, the governments decided to retain "the previous structures: annual Meetings of States Parties preceded by annual Meetings of Experts."[121] Groups of experts had met annually in the past as part of the intersessional process.[122]

The Ninth BWC Review Conference final document describes these meetings' impact

> The Meetings of States Parties engendered greater common understanding on steps to be taken to further strengthen the implementation of the Convention and considered several proposals on how to reflect the deliberations, including on any possible outcomes, of the Meetings of Experts, but the consideration was inconclusive. However, the Conference regrets that no consensus was reached on the deliberations, including on any possible outcomes, of the Meetings of Experts.[123]

Nevertheless, the document notes that BWC parties "will hold annual meetings between 2023 and 2026." The first meeting was to be held in December 2023.[124]

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[117] https://obamawhitehouse.archives.gov/sites/default/files/National_Strategy_for_Countering_BioThreats.pdf.

[118] These measures are vehicles for BWC states parties to share information about their biological activities.

[119] Article VII states, "Each State Party to this Convention undertakes to provide or support assistance, in accordance with the United Nations Charter, to any Party to the Convention which so requests, if the Security Council decides that such Party has been exposed to danger as a result of violation of the Convention."

[120] *Final Document of the Eighth Review Conference*, BWC/CONF.VIII/4, January 11, 2017.

[121] *Report of the Meeting of States Parties*, BWC/MSP/2017/6, December 19, 2017.

[122] https://www.un.org/disarmament/biological-weapons/about/meetings/.

[123] *Final Document of the Ninth Review Conference*, BWC/CONF.IX/9, December 22, 2022.

[124] Ibid.

The conference also established a working group "to identify, examine and develop specific and effective measures," as well as recommend actions "to strengthen and institutionalise" the BWC.[125] The group is to address the following issues:

- measures on international cooperation and assistance under Article X;
- measures on scientific and technological developments relevant to the convention;
- measures on confidence-building and transparency;
- measures on compliance and verification;
- measures on national implementation of the convention;
- measures on assistance, response, and preparedness under Article VII; and
- measures on organizational, institutional, and financial arrangements.[126]

The working group is to adopt a consensus report, which is to include "conclusions and recommendations." The group is then to submit the report for "consideration at the Tenth [BWC] Review Conference," which is to take place by the end of 2027.[127]

Compliance Issues

The United States, according to an April 2024 State Department report, assesses that North Korea and Russia have "offensive" biological weapons programs in violation of those governments' BWC obligations. The same report also describes U.S. concerns regarding the compliance of China and Iran with their BWC obligations.[128]

Treaty on the Prohibition of Nuclear Weapons (Nuclear Ban Treaty)

As of April 2024, 93 countries have signed and 70 countries have ratified the Treaty on the Prohibition of Nuclear Weapons, also known as the nuclear "ban treaty."[129] In accordance with Article 15, the TPNW entered into force 90 days following the 50th ratification on January 22, 2021. UNGA Resolution A/71/258 (2016) called on U.N. member states to negotiate in 2017 a legally binding prohibition on nuclear weapons. Negotiations were held in New York, February 27-March 31, and June 15-July 7, 2017. At the end of the conference, 122 countries voted to approve the treaty. Singapore abstained, and the Netherlands voted against it, citing conflicts between the treaty and the Netherlands' commitments as a member of NATO. Article 1 says that adherents would never "develop, produce, manufacture, otherwise acquire, possess or stockpile nuclear weapons or other nuclear explosive devices." This includes a prohibition on hosting nuclear weapons that are owned or controlled by another state. Nor would states parties transfer, receive control over, or assist others in developing nuclear weapons. They also would not use or threaten to use nuclear weapons or other nuclear explosive devices. Article 7 requires states to give assistance to individuals affected by the use or testing of nuclear weapons and provide for environmental remediation.

[125] Ibid.

[126] Ibid.

[127] Ibid.

[128] *Adherence to and Compliance with Arms Control, Nonproliferation, and Disarmament Agreements and Commitments*, Department of State, April 2024.

[129] See also CRS Insight IN10731, *The Nuclear Ban Treaty: An Overview*, by Mary Beth D. Nikitin.

Treaty supporters seek to establish an international norm against the possession and use of nuclear weapons, which they argue would strengthen nonproliferation norms and raise awareness of the humanitarian consequences of developing and using nuclear weapons. Some critics of the ban treaty are concerned that a new agreement would undermine the NPT and its verification system of International Atomic Energy Agency (IAEA) safeguards.

The United States opposed a ban treaty and, along with 40 other states, did not participate in negotiations. In response to the conclusion of the treaty, a joint press release from the United States, UK, and French Permanent Representatives said, "A purported ban on nuclear weapons that does not address the security concerns that continue to make nuclear deterrence necessary cannot result in the elimination of a single nuclear weapon and will not enhance any country's security, nor international peace and security."[130]

The Arms Trade Treaty (ATT)[131]

The Arms Trade Treaty (ATT) is a multilateral treaty of unlimited duration. Its stated objectives are to "[e]stablish the highest possible common international standards for regulating or improving the regulation of the international trade in conventional arms ..." and to "[p]revent and eradicate the illicit trade in conventional arms and prevent their diversion." A 2004 speech in support of the ATT concept by the British Foreign Secretary is widely credited as giving critical momentum to the treaty. Beginning in 2006, the treaty was negotiated in the U.N. General Assembly (UNGA) and specialized fora. A UNGA vote in early April 2013 approved the treaty in its negotiated form.

The ATT opened for signature on June 3, 2013, and entered into force on December 24, 2014. The United States participated in drafting the ATT and voted for the treaty in the UNGA on April 2, 2013. The United States signed the ATT, which currently has 113 parties, on September 25, 2013. President Barack Obama transmitted the treaty to the Senate for advice and consent for ratification on December 9, 2016, but the Senate has not voted on the treaty. President Donald Trump notified the Senate on April 29, 2019, that he had "decided to withdraw" the ATT from the Senate and requested the Senate to return the treaty to the President.[132] On May 13, 2019, Senator Rand Paul introduced S.Res. 204, "An executive resolution to return to the President of the United States the Arms Trade Treaty." The bill was referred to the Senator Foreign Relations Committee the same day, but the committee did not act on the resolution.

The United States notified the U.N. Secretary-General on July 18, 2019, that "the United States does not intend to become a party" to the ATT, adding that the United States "has no legal obligations arising" from its treaty signature.[133] The relevant U.N. website contains the above-described statements in a footnote.[134]

[130] Joint Press Statement from the Permanent Representatives to the United Nations of the United States, United Kingdom, and France Following the Adoption of a Treaty Banning Nuclear Weapons, July 7, 2017, https://usun.state.gov/remarks/7892.

[131] See also CRS In Focus IF10567, *The Arms Trade Treaty*, by Paul K. Kerr.

[132] Presidential Message, 165 Cong. Rec. S. 2483, Senate, vol. 165, no. 69, p. S2483, April 29, 2019.

[133] Arms Trade Treaty New York, April 2, 2013, United States of America: Communication Reference: C.N.314.2019.TREATIES-XXVI.8 (Depositary Notification), July 19, 2019.

[134] United Nations Treaty Collection, Chapter XXVI: Disarmament, Arms Trade Treaty, New York, April 2, 2013, https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVI-8&chapter=26&clang=_en#3.

Treaty Provisions

The ATT regulates trade in conventional weapons between and among countries. The treaty does not affect sales or trade in weapons among private citizens within a country. The treaty obligates states parties engaged in the international arms trade to establish national control systems to review, authorize, and document the import, export, brokerage, transit, and transshipment of conventional weapons, their parts, and ammunition. The treaty also requires that states parties report on their treaty-specified transfers to other nations on an annual basis to the Secretariat. The scope of the weapons covered by the ATT includes the following, though states parties may voluntarily include other conventional weapons:

- battle tanks,
- armored combat vehicles,
- large-caliber artillery systems,
- combat aircraft,
- attack helicopters,
- warships,
- missiles and missile launchers, and
- small arms and light weapons.

States parties' definitions of the first seven categories of weapons must, at a minimum, include items covered by the descriptions in the UN Register of Conventional Arms. For the last category, such definitions "shall not cover less than the descriptions used in relevant" U.N. instruments when the ATT entered into force. These instruments, according to the United States, are the International Instrument to Enable States to Identify and Trace, in a Timely and Reliable Manner, Illicit Small Arms and Light Weapons, and the UN Register of Conventional Arms.[135]

The ATT prohibits states parties from approving treaty-covered transfers in cases when the state "has knowledge" when reviewing the proposed transfer that the exported items would be used in the

> commission of genocide, crimes against humanity, grave breaches of the Geneva Conventions of 1949, attacks directed against civilian objects or civilians protected as such, or other war crimes as defined by international agreements to which it is a party.

The treaty also prohibits states parties from approving treaty-covered transfers to any country that violates a UN Security Council Resolution adopted under Chapter VII of the UN Charter. In addition, the ATT prohibits transfers that would violate the exporting state's "relevant international obligations under international agreements to which it is a Party, in particular those relating to the transfer of, or illicit trafficking in, conventional arms."

Regarding arms transfers not prohibited by the above criteria, the ATT obligates states parties to adopt pre-export review processes which "assess the potential" that the exported items "would contribute to or undermine peace and security" or "could be used" to "commit or facilitate" human rights violations, international humanitarian law violations, or acts of terrorism or transnational crime. The treaty prohibits states parties from authorizing such exports if, after conducting the aforementioned review and "considering available mitigating measures," the government "determines that there is an overriding risk of any" of these consequences. According to the United States, governments would "balance" such risks "against the potential that the

[135] "Message From the President of the United States Transmitting the Arms Trade Treaty, Done at New York on April 2, 2013, and Signed by the United States on September 25, 2013," Treaty Doc. 114-14, December 9, 2016.

conventional arms or items would contribute to peace and security."[136] The ATT also requires the aforementioned pre-export reviews to "take into account the risk" that exported items could be "used to commit or facilitate serious acts of gender-based violence or serious acts of violence against women and children." But the treaty does not appear to prohibit the export of weapons in cases where this particular risk is present.

The ATT also requires states parties to "take measures to prevent" the diversion of covered arms and ammunition, to mitigate risks of diversion by cooperating and exchanging information, and to "take appropriate measures" if the government detects diversion. The treaty encourages states parties to "share relevant information with one another on effective measures to address diversion." The ATT does not define "diversion" but, according to the United States, it "is understood to mean the illicit or unlawful rerouting or redirection of a transfer of conventional arms, contrary to a State Party's own national control laws."[137] Finally, the ATT encourages cooperation between States Parties in such areas as developing implementing legislation and building institutional capacity.

ATT states parties must submit annual reports to a treaty-established Secretariat regarding authorized or actual exports and imports of treaty-specified items. States parties may include the same information in these reports, which may "exclude commercially sensitive or national security information," that they would submit pursuant to other "relevant United Nations frameworks," the treaty states.

The ATT also provides for various measures of cooperation among states parties. For example, the treaty requires states parties to "cooperate with each other … to effectively implement" the ATT, as well as "afford one another the widest measure of assistance in investigations, prosecutions and judicial proceedings in relation to violations of national measures established pursuant" to the treaty. The ATT also provides mechanisms for states parties to offer and request assistance for such matters as managing weapons stockpiles, developing legislation, and institutional capacity-building. Each state-party "in a position to do so shall provide such assistance, upon request."

According to the treaty text, the ATT's Secretariat will have a "minimized structure" and shall

- receive, make available, and distribute the reports as mandated by the treaty;
- maintain and make available to States Parties the list of national points of contact;
- facilitate the matching of offers of and requests for assistance for treaty implementation and promote international cooperation, as requested;
- facilitate the work of the Conference of States Parties, including making arrangements and providing the necessary services for meetings under the treaty; and
- perform other duties as decided by the Conferences of States Parties.

Controlling the Use of Antipersonnel Landmines

Antipersonnel landmines (APL) are small, inexpensive weapons that kill or maim people upon contact. Abandoned, unmarked minefields can remain dangerous to both soldiers and civilians for an indefinite time. Nonpersistent landmines, according to the Department of Defense, "must

[136] Ibid.

[137] Ibid.

possess self-destruction mechanisms and self-deactivation features."[138] Persistent landmines, which the new policy forbids, lack these features.

Convention on Conventional Weapons

The Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects, as amended, also known as the Convention on Conventional Weapons (CCW), addresses landmines.[139] Specifically, the CCW's *Protocol on Prohibitions or Restrictions on the Use of Mines, Booby-Traps and Other Devices as amended on 3 May 1996* prohibits the use of nondetectable APLs, imposes detailed restrictions on the use of persistent APLs, and requires that its parties take "[a]ll feasible precautions … to protect civilians from the effects" of APLs. The United States is a party to the protocol, which entered into force in 1998.

U.S. Initiatives

In 1996, President Clinton announced a policy that immediately discontinued U.S. use of persistent APLs except in the demilitarized zone (DMZ) separating North and South Korea, supported negotiation of a worldwide ban on APLs in the United Nations, and backed the development of alternative technologies to perform landmine functions without endangering civilians, and to expand mine detection and clearing technology efforts and assistance to mine-plagued countries. This initiative temporarily retained the possible use of nonpersistent APLs; Clinton subsequently set a goal of 2003 to replace such APLs outside the Korean Peninsula by 2003 and on the peninsula by 2006.

President Clinton also supported negotiation in the United Nations of a worldwide ban on APLs. In November 1996, the United States introduced a resolution to the U.N. General Assembly urging governments "to pursue vigorously an effective, legally-binding international agreement to ban the use, stockpiling, production and transfer" of APLs. While many governments supported such a ban, others were concerned that verifying such a ban would be difficult and that APLs still played a useful role in military operations.

At the conclusion of an October 1996 conference in Ottawa, a number of governments agreed to work toward "the earliest possible conclusion of a legally-binding international agreement to ban anti-personnel mines." Using language identical to the U.S.-sponsored version described above, the General Assembly adopted a resolution in December 1996 exhorting governments to adopt an international ban on APLs. Following several multilateral meetings, a September 1997 conference in Oslo adopted the Ottawa Convention text, formally titled the *Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-personnel Mines and on Their Destruction,* which entered into force on March 1, 1999.

The Clinton Administration participated in the Ottawa Process but declined to sign the treaty after failing to gain certain temporary exceptions to treaty language. Specifically, the United States wanted the option of continuing APL use on the Korean Peninsula until 2006, as well as the ability to include nonpersistent APL (or "devices") within antitank landmine munitions. President Clinton suggested that the United States would sign the Ottawa Treaty in 2006 if effective alternatives to APLs were available.

[138] "DoD Policy on Landmines," January 31, 2020.

[139] *Convention on Certain Conventional Weapons*, https://www.unog.ch/80256EDD006B8954/(httpAssets)/40BDE99D98467348C12571DE0060141E/$file/CCW+text.pdf.

In February 2004, the Bush Administration announced that after 2010 the United States would not use any type of persistent landmines, whether antipersonnel or antivehicle. The Administration also indicated that the United States would develop alternatives to persistent landmines. This policy did not include a date to join the Ottawa Treaty. Various U.S. landmine systems were reportedly prepositioned in the Middle East in preparation for the 2003 war in Iraq but were not used.

The Obama Administration conducted a review of U.S. policy regarding landmines. On June 27, 2014, during the Third Review Conference of the Ottawa Convention, the United States announced that it would not "produce or otherwise acquire any anti-personnel landmines in the future," including for the purpose of replacing expiring stockpiles. The Administration also conducted "a high fidelity modeling and simulation effort to ascertain how to mitigate the risks associated with the loss" of such mines.[140] On September 23, 2014, the Obama Administration stated that the United States would align its "APL policy outside the Korean Peninsula with the key requirements of the Ottawa Convention." Specifically, the Administration stated that the United States would "not use APL outside the Korean Peninsula; not assist, encourage, or induce anyone outside the Korean Peninsula to engage in activity prohibited by the Ottawa Convention; and [would] undertake to destroy APL stockpiles not required for the defense of the Republic of Korea."[141] Puneet Talwar, Assistant Secretary of State for the Bureau of Political-Military Affairs, stated on December 9, 2014, that the United States was "pursuing solutions that would be compliant with the convention and that would ultimately allow us to accede to the convention while ensuring that we are still able to meet our alliance commitments" to South Korea. In January 2016, the Obama Administration issued Presidential Policy Directive-37 (PPD-37), which forbade the use of APLs "outside the Korean Peninsula," as well as assisting, encouraging, or inducing "anyone outside the Korean Peninsula to engage in activity prohibited by the Ottawa Convention."

In January 2020, the Department of Defense (DOD) announced a new APL policy.[142] According to a January 31, 2020 DOD memorandum, President Trump, subsequent to an internal DOD review, "decided to cancel" PPD-37. The DOD memorandum permitted Combatant Commanders to authorize the use of nonpersistent APLs regardless of geographic location "when necessary for mission success in major contingencies or other exceptional circumstances." The new policy authorized DOD to "acquire, retain, and transfer a limited number of persistent landmines" for training purposes. During a January 31, 2020, press briefing, a DOD official noted the potential need for the United States to develop new self-destructing APLs for use in accordance with the new policy. The above-cited memorandum stipulated that "Military Departments should explore acquiring landmines and landmine alternatives that could further reduce the risk of unintended harm to noncombatants."

On June 21, 2022, National Security Council (NSC) Spokesperson Adrienne Watson announced the United States would "align its policy concerning use" of antipersonnel landmines (APLs) "outside of the Korean Peninsula" with key provisions of the Ottawa Convention.[143] A June 21, 2022 White House fact sheet stated that the United States would not develop, produce, or acquire APLs; export or transfer APLs; use APLs outside of the Korean Peninsula; or assist, encourage, or induce anyone to engage in any activity prohibited by the Ottawa Convention. According to the

[140] The White House Office of the Press Secretary, "Statement by NSC Spokesperson Caitlin Hayden on U.S. Anti-Personnel Landmine Policy," June 27, 2014.

[141] U.S. Landmine Policy, available at http://www.state.gov/t/pm/wra/c11735.htm.

[142] CRS In Focus IF11440, *U.S. Antipersonnel Landmine Use Policy*, by Andrew Feickert and Paul K. Kerr.

[143] Ibid.

fact sheet, the United States would also destroy all APL stockpiles not required for the defense of South Korea. President Biden directed DOD "to undertake diligent efforts to pursue alternatives to anti-personnel landmines that would be compliant with and ultimately allow the United States to accede to the Ottawa Convention," Watson explained.

The Ottawa Convention[144]

The Ottawa Convention requires states parties to stop the production, use, and transfer of APLs, as well as to destroy all stockpiled APLs, except for the "minimum number absolutely necessary" for training purposes, within four years. States parties are also required to clear APLs within 10 years of becoming party to the convention but can request extensions of up to 10 years to complete this task. The convention has 164 states parties. Thirty-three states parties had not yet met their clearance obligations, as of November 19, 2021.[145]

The convention does not include a verification body, but states parties may submit allegations of noncompliance, as well as requests for "clarification" from relevant governments, to the U.N. Secretary-General. A state party may also request that a special meeting of other treaty members address the compliance matters. States parties can initiate fact-finding missions and request relevant governments to address compliance issues.

Convention on Cluster Munitions[146]

Cluster munitions are weapons that open in midair and dispense smaller submunitions—anywhere from a few dozen to hundreds—into an area. They can be delivered by aircraft or from ground systems such as artillery, rockets, and missiles. Cluster munitions are valued militarily because one munition can kill or destroy many targets within its impact area, and fewer weapons systems are needed to deliver fewer munitions to attack multiple targets. They also permit a smaller force to engage a larger adversary and are considered by some an "economy of force" weapon. On the other hand, critics note that cluster munitions disperse their large numbers of submunitions imprecisely over an extended area, that they frequently fail to detonate and are difficult to detect, and that the submunitions can remain explosive hazards for decades. They can also produce high civilian casualties if they are fired into areas where soldiers and civilians are intermixed or if inaccurate cluster munitions land in populated areas.

A number of CCW members, led by Norway, initiated negotiations in 2007 outside of the CCW to ban cluster munitions.[147] On May 30, 2008, they reached an agreement to ban cluster munitions.[148] The United States, Russia, China, Israel, Egypt, India, and Pakistan did not participate in the talks or sign the agreement. During the Signing Conference in Oslo on December 3-4, 2008, 94 states signed the convention and four of the signatories ratified the convention at the same time.[149] China, Russia, and the United States abstained, but France,

[144] The full text of the convention is available at Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on their Destruction, United Nations Treaties Database, https://treaties.un.org/.

[145] Committee on Article 5 Implementation, *Preliminary Observations*, Intersessional Meetings, June 20-22, 2022.

[146] For detailed information, see CRS Report RS22907, *Cluster Munitions: Background and Issues for Congress*, by Andrew Feickert and Paul K. Kerr.

[147] Arms Control Association Fact Sheet, "Convention on Certain Conventional Weapons Convention (CCW) at a Glance," Washington, DC, October 2007.

[148] Kevin Sullivan and Josh White, "111 Nations, Minus the U.S., Agree to Cluster-Bomb Ban," *Washington Post*, May 29, 2008.

[149] Convention on Cluster Munitions Homepage, http://www.clusterconvention.org/.

Germany, and the United Kingdom were among the 18 NATO members to sign the convention.[150] The convention entered into force on August 1, 2010. The Convention on Cluster Munitions, inter alia, bans the use of cluster munitions, as well as their development, production, acquisition, transfer, and stockpiling.[151] The convention does not prohibit cluster munitions that can detect and engage a single target or explosive submunitions equipped with an electronic self-destruction or self-deactivating feature[152]—an exemption that seemingly permits sensor-fuzed or "smart" cluster submunitions.

Export Controls

Zangger Committee

In 1971, a group of seven NPT nuclear supplier nations formed the Nuclear Exporters Committee, known as the Zangger Committee, to assist in restricting nuclear trade as called for in Article III of the NPT. In 1974, the Zangger Committee compiled a list of nuclear export items that could be potentially useful for military applications of nuclear technology. The nuclear suppliers agreed that the transfer of items on the list would "trigger" a requirement for IAEA safeguards to ensure that the items were not used to make nuclear explosives. The Zangger list included reactors, reactor components, and certain nuclear materials such as heavy water. In recent years, the list of controlled items has been expanded and updated. Membership is voluntary and implies no formal commitments for enforcement of the guidelines. As of June 2024, the Zangger Committee had 39 members, including all five NPT-recognized nuclear weapon states. The committee meets twice each year to exchange information and upgrade its list of controlled commodities.[153]

Nuclear Suppliers Group (NSG)

International nuclear controls are coordinated by an informal association of 48 nuclear exporters called the Nuclear Suppliers Group (NSG), founded in 1975. Shaken by the 1974 test of a nuclear explosive device by India, the major nuclear suppliers in 1975 established a set of unpublished nuclear export guidelines.[154] In 1978, the group, known as the London Club, added new members and announced a common policy regarding nuclear exports. While the NPT's Zangger list initially included only nuclear materials and components used directly in weapons development, the London Club adopted more restrictive export control guidelines that included some dual-use items, with civil and military applications. The NSG guidelines called for suppliers to exercise restraint regarding transfers of enrichment and reprocessing technology, and required the provision of physical security for transferred nuclear facilities and materials, acceptance of safeguards on replicated facilities (based on a design transferred from a London Club member-state), and prohibitions against retransfer of nuclear exports to third parties.

Although NSG guidelines were in place, members took no further actions until 1991. Concerned about Iraq's successful procurement of dual-use items and apparently inconsistent enforcement of nuclear export controls in several supplier countries, the NSG convened in March 1991 for the

[150] Marina Malenic, "Dozens of Nations Sign Cluster Bomb Treaty, U.S. Begins Upgrading Related Technology," *Defense Daily*, December 5, 2008.

[151] Diplomatic Conference for the Adoption of a Convention on Cluster Munitions, Convention on Cluster Munitions, Dublin, Ireland, May 30, 2008, http://www.clustermunitionsdublin.ie/documents.asp.

[152] Ibid.

[153] See http://www.zanggercommittee.org/ for Zangger website.

[154] See http://www.nuclearsuppliersgroup.org for NSG website.

first time since 1978 to update its list of controlled commodities. The expanded group agreed on new guidelines in January 1992 for transfers of a wider range of nuclear-related, dual-use equipment, material and technology and jointly adopted the long-standing U.S. policy of requiring full-scope safeguards for all nuclear exports. (Nations purchasing nuclear technology must open *all* nuclear facilities to inspection, not just the facility in which an imported item is used.[155])

NSG members voluntarily agree to coordinate exports of civilian nuclear material and nuclear-related equipment and technology. The NSG agreed to guidelines for export that include lists of materials and equipment that are to be subject to export control. NSG guidelines require that the recipient country offer assurances that the importing items will not be used for a weapons program, will have proper physical security, and will not be transferred to a third party without the permission of the exporter. Recipient countries' nuclear programs must also have comprehensive IAEA safeguards agreements. In September 2008, the NSG agreed to exempt India from this safeguards requirement, although the group retained a policy of restraint on the transfer of enrichment and reprocessing equipment. NSG members in June 2011 adopted additional guidelines that define eligibility criteria for the transfer of enrichment and reprocessing technologies to new states.

Australia Group (AG)

The Australia Group (AG) is made up of 42 countries and the European Union to coordinate controls on chemical and biological weapons-related transfers. In 1984, United Nations investigators officially confirmed that chemical weapons had been used in the Iran-Iraq War. In response, the United States and several other countries began to implement export controls on chemicals that could be used to manufacture chemical weapons. In 1985, Australia proposed that concerned countries meet in order to coordinate their export controls and share information to enhance their effectiveness. The first meeting took place in June 1985, and biennial meetings continue at the Australian embassy in Paris. Its 37th Plenary was held in June 2024.[156]

The Australia Group has established a list of chemicals and equipment that are subject to control. In 1990, in response to growing concerns over the proliferation of covert biological weapons programs, certain biological agents and research/production equipment were added to the control list. Australia Group guidelines do not call for prohibiting the export of control list items, but rather establishing monitoring and licensing procedures, with export denial only if there is reason to suspect potential contribution to a CBW program. The group's list does not curtail legitimate trade. Since its inception, the Australia Group has added controls on the transfer of information and knowledge that could aid BW proliferation. These include "catch-all" constraints covering items that are not on control lists, adding eight toxins to the control list, adopting controls on technology associated with dual-use biological equipment, and agreeing to control intangible technology transfer (i.e., by phone, fax, or internet) that could be used to advance CBW programs.[157]

[155] The new guidelines appeared as an International Atomic Energy Agency document, INFCIRC/254/Rev.1/Part 1 and Part 2, July 1992.

[156] See https://www.state.gov/statement-by-the-chair-of-the-2024-australia-group/.

[157] The AG's Common Control Lists include chemical weapons precursors, dual-use chemical manufacturing facilities and equipment and related technology and software, dual-use biological equipment and related technology and software, human and animal pathogens and toxins, and plant pathogens. Australia Group Secretariat, Australian Department of Foreign Affairs and Trade, https://www.dfat.gov.au/publications/minisite/theaustraliagroupnet/site/en/controllists.html.

The Australia Group does not have an independent administrative organization, but the Australian Department of Foreign Affairs and Trade maintains its secretariat. National governments administer their own export control programs. As an informal effort, it is not based on international treaty, is not affiliated with any international organization, and has no independent administrative structure. It operates entirely upon consensus of its 42 members, and its decisions are not binding. Countries are admitted to membership only upon the full consensus of current members, and they must have demonstrated compliance with the CWC and BWC and have an effective export control regime.

The question of the Australia Group's relationship to the Chemical Weapons Convention revolves around the convention's Article XI, which declares that states parties will not

> maintain among themselves any restrictions, including those in any international agreements, incompatible with the obligations undertaken under this Convention, which would restrict or impede trade and the development and promotion of scientific and technological knowledge.

The Australia Group maintains that its export control regime is compatible with the objectives of the convention and therefore not prohibited. A number of developing countries, led by Iran (a CWC state party), maintain that the AG controls should be dropped—particularly for CWC states parties. They view the controls as a tool of economic oppression on the part of developed countries, even though no country has been able to provide an example where AG controls have resulted in a denial of exports for legitimate purposes.

The Missile Technology Control Regime (MTCR)

The United States, Canada, France, Germany, Italy, Japan, and the United Kingdom established the Missile Technology Control Regime (MTCR) on April 16, 1987. Designed to slow the proliferation of ballistic and cruise missiles, rockets, and unmanned air vehicles (UAVs) capable of delivering weapons of mass destruction, the MTCR is an informal, voluntary arrangement in which participants agree to adhere to common export policy guidelines applied to an "annex" that lists controlled items. MTCR partners adopt the guidelines as national policy and are responsible for restraining their own missile-related transfers. In addition, partners regularly exchange information on relevant export licensing issues, including denials of technology transfers. The MTCR has neither an independent means to verify whether states are adhering to its guidelines nor a mechanism to penalize states if they violate them.

Analysts credit the MTCR with slowing missile development in Brazil and India; blocking a cooperative missile program of Argentina, Egypt, and Iraq; and eliminating missile programs in South Africa and Hungary. Moreover, partner countries have tightened their export control laws and procedures, and several have taken legal action against alleged missile-technology smugglers. However, some participating governments have exported ballistic and cruise missile technology; Russia has exported technology to Iran, and the United Kingdom has done so to the United Arab Emirates. In addition, many analysts have argued that advances in missile-related technology will challenge the MTCR's future ability to check missile proliferation.

Since 1987, the number of MTCR partners has grown from seven to 35, with India joining the regime in 2016.[158] Several nonpartners, including China, Israel, Romania, and Slovakia, have declared that they adhere to MTCR provisions. Membership in the regime is decided by consensus. According to former MTCR Chairman Per Fischer, "[p]otential members are reviewed

[158] Information on MTCR partners is available at http://mtcr.info/partners/.

on a case-by case basis, and decisions regarding applications are based on the effectiveness of a state's export controls … its potential contribution to the regime and its proliferation record."[159]

The MTCR guidelines[160] call on each partner country to exercise restraint when considering transfers of equipment or technology, as well as "intangible" transfers, that would provide, or help a recipient country build, a missile capable of delivering a 500 kilogram warhead to a range of at least 300 kilometers. The 500 kilogram weight threshold was intended to limit transfers of missiles that could carry a relatively crude nuclear warhead. A 1993 addition to the guidelines calls for particular restraint in the export of any missiles or related technology if the nation controlling the export judges that the missiles are intended to be used for the delivery of weapons of mass destruction (nuclear, chemical, or biological). Thus, some missiles with warheads weighing less than 500 kilograms also fall under MTCR guidelines. From time to time, regime partners update the MTCR guidelines and annex.

The MTCR annex contains two categories of controlled items. Category I items are the most sensitive. There is "a strong presumption to deny such transfers," according to the MTCR guidelines. Category-I systems "are recognized through long-standing international consensus as being the systems of most concern with respect to the delivery capability for a nuclear payload," France, Germany, and the United Kingdom asserted in an August 21 letter to the UN Security Council.[161] Regime partners have greater flexibility to regulate exports of Category II items. Category I items include complete rocket systems (including ballistic missiles, space launch vehicles, and sounding rockets), UAV systems (including cruise missiles systems, target and reconnaissance drones), production facilities for such systems, and major subsystems (including rocket stages, reentry vehicles, rocket engines, guidance systems, and warhead mechanisms). The guidelines prohibit exports of production facilities for Category I items. Category II items are other less sensitive and dual-use missile-related components that could be used to develop a Category I system and complete missiles and major subsystems of missiles capable of delivering a payload of any size to a range of 300 km.

Hague Code of Conduct Against Ballistic Missile Proliferation (HCOC)

The Hague Code of Conduct against Ballistic Missile Proliferation (HCOC) was inaugurated on November 25, 2002. The HCOC, which has 145 subscribing states, is not a treaty but instead a set of "fundamental behavioral norms and a framework for cooperation to address missile proliferation." It focuses on the possession of ballistic missiles, as a complement to the supply-side-oriented MTCR. Subscribing states have held regular conferences since the code came into effect.[162]

The HCOC, according to its text, intends to "prevent and curb the proliferation of Ballistic Missile systems capable of delivering weapons of mass destruction." The code calls on subscribing states "to exercise maximum possible restraint in the development, testing and deployment of Ballistic Missiles capable of delivering weapons of mass destruction [WMD], including, where possible, to reduce national holdings of such missiles." Subscribing states also

[159] "20 Years of the Missile Technology Control Regime and Beyond," paper given to the DIIS Conference on Missile Proliferation, Copenhagen, May 2, 2007.

[160] The MTCR guidelines and annex are available at http://www.mtcr.info.

[161] *Letter dated 10 August 2021 from the Representatives of France, Germany and the United Kingdom of Great Britain and Northern Ireland to the United Nations Addressed to the Secretary-General,* August 11, 2021, S/2021/724.

[162] See https://www.hcoc.at.

agree not to assist ballistic missile programs in countries suspected of developing WMD. In addition, the code calls for subscribing states to "exercise the necessary vigilance" when assisting other countries' space-launch programs, which could serve as covers for ballistic missile programs.

Subscribing states "resolve to implement" several transparency measures, such as producing annual declarations that provide outlines of their ballistic missile policies, as well as "information on the number and generic class" of such missiles launched during the preceding year. The code also calls on subscribing states to provide similar annual declarations regarding their "expendable Space Launch Vehicle" programs. Furthermore, the HCOC calls on states to "exchange pre-launch notifications on their Ballistic Missile and Space Launch Vehicle launches and test flights." Signatories are required to provide such notifications to Austria, which serves as the Immediate Central Contact and Executive Secretariat for the HCOC.

The Wassenaar Arrangement

In July 1996, 33 governments approved the Wassenaar Arrangement on Export Controls for Conventional Arms and Dual-Use Goods and Technologies arms and dual-use goods and technologies. This agreement replaced the Coordinating Committee for Multilateral Export Controls—the Cold War organization that controlled sensitive exports of technologies to Communist countries. According to its Guidelines and Procedures, the Wassenaar Arrangement is not formally targeted at "any state or group of states" but is "intended to enhance co-operation to prevent the acquisition of armaments and sensitive dual-use items for military end-uses, if the situation in a region or the behavior of a state is, or becomes, a cause for serious concern."[163]

The arrangement's stated purpose is "to contribute to regional and international security and stability, by promoting transparency and greater responsibility in transfers of conventional arms and dual-use goods and technologies, thus preventing destabilizing accumulations." Decisions by the 42 participating states are made by consensus.

The arrangement's guidelines specify several factors for participants to consider when deciding on a potential new participant. These factors include whether the state has adopted the arrangement's control lists "as a reference in its national export controls," the government's "adherence to fully effective export controls," and whether the state adheres to several other multilateral agreements.[164]

Participating states agree to control exports and retransfers of items on a Munitions List and a List of Dual-Use Goods and Technologies; the latter includes a Sensitive List and a Very Sensitive List. The decision to allow or deny transfer of an item is the sole responsibility of each participating state. The control lists are updated frequently.

Participating states report all transfers or licenses issued for sensitive dual-use goods or technology and all deliveries of items on the Munitions List. The data exchange identifies the supplier, recipient, and items transferred. Participating states also report export license denials for dual-use items to nonmember states; this information concerning license denials is shared either individually or in the aggregate, depending on the items' sensitivity. Participating governments also notify each other on an "aggregate basis, twice per year" of export licenses issued for or transfers of items on the Sensitive and Very Sensitive Lists. The arrangement does not prohibit a

[163] The Arrangement's Guidelines and Procedures are available at https://www.wassenaar.org/best-practices/.

[164] These agreements include the guidelines for the Nuclear Suppliers Group, the Zangger Committee, the Missile Technology Control Regime, and the Australia Group. They also include the Nuclear Non-Proliferation Treaty, the Biological and Toxicological Weapons Convention, and the Chemical Weapons Convention.

participating country from making an export that has been denied by another participant (this practice is called "undercutting"). But participants are required to report no later than 60 days after approving an export license for dual-use goods that are "essentially identical" to those that have been denied by another participant during the previous three years.

During plenary and working group discussions, participating states voluntarily share information on potential threats to peace and stability and examine dangerous acquisition trends. The participants review the scope of reporting and coordinating national control policies and develop further guidelines and procedures.

European Conventional Arms Control

Conventional Armed Forces in Europe Treaty (CFE)

In late 1990, 22 members of NATO and the Warsaw Pact signed the Conventional Armed Forces in Europe (CFE) Treaty, agreeing to limit NATO and Warsaw Pact nonnuclear forces in an area from the Atlantic Ocean to the Ural Mountains. The CFE treaty did not anticipate the dissolution of the Soviet Union and the Warsaw Pact. Consequently, the participants signed the so-called "Tashkent Agreement" in May 1992, allocating responsibility for the Soviet Union's Treaty-Limited items of Equipment (TLEs) among Azerbaijan, Armenia, Belarus, Kazakhstan, Moldova, Russia, Ukraine, and Georgia. It also established equipment ceilings for each nation and the implied responsibility for the destruction/transfer of equipment necessary to meet these national ceilings. In 1999, the CFE Adaptation Agreement was signed to further adjust to the dissolution of the Warsaw Pact and the expansion of NATO. As discussed below, this agreement has not entered into force pending its ratification by NATO members, and Russia suspended its participation in the CFE Treaty in 2007. In 2023, Russia withdrew from the agreement, a move that was followed by U.S. and NATO suspension of their obligations under the treaty. In 2024, Belarus, Turkey, and Hungary also announced that they would exit the treaty.

Key Limits and Restrictions

CFE placed alliance-wide, regional (zonal), and national ceilings on specific major items of military equipment.[165] It sought to promote stability not only by reducing armaments, but also by reducing the possibility of surprise attack by preventing large concentrations of forces. The CFE treaty also provides for (1) very detailed data exchanges on equipment, force structure, and training maneuvers; (2) specific procedures for the destruction or redistribution of excess equipment; and (3) verification of compliance through on-site inspections. Its implementation has resulted in an unprecedented reduction of conventional arms in Europe, with over 50,000 (TLEs) removed or destroyed; almost all agree it has achieved most of its initial objectives.

Under the CFE treaty, all equipment reductions needed to comply with overall, national requirements, and zonal ceilings were to have been completed by November 1995. As this deadline approached, it was evident that Russia would not meet those requirements, particularly in the so-called "flank zones," which include the Leningrad Military District in the north, and more importantly, the North Caucasus Military District in the south. The outbreak of armed ethnic conflicts in and around the Caucasus, most notably in Chechnya, led Russia to claim it needed to

[165] The treaty limits battle tanks, artillery, armored combat vehicles, attack helicopters, and combat aircraft. Other types of equipment are subject to operating restrictions and reporting requirements: primary trainer aircraft, unarmed trainer aircraft, combat support helicopters, unarmed transport helicopters, armored vehicle-launched bridges, armored personnel carrier "look-alikes," and armored combat vehicle "look-alikes."

deploy equipment in excess of treaty limits in that zone. Russia placed this claim in the context of broader assertions that some CFE provisions reflected Cold War assumptions and did not fairly address its new national security concerns. Further, it argued that economic hardship was making the movement of forces unaffordable in some cases.

To address these concerns, the CFE parties negotiated a Flank Agreement, in early 1996. This agreement removed several Russian (and one Ukrainian) administrative districts from the old "flank zone," thus permitting existing flank equipment ceilings to apply to a smaller area. To provide some counterbalance to these adjustments, reporting requirements were enhanced, inspection rights in the zone increased, and district ceilings were placed on armored combat vehicles to prevent their concentration.

The Adaptation Agreement

The 1996 CFE Review Conference opened negotiations to modify the treaty to account for the absence of the USSR and the Warsaw Pact, and the expansion of NATO into the Czech Republic, Poland, and Hungary. Most CFE signatories did not want to completely renegotiate the treaty. Russia, however, sought broader revisions, and, ironically, it sought to maintain the alliance-wide equipment ceilings. An alliance-wide cap on NATO would presumably force adjustments of national holdings as the NATO alliance expanded; such adjustments probably would *not* favor new member nations close to Russia's borders. The CFE parties did not adopt Russia's position, and Russia ultimately agreed to a largely NATO-drafted document. This agreement called for, among other things, lower equipment levels throughout the "Atlantic to the Urals" area; enhanced verification procedures; and the replacement of NATO-Warsaw Pact "bloc to bloc" ceilings with national limits on all categories of TLEs. It also stated that the Flank Agreement was to remain in effect. The Adaptation Agreement reiterates that NATO has "no plan, no intention, and no reason" to deploy nuclear weapons on new members' territory, and seeks to improve new members' defensive capabilities through interoperability and capability for reinforcement, rather than by stationing additional combat forces on new members' territory. Russia's most serious focus has been, however, on NATO enlargement and how CFE could adapt to mitigate what many Russians see as an encroaching threat. Russia has called for the new members of NATO, particularly the Baltic states of Latvia, Lithuania, and Estonia, to become CFE state parties. These countries have indicated a willingness to join; however, they cannot do so until the Adaptation Agreement is ratified and the new CFE regime comes into force.

At the Istanbul Summit in 1999, where the Adaptation Agreement was concluded, Russia undertook the so-called Istanbul Commitments to remove its troops from both the Republic of Georgia and the "breakaway" province of Transdniestria in Moldova.[166] Though not part of the CFE Adaptation Agreement document, NATO members considered Russian fulfillment of these commitments a prerequisite for the ratification of the Agreement. Consequently, of the CFE signatories only Russia, Belarus, Ukraine, and Kazakhstan ratified the adapted treaty.

Compliance Concerns

In past compliance reports, the State Department asserted that Russian equipment holdings "continue to exceed most of the legally binding limits for both the original and revised flank

[166] For more information concerning the Georgian and Moldovan negotiations with Russia over its troop deployments in their countries, see CRS Report RS21981, Moldova: Background and U.S. Policy, by Steven Woehrel (nondistributable but available to congressional clients upon request), and CRS Report RL33453, *Armenia, Azerbaijan, and Georgia: Political Developments and Implications for U.S. Interests*, by Jim Nichol and Steven Woehrel.

zones."[167] It also cited Russia for relatively minor reporting violations and for its failure to complete withdrawals of its troops from Georgia and Moldova. It also cited Armenia, Azerbaijan, Belarus, and Ukraine for noncompliance.[168] Armenia and Azerbaijan, engaged in a conflict over the Nagorno-Karabakh territory, have not completed equipment reductions, provided complete equipment declarations, or provided timely notification of new equipment acquisition. Belarus was also cited for questionable equipment declarations and for its refusal to allow inspectors access to an equipment storage site. The State Department deems Ukraine to have substantially complied with CFE requirements, but notes that it retained several hundred equipment items in excess of treaty limits. The State Department has raised significant issues with Russia's compliance, particularly in the years since Russia suspended its participation in the treaty.

Collapse of the CFE Regime

On April 26, 2007, Russian President Putin announced a "moratorium" on Russian CFE compliance, pointing to, among other things, the NATO members' not having ratified the treaty as adapted. Subsequently, in statements to the press and diplomatic conferences, Russian officials elucidated the Russian position and its concerns. Among the major points are the following:[169]

- During its CFE "moratorium," Russia will not allow CFE inspections, nor will it report on its military movements.
- The Istanbul Commitments regarding troop withdrawals in Georgia and Moldova are not an integral part of the CFE Adaptation Agreement document, and are consequently not legally binding and should not stand in the way of NATO members' ratification of the agreement.
- The Baltic States and Slovakia are not bound by the CFE, and their NATO membership, coupled with the new U.S. basing agreements with Poland, Bulgaria, and Romania, constitute an unacceptable encroachment on Russian national security.
- If the NATO nations do not ratify the CFE Adaptation Agreement within a year, Russia will consider complete withdrawal from the treaty.

Russian officials, military leaders, and political commentators increasingly referred to the CFE treaty as a "Cold War agreement," which no longer reflected the realities of the European security environment. Russian military officials' consultations at NATO Headquarters on May 10 brought no softening of the Russian position. A Russian request to the Organization for Security and Cooperation in Europe for a special conference of CFE signatories in June was granted.[170] The conference failed to resolve any of the outstanding issues, and the state parties were unable to find sufficient common ground to issue a final joint statement.

The European and U.S. governments reacted with some surprise at the harshness of Russian statements and urged Russia to address its concerns within the consultative framework of the treaty rather than pursue a withdrawal. However, then-Secretary of State Rice and Secretary of Defense Gates, in conversations with President Putin and Russian Foreign Minister Lavrov, and

[167] *Adherence to and Compliance with Arms Control and Nonproliferation Agreements and Commitments*, Department of State, 2005, p. 47. The State Department did not publish this statutorily mandated report to Congress in 2006.

[168] Ibid., pp. 16-28.

[169] "Russia May Withdraw from Agreement with NATO," *RIA Novosti*, April 27, 2007; "Russian Paper Examines NATO Ties, Impact of CFE Moratorium," BBC Monitoring Service, May 1, 2007. Translation from *Kommersant*, April 28, 2007.

[170] "Russian MP Says New Structure of European Security on the Agenda," *ITAR-TASS World Service*, May 11, 2007.

the Assistant Secretary of State for European and Eurasian Affairs, in testimony before the U.S. Commission on Security and Cooperation in Europe, reiterated the U.S. position that ratification of the CFE Adaptation Agreement still remained contingent upon Russia fulfilling its commitment to withdraw its military forces from Georgia and Moldova.[171]

On November 30, 2007, President Putin signed legislation from the Duma that suspended Russian compliance with CFE, effective December 12, 2007. This action came during the Madrid OSCE summit meeting and evoked an expression of regret on the part of NATO officials, who noted that Russia's military posture would be under discussion at the NATO foreign ministers meeting in December. Under Secretary of State Nicholas Burns characterized the Russian action as a "mistake" and urged Russia to negotiate its concerns within the CFE framework.

Russian officials emphasized that this action was not a withdrawal from the treaty, and that they were willing to participate in further discussions if they perceived a greater willingness on the part of the NATO allies to address their concerns. However, in recent years, it has become clear that Russia does not intend to return to the CFE Treaty; it would prefer the negotiation of a new agreement that reflected the new security environment in Europe. Moreover, in March 2015, Russia suspended its participation in the Joint Consultative Group of the CFE Treaty, leaving little room for continued dialogue or cooperation.

In 2007, Russian officials indicated that Russia did not plan to conduct any significant redeployment of forces outside the treaty limits. However, in August 2008, Russia sent military forces into Georgia without the consent of the Georgian government and recognized two provinces of Georgia, Abkhazia and South Ossetia, as independent states. U.S. officials have noted that these steps are inconsistent with Russia's obligation under the CFE Treaty "to refrain ... from the threat or use of force against the territorial integrity or political independence of any State." In addition, because Russia has suspended its participation in the treaty, it has not allowed any on-site inspections and has not provided any data mandated by the treaty.

Some observers, and Russian spokesmen, portrayed the Russian moves regarding CFE as an asymmetrical response to the Bush Administration's proposed deployment of a U.S. ground-based missile defense system in Poland and the Czech Republic.[172] Others, including Chief of the Russian General Staff Baluyevsky, discounted a specific linkage, seeing the missile defense controversy as merely one element of a more broadly ranged dissatisfaction with changes in the European security environment, which, from the Russian perspective, have favored the NATO allies.[173]

In November 2011, the United States announced that it would stop implementing its data exchange obligations under the CFE Treaty with respect to Russia. The United States would continue to share data with other treaty partners, and would not exceed the numerical limits on conventional armaments and equipment established by the treaty. But it would withhold data from Russia because it has refused to accept inspections and ceased to provide information to other CFE Treaty parties since its 2007 decision. The U.S. State Department, in its statement on the treaty, indicated that the United States remained committed to revitalizing conventional arms control in Europe. It also indicated that, in order to increase transparency and promote stability in

[171] Transcript of Secretary of State Rice Media Availability, Moscow, May 15, 2007. Federal Document Clearing House; Transcript of Hearing before the U.S. Commission on Security and Cooperation in Europe, May 24, 2007. Federal Document Clearing House.

[172] "U.S. and NATO Dissect Putin Treaty Threat," *Financial Times*, April 27, 2007, p. 2.

[173] "Chief of the General Staff Makes a Policy Speech," *WPS: What the Papers Say*, WPS Russian Media Monitoring Agency, May 8, 2007; "Russian Move on Key Arms Treaty Not Linked to US ABM Plans," *BBC Monitoring News File*, April 26, 2007.

the region, the United States would voluntarily inform Russia of any significant change in the U.S. force posture in Europe. NATO signatories of the treaty similarly suspended treaty implementation with Russia in November 2022 but continued to provide data and engage with other non-NATO Treaty signatories.[174]

On November 7, 2023, Russia formally withdrew from CFE, citing the West's lack of interest in considering Russian security interests.[175] On November 7, U.S. officials stated that, after a NATO decision to suspend CFE Treaty obligations, the United States would also suspend its CFE obligations effective December 7, 2023.[176] On April 5, 2024 Belarus also announced that it would suspend its treaty participation.[177] NATO allies, including Turkey and Hungary, have also sought to suspended their obligations under the treaty.[178]

Treaty on Open Skies

President Eisenhower originally proposed the concept for a Treaty on Open Skies in 1955. In the years before satellites began to collect intelligence data, aerial overflights were seen as a way to gain information needed for both intelligence and confidence-building purposes. The Soviet Union rejected President Eisenhower's proposal because it considered the overflights equal to espionage.

President George H. W. Bush revived the Open Skies proposal in May 1989. By this time, both the United States and Soviet Union employed satellites and remote sensors for intelligence collection, so aircraft overflights would add little for that objective. But at the time when Europe was emerging from the East-West divide of the Cold War, the United States supported increased transparency throughout Europe as a way to reduce the chances of military confrontation and to build confidence among the participants.

On March 24, 1992, the United States, Canada, and 22 European nations signed the treaty on Open Skies. Canada and Hungary served as the treaty depositary states. The U.S. Senate gave its advice and consent to the ratification of the Open Skies Treaty in August 1993, but Russia and Belarus delayed their ratification until May 2001. The treaty entered into force on January 1, 2002. Until the United States withdrew from Open Skies in late 2020, the treaty had 34 participating member states. In early 2021, Russia announced that it planned to withdraw as well.

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[174] William Alberque, "NATO Allies Fully Suspend Implementation of the CFE Treaty," November 8, 2023, https://www.iiss.org/online-analysis/online-analysis/2023/10/nato-allies-fully-suspend-implementation-of-the-cfe-treaty/.

[175] Russian Ministry of Foreign Affairs, "Russian MFA statement on Russian withdrawal from CFE" (Заявление МИД России в связи с завершением процедуры выхода Российской Федерации из Договора об обычных вооружённых силах в Европе [ДОВСЕ]), November 7, 2023, https://mid.ru/ru/foreign_policy/news/1913546/. Guy Faulconbridge and Lidia Kelly, "Russia Formally Withdraws from Key Post-Cold War European Armed Forces Treaty," Reuters, November 7, 2023, https://www.reuters.com/world/europe/russia-formally-withdraws-key-post-cold-war-european-armed-forces-treaty-2023-11-07/.

[176] U.S. Department of State, "United States Will Suspend the Operation of its Obligations Under The Treaty on Conventional Armed Forces in Europe," November 7, 2023, https://www.state.gov/united-states-will-suspend-the-operation-of-its-obligations-under-the-treaty-on-conventional-armed-forces-in-europe/.

[177] "Lukashenko to Submit Bill to Parliament on Suspension of CFE Treaty," TASS, April 5, 2024, https://tass.com/world/1771125.

[178] "Parliament Votes to Suspend Treaty on Conventional Armed Forces in Europe, Supplementary Documents," *The Budapest Times*, April 10, 2024, https://www.budapesttimes.hu/hungary/parliament-votes-to-suspend-treaty-on-conventional-armed-forces-in-europe-supplementary-documents/, and Selcan Hacaoglu, "Turkey Joins NATO Allies in Suspending Europe Arms Treaty," Bloomberg, April 5, 2024, https://www.bloomberg.com/news/articles/2024-04-05/turkey-joins-nato-allies-in-suspending-europe-arms-treaty.

The treaty parties conducted more than 1,500 observation flights since the treaty entered into force. When signing the treaty, they agreed to permit unarmed aircraft to conduct observation flights over their *entire* territories. Although the flights often focused on military activities, the information they gathered was not intended to be used to verify compliance with limits in other arms control agreements. Instead, Open Skies served as a confidence-building measure, to promote openness and enhance mutual understanding about military activities. It was designed to allow all nations, including those without access to satellites, to collect information on military forces and activities of other parties to the treaty and to gain an improved understanding of military activities in other nations. Overflights may provide early signs of efforts to build up military forces or, conversely, assurances that an adversary or neighbor is not preparing its military for a possible conflict. In addition, the treaty helped nations in Europe observe and monitor Russian forces in areas near its border with Ukraine.

The Provisions of Open Skies

The parties to the Open Skies Treaty have agreed to make all of their territory accessible to overflights by unarmed fixed wing observation aircraft. They can restrict flights over areas, such as nuclear power plants, where safety is a concern, but they cannot impede or prohibit flights over any area, including critical infrastructure or military installations that are considered secret or otherwise off-limits. In most cases, the nation conducting the observation flight will provide the aircraft and sensors for the flight. However, Russia insisted that the treaty permit the observed country to provide the aircraft if it chose to do so. Nations can also team up to conduct overflights to share the costs of the effort or use aircraft and sensor suites provided by other nations. Teams from the nation hosting the observation flight fly along on the aircraft with the team conducting the observation. Each nation is assigned a quota of overflights that it can conduct and must be willing to receive each year. The quota is determined, generally, by the size of the nation's territory. For the United States, this quota is equal to 42 observation flights per year.

The treaty permits the nations to use several types of sensors—including photographic cameras, infrared cameras, and synthetic aperture radars—during their observation flights, although none have yet used synthetic aperture radars. The permitted equipment allows the nations to collect basic information on military forces and activities, but it is not intended to provide them with detailed technical intelligence. For example, the resolution on the sensors would allow the nations to identify vehicles and distinguish between tanks and trucks, but probably will not allow them to tell one type of tank from another. Each observation flight produces two sets of data—one for the observing nation and one for the observed nation. This allows the nation under observation to know what information was collected during the flight. Other parties to the treaty can purchase copies of the data, so all parties can share in the information collected during all flights. Each nation is responsible for its own analysis of the data.

The treaty allows the parties to update their cameras to take advantage of changes in technology, as long as the parties agree, by consensus, in the Open Skies Consultative Commission, to permit the use of the new systems. For example, because approved cameras that use film are no longer available, several countries are pursuing a transition to digital cameras. Russia has recently equipped is flights with new electro-optical (digital cameras), and Germany is in the process of transitioning and testing a similar system. The United States also outlined plans to make this change before it withdrew from the treaty. The capabilities of these cameras must remain within the photographic resolution permitted by the treaty, and they must use commercially available, unclassified technology. Consequently, they will not alter or improve the quality of the data collected during the flights. However, some officials in the Pentagon and U.S. intelligence

community have expressed concern about the transition to new cameras, arguing that the information could help Russia fill in gaps in its satellite surveillance capabilities.

Implementation

Although several of the participating nations conducted practice missions in the years before the treaty entered into force, the first official overflight mission occurred in 2002. The parties conduct approximately 100 observation flights each year. In recent years, the United States has received four to nine observation flights from Russia and has conducted 14-16 flights over Russia each year, although there were no flights in 2018. The United States also occasionally uses its open skies aircraft to monitor natural disasters, such as the recent earthquake in Haiti. It has also joined with Ukraine and other participants to conduct flights over Ukraine that can monitor Russian military forces across the border in Russia.

In recent years, the United States raised concerns about Russia's compliance with the Open Skies Treaty. For several years, the U.S. State Department's annual report on compliance with arms control agreements noted that Russia had refused access for Open Skies observation over Chechnya and nearby areas of southwestern Russia and had limited access to a region over Moscow. It had also failed to provide priority flight clearance for Open Skies flights on a few occasions. These issues no longer appear in the reports. The reports still note, however, that Russia has limited access along the border of Russia with the Georgian regions of South Ossetia and Abkhazia because it considers these areas to be independent states, and that it has restricted the duration of flights over its Kaliningrad region to 500 kilometers to reduce disruptions to commercial air traffic. The United States responded to limitations imposed by Russia by restricting Russian flights over the United States. In late 2017, it limited the length of flights over Hawaii and removed access to two U.S. air force bases the Russians used to overnight during their missions over the United States. In 2018, the United States also blocked approval of Russia's use of new cameras on its Open Skies Aircraft, although it reversed this decision quickly and flights resumed in 2019.

Although the treaty parties sought to resolve concerns about Russia's compliance with the treaty in the Open Skies Consultative Commission, the United States cited these concerns when it announced its intention to withdraw from the treaty in May 2020. Trump Administration officials also claimed that Russia might be using its observation flights to support its "doctrine of targeting ... critical infrastructure targets with conventionally armed precision-guided missiles." The official noted that Russia did not violate the treaty by conducting flights over civilian infrastructure, but that it would be "problematic" if Russia used this data for military targeting.[179] The official did not, however, explain how this data would aid Russia's military targeting when Russia could already collect targeting data with through its satellite operations.

[179] https://2017-2021.state.gov/briefing-with-special-presidential-envoy-for-arms-control-marshall-billingslea-and-assistant-secretary-for-international-security-and-nonproliferation-dr-christopher-a-ford-on-the-treaty-on-ope/index.html.

Arms Control Between the United States and States of the Former Soviet Union

1970s: SALT I and SALT II

The United States and Soviet Union signed their first formal agreements limiting nuclear offensive and defensive weapons in May 1972. The Strategic Arms Limitation Talks, known as SALT, produced two agreements—the *Interim Agreement ... on Certain Measures with Respect to the Limitation of Strategic Offensive Arms* and the *Treaty ... on the Limitation of Anti-Ballistic Missile Systems.* These were followed, in 1979, by the Strategic Arms Limitation Treaty, known as SALT II, which sought to codify equal limits on U.S. and Soviet strategic offensive nuclear forces.

The Interim Agreement on Offensive Arms

The Interim Agreement on Offensive Arms imposed a freeze on the number of launchers for intercontinental ballistic missiles (ICBMs) and submarine-launched ballistic missiles (SLBMs) that the United States and Soviet Union could deploy. The parties agreed that they would not begin construction of new ICBM launchers after July 1, 1972; at the time the United States had 1,054 ICBM launchers and the Soviet Union had 1,618 ICBM launchers. They also agreed to freeze their number of SLBM launchers and modern ballistic missile submarines, although they could add SLBM launchers if they retired old ICBM launchers. A protocol to the treaty indicated that the United States could deploy up to 710 SLBM launchers on 44 submarines, and the Soviet Union could deploy up to 950 SLBM launchers on 62 submarines.

The inequality in these numbers raised serious concerns both in Congress and in the policy community in Washington. When approving the agreement, Congress adopted a provision, known as the Jackson amendment, that mandated that all future arms control agreements would have to contain equal limits for the United States and Soviet Union.

The Interim Agreement was to remain in force for five years, unless the parties replaced it with a more comprehensive agreement limiting strategic offensive weapons. In 1977, both nations agreed to observe the agreement until they completed the SALT II Treaty.

The Strategic Arms Limitation Treaty (SALT II)

The United States and Soviet Union completed the SALT II Treaty in June 1979, after seven years of negotiations. During these negotiations, the United States sought limits on quantitative and qualitative changes in Soviet forces. The U.S. negotiating position also reflected the congressional mandate for numerically equal limits on both nations' forces. As a result, the treaty limited each nation to a total of 2,400 ICBM launchers, SLBM launchers, and heavy bombers, with this number declining to 2,250 by January 1, 1981. Within this total, the treaty contained sublimits for the numbers launchers that could be deployed for ICBMs with multiple independent reentry vehicles (MIRVed ICBMs); MIRVed ICBMs and MIRVed SLBMs; and MIRVed ICBMs, MIRVed SLBMs, MIRVed air-to-surface ballistic missiles (ASBMs), and heavy bombers. The Treaty would not have limited the total number of warheads that could be carried on these delivery vehicles, which was a growing concern with the deployment of large numbers of multiple-warhead missiles, but the nations did agree that they would not increase the numbers of warheads on existing types of missiles and would not test new types of ICBMs with more than 10 warheads and new types of SLBMs with more than 14 warheads. They also agreed to provisions

that were designed to limit missile modernization programs, in an effort to restrain qualitative improvements in their strategic forces.

Although it contained equal limits on U.S. and Soviet forces, the SALT II Treaty still proved to be highly controversial. Some analysts argued that the treaty would fail to curb the arms race because the limits on forces were equal to the numbers already deployed by the United States and Soviet Union; they argued for lower limits and actual reductions. Other analysts argued that the treaty would allow the Soviet Union to maintain strategic superiority over the United States because the Soviet force of large, land-based ballistic missiles would be able to carry far greater numbers of warheads, even within the equal limits on delivery vehicles, than U.S. ballistic missiles. Some argued that, with this advantage, the Soviet Union would be able to target all U.S. land-based ICBMs in a first strike, which created a "window of vulnerability" for the United States. The Treaty's supporters argued that the Soviet advantage in large MIRVed ICBMs was more than offset by the U.S. advantage in SLBM warheads, which could not be destroyed in a first strike and could retaliate against Soviet targets, and the U.S. advantage in heavy bombers.

The continuing Soviet build-up of strategic nuclear forces, along with the taking of U.S. hostages in Iran and other challenges to the U.S. international position in the late 1970s, combined with the perceived weaknesses to the treaty to raise questions about whether the Senate would muster the votes needed to consent to the treaty's ratification. Shortly after the Soviet Union invaded Afghanistan in December 1979, President Carter withdrew the treaty from the Senate's consideration.

The ABM Treaty

The 1972 ABM Treaty permitted the United States and Soviet Union to deploy ABM interceptors at two sites, one centered on the nation's capital and one containing ICBM silo launchers. Each site could contain up to 100 ground-based launchers for ABM interceptor missiles, along with specified radars and sensors. The ABM Treaty also obligated each nation not to develop, test, or deploy ABM systems for the "defense of the territory of its country" and not to provide a base for such a defense. It forbade testing and deployment of space-based, sea-based, or air-based ABM systems or components and it imposed a number of qualitative limits on missile defense programs. The Treaty, however, imposed no restrictions on defenses against aircraft, cruise missiles, or theater ballistic missiles.

In a Protocol signed in 1974, each side agreed that it would deploy an ABM system at only one site, either around the nation's capital or around an ICBM deployment area. The Soviet Union deployed its site around Moscow; this system has been maintained and upgraded over the years, and remains operational today. The United States deployed its ABM system around ICBM silo launchers located near Grand Forks, ND; it operated this facility briefly in 1974 before closing it down when it proved to be not cost effective.

The ABM Treaty was the source of considerable controversy and debate for most of its history. Presidents Reagan, George H. W. Bush, and Clinton all wrestled with the conflicting goals of defending the United States against ballistic missile attack while living within the confines of the ABM Treaty. President George W. Bush resolved this conflict in 2002, when he announced that the United States would withdraw from the ABM Treaty so that it could deploy ballistic missile defenses. The substance of this debate during the Clinton and Bush years is described in more detail below.

1980s-Early 1990s: INF and START

During the election campaign of 1980, and after taking office in January 1981, President Ronald Reagan pledged to restore U.S. military capabilities, in general, and nuclear capabilities, in particular. He planned to expand U.S. nuclear forces and capabilities in an effort to counter the perceived Soviet advantages in nuclear weapons. Initially, at least, he rejected the use of arms control agreements to contain the Soviet threat. However, in 1982, after Congress and many analysts pressed for more diplomatic initiatives, the Reagan Administration outlined negotiating positions to address intermediate-range missiles, long-range strategic weapons, and ballistic missile defenses. These negotiations began to bear fruit in the latter half of President Reagan's second term, with the signing of the Intermediate-Range Nuclear Forces Treaty in 1987. President George H. W. Bush continued to pursue the first Strategic Arms Reduction Treaty (START), with the United States and Soviet Union, signing this Treaty in July 1991. The collapse of the Soviet Union later that year led to calls for deeper reductions in strategic offensive arms. As a result, the United States and Russia signed START II in January 1993, weeks before the end of the Bush Administration.

The Intermediate-Range Nuclear Forces (INF) Treaty

In December 1979, NATO decided upon a "two track" approach to intermediate-range nuclear forces (INF) in Europe: it would seek negotiations with the Soviets to limit such systems, and at the same time schedule deployments as a spur to such negotiations. Negotiating sessions began in the fall of 1980 and continued until November 1983, when the Soviets left the talks upon deployment of the first U.S. INF systems in Europe. The negotiations resumed in January 1985. At the negotiations, the Reagan Administration initially called for a "double zero" option, which would eliminate all short- as well as long-range INF systems, a position at the time viewed by most observers to be unattractive to the Soviets. The negotiations proceeded to discuss possible limits on the systems, with progress slowed by the Soviet refusal to consider limits on its systems in Asia. Nevertheless, significant progress began to occur during the Gorbachev regime. At the Reykjavik summit in October 1986, Gorbachev agreed to include reductions of Soviet INF systems in Asia. Then, in June 1987, the Soviets proposed a global ban on short- and long-range INF systems, which was similar to the U.S. proposal for a double zero. Gorbachev also accepted the U.S. proposal for an intrusive verification regime.

The United States and the Soviet Union signed the Treaty on Intermediate-Range Nuclear Forces (INF) on December 8, 1987. The INF Treaty was seen as a significant milestone in arms control because it established an intrusive verification regime and because it eliminated entire classes of weapons that both sides regarded as modern and effective. The United States and Soviet Union agreed to destroy all intermediate-range and shorter-range nuclear-armed ballistic missiles and ground-launched cruise missiles, which are those missiles with a range between 300 and 3,400 miles. The launchers associated with the controlled missiles were also to be destroyed. The signatories agreed that the warheads and guidance systems of the missiles need not be destroyed; they could be used or reconfigured for other systems not controlled by the treaty.

The Soviets agreed to destroy approximately 1,750 missiles and the United States agreed to destroy 846 missiles, establishing a principle that asymmetrical reductions were acceptable in order to achieve a goal of greater stability. On the U.S. side, the principal systems destroyed were the Pershing II ballistic missile and the ground-launched cruise missile (GLCM), both single-warhead systems. On the Soviet side, the principal system was the SS-20 ballistic missile, which carried three warheads. These systems, on both sides, were highly mobile and able to strike such high-value targets as command-and-control centers, staging areas, airfields, depots, and ports.

The Soviets also agreed to destroy a range of older nuclear missiles, as well as the mobile, short-range SS-23, a system developed and deployed in the early 1980s. The parties had eliminated all their weapons by May 1991.

The verification regime of the INF Treaty permitted on-site inspections of selected missile assembly facilities and all storage centers, deployment zones, and repair, test, and elimination facilities. Although it did not permit "anywhere, anytime" inspections, it did allow up to 20 short-notice inspections of sites designated in the treaty. The two sides agreed to an extensive data exchange, intended to account for all systems covered by the agreement. The Treaty also established a continuous portal monitoring procedure at one assembly facility in each country. Inspections under the INF Treaty continued until May 2001. However, the United States continued to operate its site at Russia's Votkinsk Missile Assembly facility until the end of 2009 under the terms of the 1991 START Treaty.

The INF Treaty returned to the news in 2007. Russia, partly in response to U.S. plans to deploy a missile defense radar in the Czech Republic and interceptor missiles in Poland, stated that it might withdraw from the INF Treaty. Some Russian officials claimed this would allow Russia to deploy missiles with the range needed to threaten the missile defense system, in case it were capable of threatening Russia's strategic nuclear forces. Analysts outside Russia also noted that Russia might be responding to concerns about the growing capabilities of China's missiles, or of those in other countries surrounding Russia.

During the Obama Administration, the United States grew concerned about Russia's testing and development of a new ground-launched cruise missile of INF range. In 2014, the United States began to express these concerns in the State Department's annual report on *Adherence to and Compliance with Arms Control, Nonproliferation, and Disarmament Agreements and Commitments*. This report stated that the United States determined that "the Russian Federation is in violation of its obligations under the [1987 Intermediate-range Nuclear Forces] INF Treaty not to possess, produce, or flight-test a ground-launched cruise missile (GLCM) with a range capability of 500 km to 5,500 km, or to possess or produce launchers of such missiles." In the 2018 version of the report, it identified the missile's designation as the 9M729.

The United States addressed its concerns about this missile repeatedly with Russia in a number of diplomatic meetings, including in 2016 and 2017 meetings of the treaty's Special Verification Commission (SVC). Russia first denied that any such cruise missile existed, and after the United States identified the specific missile, Russia denied that it had been tested to INF range. It responded with its own accusations of U.S. noncompliance, noting, particularly, that U.S. missile defense launchers located in Romania could be equipped with offensive ground-launched cruise missiles. The United States has denied this accusation.

According to U.S. officials, Russia began to deploy the new cruise missile in late 2016. The Trump Administration conducted an extensive review of the INF Treaty during 2017 to assess the potential security implications of Russia's violation and to determine how the United States would respond going forward. On December 8, 2017—the 30th anniversary of date when the treaty was signed—the Administration announced that the United States would implement an integrated response that included diplomatic, military, and economic measures. This includes establishing a new program in the Pentagon that will fund research into a possible new ground-launched cruise missile. However, in October 2018, then-Secretary of Defense Mattis informed U.S. allies in NATO that the situation had become "untenable" because Russia refused to acknowledge and address its violation. On October 20, 2018, President Trump announced that the United States would withdraw from the treaty, and Secretary of State Pompeo announced that the United States had submitted its formal notice of withdrawal to Russia on February 1, 2019.

Russia followed suit by suspending its participation in the treaty. The United States implemented its withdrawal, and the treaty lapsed on August 2, 2019.[180]

The Strategic Arms Reduction Treaty (START)

Like INF, START negotiations began in 1982, but stopped between 1983 and 1985 after a Soviet walk-out in response to the U.S. deployment of intermediate-range missiles in Europe. They resumed later in the Reagan Administration, and were concluded in the first Bush Administration. The United States and Soviet Union signed the first Strategic Arms Reduction Treaty (START) on July 31, 1991.

START After the Soviet Union

The demise of the Soviet Union in December 1991 immediately raised questions about the future of the treaty. At that time, about 70% of the strategic nuclear weapons covered by START were deployed at bases in Russia; the other 30% were deployed in Ukraine, Kazakhstan, and Belarus.[181] Russia initially sought to be the sole successor to the Soviet Union for the treaty, but the other three republics did not want to cede all responsibility for the Soviet Union's nuclear status and treaty obligations to Russia. In May 1992, the four republics and the United States signed a Protocol that made all four republics parties to the treaty. At the same time, the leaders of Belarus, Ukraine, and Kazakhstan agreed to eliminate all of their nuclear weapons during the seven-year reduction period outlined in START. They also agreed to sign the Nuclear Non-Proliferation Treaty (NPT) as nonnuclear weapons states.

The U.S. Senate gave its consent to the ratification of START on October 1, 1992. The Russian parliament consented to the ratification of START on November 4, 1992, but it stated that Russia would not exchange the instruments of ratification for the treaty until all three of the other republics adhered to the NPT as nonnuclear states. Kazakhstan completed the ratification process in June 1992 and joined the NPT as a nonnuclear weapon state on February 14, 1994. Belarus approved START and the NPT on February 4, 1993, and formally joined the NPT as a nonnuclear weapon state on July 22, 1993. Ukraine's parliament approved START in November 1993, but its approval was conditioned on Ukraine's retention of some of the weapons based on its territory and the provision of security guarantees by the other nuclear weapons states.

In early 1994, after the United States, Russia, and Ukraine agreed that Ukraine should receive compensation and security assurances in exchange for the weapons based on its soil, the parliament removed the conditions from its resolution of ratification. But it still did not approve Ukraine's accession to the NPT. The Ukrainian parliament took this final step on November 16, 1994, after insisting on and apparently receiving additional security assurances from the United States, Russia, and the United Kingdom. START officially entered into force with the exchange of the instruments of ratification on December 5, 1994.

[180] See CRS Report R43832, *Russian Compliance with the Intermediate Range Nuclear Forces (INF) Treaty: Background and Issues for Congress*, by Amy F. Woolf, and CRS In Focus IF11051, *U.S. Withdrawal from the INF Treaty: What's Next?*, by Amy F. Woolf.

[181] Leaders in these the non-Russian republics did not have control over the use of the nuclear weapons on their territory. Russian President Boris Yeltsin, and now Vladimir Putin, is the sole successor to the Soviet President in the command and control structure for Soviet nuclear weapons and he, along with his Minister of Defense and Military Chief of Staff, have the codes needed to launch Soviet nuclear weapons.

START Provisions

START limited long-range nuclear forces—land-based intercontinental ballistic missiles (ICBMs), submarine-launched ballistic missiles (SLBMs), and heavy bombers—in the United States and the newly independent states of the former Soviet Union. Each side could deploy up to 6,000 *attributed* warheads on 1,600 ballistic missiles and bombers. (Some weapons carried on bombers do not count against the treaty's limits, so each side could deploy 8,000 or 9,000 actual weapons.) Each side could deploy up to 4,900 warheads on ICBMs and SLBMs. Throughout the START negotiations, the United States placed a high priority on reductions in heavy ICBMs because they were thought to be able to threaten a first strike against U.S. ICBMs. Therefore, START also limits each side to 1,540 warheads on "heavy" ICBMs, a 50% reduction in the number of warheads deployed on the SS-18 ICBMs in the former Soviet republics.

START did not require the elimination of most of the missiles removed from service. The nations had to eliminate *launchers* for missiles that exceeded the permitted totals, but, in most cases, missiles could be placed in storage and warheads could either be stored or reused on missiles remaining in the force.

START contained a complex verification regime. Both sides collect most of the information needed to verify compliance with their own satellites and remote sensing equipment—the National Technical Means of Verification (NTM). But the parties also used data exchanges, notifications, and on-site inspections to gather information about forces and activities limited by the treaty. Taken together, these measures are designed to provide each nation with the ability to deter and detect militarily significant violations. (No verification regime can ensure the detection of all violations. A determined cheater could probably find a way to conceal some types of violations.) Many also believe that the intrusiveness mandated by the START verification regime and the cooperation needed to implement many of these measures built confidence and encouraged openness among the signatories.

The United States and Russia completed the reductions in their forces by the designated date of December 5, 2001. All the warheads from 104 SS-18 ICBMs in Kazakhstan were removed and returned to Russia and all the launchers in that nation have been destroyed. Ukraine has destroyed all the SS-19 ICBM and SS-24 ICBM launchers on its territory and returned all the warheads from those missiles to Russia. Belarus had also returned to Russia all 81 SS-25 missiles and warheads based on its territory by late November 1996.

START Expiration

The START Treaty expired in December 2009. According to the terms of the treaty, the parties could allow START to lapse, extend it without modification for another five years, or seek to modify the treaty before extending it for five-year intervals. The United States and Russia began, in 2006, to hold a series of discussions about the future of START, but, through the latter years of the Bush Administration, the two sides held sharply different views on what that future should be. Russian officials believed that the two nations should replace START with a new treaty that would reduce the numbers of deployed warheads but contain many of the definitions, counting rules, and monitoring provisions of START. The Bush Administration rejected that approach; it noted that the new Moscow Treaty (described below) called for further reductions in offensive nuclear weapons and it argued that many of the detailed provisions in START were no longer needed because the United States and Russia were no longer enemies. The United States suggested that the two sides reaffirm their commitment to the Moscow Treaty, and add to it an informal monitoring regime that would extend some of the monitoring and verification provisions in START. Analysts outside government also suggested that the nations extend the monitoring

provisions, at least through 2012, as the Moscow Treaty did not have its own verification regime. Some in the United States, however, objected to this approach because some of the monitoring provisions had begun to impinge on U.S. strategic weapons and missile defense programs.

The Obama Administration altered the U.S. approach and decided to negotiate a new treaty that would replace START (this is discussed in more detail below).[182] The United States and Russia began these discussions in April 2009, but were unable to complete them before START expired on December 5, 2009. As is noted, below, they did complete a New START Treaty in April 2010.

START II

The United States and Russia signed the second START Treaty, START II, on January 3, 1993, after less than a year of negotiations. The Treaty never entered into force. Its consideration was delayed for several years during the 1990s, but it eventually received approval from both the U.S. Senate and Russian parliament. Nevertheless, it was overcome by events in 2002.

START II Provisions

START II would have limited each side to between 3,000 and 3,500 warheads; reductions initially were to occur by the year 2003 and would have been extended until 2007 if the nations had approved a new Protocol. It would have banned all MIRVed ICBMs and would have limited each side to 1,750 warheads on SLBMs.

To comply with these limits the United States would have removed two warheads (a process known as "downloading") from each of its 500 3-warhead Minuteman III missiles and eliminated all launchers for its 50 10-warhead MX missiles. The United States also stated that it would reduce its SLBM warheads by eliminating 4 Trident submarines and deploying the missiles on the 14 remaining Trident submarines with 5, rather than 8, warheads. Russia would have eliminated all launchers for its 10-warhead SS-24 missiles and 10-warhead SS-18 missiles. It would also have downloaded to a single warhead 105 6-warhead SS-19 missiles, if it retained those missiles. It would also have eliminated a significant number of ballistic missile submarines, both for budget reasons and to reduce to START II limits. These changes would have brought Russian forces below the 3,500 limit because so many of Russia's warheads are deployed on MIRVed ICBMs. As a result, many Russian officials and Duma members insisted that the United States and Russia negotiate a START III Treaty, with lower warhead numbers, so that Russia would not have to produce hundreds of new missiles to maintain START II levels.

START II implementation would have accomplished the long-standing U.S. objective of eliminating the Soviet SS-18 heavy ICBMs. The Soviet Union and Russia had resisted limits on these missiles in the past. Russia would have achieved its long-standing objective of limiting U.S. SLBM warheads, although the reductions would not have been as great as those for MIRVed ICBMs. The United States had long resisted limits on these missiles, but apparently believed a 50% reduction was a fair trade for the complete elimination of Russia's SS-18 heavy ICBMs.

START II would have relied on the verification regime established by START, with a few new provisions. For example, U.S. inspectors would be allowed to watch Russia pour concrete into the SS-18 silos and to measure the depth of the concrete when Russia converted the silos to hold smaller missiles. In addition, Russian inspectors could have viewed the weapons carriage areas on U.S. heavy bombers to confirm that the number of weapons the bombers are equipped to carry did not exceed the number attributed to that type of bomber.

[182] See CRS Report R40084, *Strategic Arms Control After START: Issues and Options*, by Amy F. Woolf.

START II Ratification

Although START II was signed in early January 1993, its full consideration was delayed until START entered into force at the end of 1994. The U.S. Senate further delayed its consideration during a Senate dispute over the future of the Arms Control and Disarmament Agency. The Senate eventually approved ratification of START II, by a vote of 87-4, on January 26, 1996.

The Russian Duma also delayed its consideration of START II. Many members of the Duma disapproved of the way the treaty would affect Russian strategic offensive forces and many objected to the economic costs Russia would bear when implementing the treaty.[183] The United States sought to address the Duma's concerns during 1997, by negotiating a Protocol that would extend the elimination deadlines in START II, and, therefore, reduce the annual costs of implementation, and by agreeing to negotiate a START III Treaty after START II entered into force. But this did not break the deadlock; the Duma again delayed its debate after the United States and the United Kingdom launched air strikes against Iraq in December 1998. The Treaty's future clouded again after the United States announced its plans in January 1999 to negotiate amendments to the 1972 ABM Treaty, and after NATO forces began their air campaign in Yugoslavia in April 1999.

President Putin offered his support to START II and pressed the Duma for action in early 2000. He succeeded in winning approval for the treaty on April 14 after promising, among other things, that Russia would withdraw from the treaty if the United States withdrew from the 1972 ABM Treaty. However, the Federal Law on Ratification said the treaty could not enter into force until the United States approved ratification of several 1997 agreements related to the 1972 ABM Treaty. President Clinton never submitted these to the Senate, for fear they would be defeated. The Bush Administration also never submitted these to the Senate, announcing, instead, in June 2002, that the United States would withdraw from the ABM Treaty. Russia responded by announcing that it had withdrawn from START II and would not implement the treaty's reductions.

1990s-Early 2000s: Moving Past START and the ABM Treaty

The arms control process between the United States and Russia essentially stalled during the 1990s, as efforts to ratify and implement START II dragged on. In 1997, in an effort to move the agenda forward, Presidents Clinton and Yeltsin agreed to a framework for a START III Treaty. But these negotiations never produced a treaty, as the U.S.-Russian arms control agenda came to be dominated by U.S. plans for ballistic missile defenses and issues related to the ABM Treaty. When President Bush took office in 2001, he had little interest in pursuing formal arms control agreements with Russia. He signed the Strategic Offensive Reductions Treaty (known as the Moscow Treaty) in 2002, even though he would have preferred that the United States and Russia each set their force levels without any formal limits.

START III Framework for Strategic Offensive Forces

Many in Russia argued the United States and Russia should bypass START II and negotiate deeper reductions in nuclear warheads that were more consistent with the levels Russia was likely to retain by the end of the 1990s. The Clinton Administration did not want to set START II aside, in part because it wanted to be sure Russia eliminated its MIRVed ICBMS. However, many in the Administration eventually concluded that Russia would not ratify START II without some assurances that the warhead levels would decline further. So the United States agreed to proceed

[183] See CRS Report 97-359, *START II Debate in the Russian Duma: Issues and Prospects*, by Amy F. Woolf.

to START III, but *only after* START II entered into force; Presidents Clinton and Yeltsin agreed to this timeline in March 1997. The START III framework called for reductions to between 2,000 and 2,500 warheads for strategic offensive nuclear weapons on each side.

The United States and Russia held several rounds of discussions on START III, but they did not resolve their differences before the end of the Clinton Administration. President Bush did not pursue the negotiations after taking office in 2001. The demise of these discussions left many issues that had been central to the U.S.-Russian arms control process unresolved. For example, Presidents Clinton and Yeltsin had agreed to explore possible measures for limiting long-range, nuclear-armed, sea-launched cruise missiles and other tactical nuclear weapons in the START III framework. These weapons systems are not limited by existing treaties. Many in Congress have joined analysts outside the government in expressing concerns about the safety and security of Russia's stored nuclear weapons and about the numerical discrepancy between U.S. and Russian nonstrategic nuclear weapons.

In addition, when establishing the START III framework, the United States and Russia agreed that they would explore proposals to enhance transparency and promote the irreversibility of warhead reductions. Many analysts viewed this step as critical to lasting, predictable reductions in nuclear weapons. The Bush Administration, however, rejected this approach. Although it pledged to eliminate some warheads removed from deployment, and implemented deep reductions in the U.S. stockpile of stored nuclear weapons, it did not offer any measures promoting the transparency or irreversibility of this process. It wanted to retain U.S. flexibility and the ability to restore warheads to deployed forces. Many critics of the Bush Administration opposed this policy, in part, because they argued it would undermine U.S. efforts to encourage Russia to eliminate warheads that might be at risk of loss or theft.

Ballistic Missile Defenses and the ABM Treaty

As was noted above, the 1972 Anti-Ballistic Missile (ABM) Treaty and 1974 Protocol allowed the United States and Soviet Union to deploy limited defenses against long-range ballistic missiles. The United States completed, then quickly abandoned a treaty-compliant ABM system near Grand Forks, ND, in 1974. The Soviet Union deployed, and Russia continues to operate, a treaty-compliant system around Moscow.

Missile Defense Plans and Programs

During the 1980s and early 1990s, the United States conducted research on a variety of ballistic missile defense technologies. In 1983 President Reagan collected and expanded these programs in the Strategic Defense Initiative (SDI), which sought to develop and deploy comprehensive missile defenses that would defend the United States against a deliberate, massive attack from the Soviet Union. The first Bush Administration changed this focus, seeking instead to provide a defense against possible limited missile attacks that might arise from any number of countries throughout the world.

After the Persian Gulf War in 1991, with Iraq's attacks with Scud missiles alerting many to the dangers of missile proliferation and the threats posed by short- and medium-range theater ballistic missiles, the United States began developing several advanced theater missile defense (TMD) systems. At the same time, the Clinton Administration pursued research and technology development for national missile defenses (NMD). The Department of Defense concluded that there was no military requirement for the deployment of such a system after intelligence estimates found that no additional nations (beyond China, Russia, France, and the United Kingdom) were likely to develop missiles that could threaten the continental United States for at least the next 10-

15 years. However, after a congressionally mandated commission raised concerns about the proliferation of long-range missiles in July 1998 and North Korea tested a three-stage missile in August 1998, the Clinton Administration began to consider the deployment of an NMD, with a program structured to achieve that objective in 2005. On September 1, 2000, after disappointing test results, President Clinton announced that he would not authorize construction needed to begin deployment of an NMD.

President George W. Bush altered U.S. policy on missile defenses. His Administration sought to develop a layered defense, with land-based, sea-based, and space-based components, that could protect the United States, its allies, and its forces overseas from short-, medium-, and long-range ballistic missiles. It deployed land-based missile interceptors for defense against long-range missiles in Alaska and California, and pursued the deployment of defenses against shorter-range missiles on naval ships. The Bush Administration declared the interceptors in Alaska to be operational in late 2004, but their status and capabilities remain uncertain.

ABM Treaty Issues and Negotiations

The missile defense systems advocated by the Reagan Administration and first Bush Administration would not have been permitted under the ABM Treaty. In 1985, the United States proposed, in negotiations with the Soviet Union, that the two sides replace the ABM Treaty with an agreement that would permit deployment of more extensive defenses. These negotiations failed, and, in 1993, the Clinton Administration altered their focus. It sought a demarcation agreement to clarify the difference between theater missile defenses and strategic missile defenses so the United States could proceed with theater missile defense (TMD) programs without raising questions about compliance with the treaty.

The United States and Russia signed two joint statements on ABM/TMD Demarcation in September 1997. As amendments to the ABM Treaty, these agreements required the advice and consent of the Senate before they entered into force. But President Clinton never submitted them to the Senate, knowing that the required 67 votes would prove elusive as many of the Senators in the Republican majority believed the ABM Treaty, even if modified, would stand in the way of the deployment of robust missile defenses.

In February 1999, the United States and Russia began to discuss ABM Treaty modifications that would permit deployment of a U.S. national missile defense (NMD) system. The United States sought to reassure Russia that the planned NMD would not interfere with Russia's strategic nuclear forces and that the United States still viewed the ABM Treaty as central to the U.S.-Russian strategic balance. The Russians were reportedly unconvinced, noting that the United States could expand its system so that it could intercept a significant portion of Russia's forces. They also argued that the United States had overstated the threat from rogue nations. Furthermore, after Russia approved START II, President Putin noted that U.S. withdrawal from the ABM Treaty would lead not only to Russian withdrawal from START II, but also Russian withdrawal from a wider range of arms control agreements. Through the end of the Clinton Administration, Russia refused to consider U.S. proposals for modifications to the ABM Treaty. Some argued that Russia's position reflected its belief that the United States would not withdraw from the ABM Treaty and, therefore, if Russia refused to amend it, the United States would not deploy national missile defenses.

Officials in the George W. Bush Administration referred to the ABM Treaty as a relic of the Cold War and the President stated that the United States would need to move beyond the limits in the treaty to deploy robust missile defenses. In discussions that began in the middle of 2001, the Bush Administration sought to convince Russia to accept a U.S. proposal for the nations to "set aside"

the treaty together. The Administration also offered Russia extensive briefings to demonstrate that its missile defense program would not threaten Russia but that the ABM Treaty would interfere with the program. Russia would not agree to set the treaty aside, and, instead, suggested that the United States identify modifications to the treaty that would allow it to pursue the more robust testing program contained in its proposals. But, according to some reports, Russia would have insisted on the right to determine whether proposed tests were consistent with the treaty. The Bush Administration would not accept these conditions and President Bush announced, on December 13, 2001, that the United States would withdraw from the ABM Treaty. This withdrawal took effect on June 13, 2002. Russia's President Putin stated that this action was "mistaken." Russia responded by withdrawing from the START II Treaty, but this action was largely symbolic as the treaty seemed likely to never enter into force.

Missile Defense After the ABM Treaty[184]

In addition to deploying long-range missile defense interceptors in Alaska and California, the George W. Bush Administration proposed that the United States deploy a third missile defense site in Europe to defend against a potential Iranian missile threat. The system was to include 10 interceptors based in Poland and a radar in the Czech Republic. Russia's President Putin and his successor, Vladimir Medvedev, argued that the proposal would reignite the arms race and upset U.S.-Russian-European security relations. U.S. officials disputed Russia's objections, noting that the interceptors would not be able to intercept Russian missiles or undermine Russia's deterrent capabilities. In mid-2007, Russia offered to cooperate on missile defense, proposing the use of a Russian-leased radar in Azerbaijan, but urging that U.S. facilities not be built in Eastern Europe. President Bush welcomed the idea in principle, but insisted upon the need for the European sites. Despite ongoing discussions over the issue, sharp Russian criticism of the program continued. Medvedev said that Russia might deploy Iskander tactical missiles to Kaliningrad, but later stated that Moscow would not do so if the United States reversed its plan to emplace GMD facilities in Poland and the Czech Republic.

Congress resisted the Bush Administration's request for funding for this system. It withheld much of the funding, pending at least two successful tests and the completion of agreements with the Polish and Czech governments. It also requested further reports on the need for and capabilities of the proposed system.

The Obama Administration reviewed and restructured U.S. plans for a missile defense site in Europe. On September 17, 2009, the Administration announced it would cancel the system proposed by the Bush Administration. Instead, Defense Secretary Gates announced U.S. plans to develop and deploy a regional BMD capability that could be deployed around the world on relatively short notice during crises or as the situation may demand. Gates argued this new capability, based primarily around current BMD sensors and interceptors, would be more responsive and adaptable to growing concern over the direction of Iranian short- and medium-range ballistic missile proliferation. This capability would continue to evolve and expand as the United States moved forward with the concept known as the "Phased Adaptive Approach." As missile threats matured during the next decade, the missile defense system would include interceptors that could respond against more numerous and more sophisticated threats.

The United States and its NATO allies have moved forward with the deployment of components of this missile defense system; ships armed with the Aegis missile defense system are deployed at Rota, Spain, and patrol regularly in the Mediterranean. The United States has also deployed

[184] See CRS Report 98-496, *Anti-Ballistic Missile Treaty Demarcation and Succession Agreements: Background and Issues*, by Amy F. Woolf.

missile defense assets on land in Europe, in an effort known as Aegis Ashore. The United States completed deployment of the site in Romania on December 1, 2015, and plans to complete the deployment in Poland in the 2018-2019 time frame. While the United States insists that these systems do not have the range or capability to threaten Russian ballistic missiles, Russia continues to object to these deployments and to insist that it is unwilling to discuss further limits on offensive weapons until the United States agrees to limit the numbers and capabilities of its missile defense systems.

The Trump Administration completed a new Missile Defense Review in 2019. This review continues to support the deployment of missile defenses in Europe and Asia to address regional missile threats from nations such as North Korea and Iran. It has also outlined plans to move toward the deployment of more robust sensors, and possibly interceptors, that could address threats from other nations.

The Strategic Offensive Reductions Treaty (The Moscow Treaty)[185]

During a summit meeting with President Putin in November 2001, President George W. Bush announced that the United States would reduce its "operationally deployed" strategic nuclear warheads to a level between 1,700 and 2,200 warheads during the next decade. He stated that the United States would reduce its forces unilaterally, without signing a formal agreement. President Putin indicated that Russia wanted to use the formal arms control process, emphasizing that the two sides should focus on "reaching a reliable and verifiable agreement." Russia sought a "legally binding document" that would provide "predictability and transparency" and ensure for the "irreversibilty of the reduction of nuclear forces." The United States wanted to maintain the flexibility to size and structure its nuclear forces in response to its own needs. It preferred a less formal process, such as an exchange of letters and, possibly, new transparency measures that would allow each side to understand the force structure plans of the other side.

Within the Bush Administration, Secretary of State Powell supported the conclusion of a "legally binding" agreement because he believed it would help President Putin's standing with his domestic critics. He apparently prevailed over the objections of officials in the Pentagon. Although the eventual outcome did differ from the initial approach of the Bush Administration, most observers agree that it did not undermine the fundamental U.S. objectives in the negotiations because the treaty's provisions would not impede the Bush Administration's plans for U.S. strategic nuclear forces.

The United States and Russia signed the Strategic Offensive Reductions Treaty (also known as the Moscow Treaty) on May 24, 2002. The U.S. Senate gave its advice and consent to the ratification of the treaty on March 6, 2003. The Russian Duma approved the Federal Law on Ratification for the treaty on May 14, 2003. The Treaty entered into force on June 1, 2003. The Treaty was due to remain in force until December 31, 2012, after which it could be extended or replaced by another agreement. It lapsed, however, on February 5, 2011, when the New START Treaty (see below) entered into force.

Treaty Provisions

Article I contained the only limit in the treaty, stating that the United States and Russia will reduce their "strategic nuclear warheads" to between 1,700 and 2,200 warheads by December 31,

[185] See CRS Report RL31448, *Nuclear Arms Control: The Strategic Offensive Reductions Treaty*, by Amy F. Woolf, and CRS Report RL31222, *Arms Control and Strategic Nuclear Weapons: Unilateral vs. Bilateral Reductions*, by Amy F. Woolf.

2012. The text did not define "strategic nuclear warheads" and, therefore, did not indicate whether the parties would count only those warheads that are "operationally deployed," all warheads that would count under the START counting rules, or some other quantity of nuclear warheads. The text did refer to statements made by Presidents Bush and Putin in November and December 2001, when each outlined their own reduction plans. This reference may have indicated that the United States and Russia could each use their own definition when counting strategic nuclear warheads. The Treaty did not limit delivery vehicles or impose sublimits on specific types of weapons systems. Each party could determine its own "composition and structure of its strategic offensive arms."

Monitoring and Verification

The Strategic Offensive Reductions Treaty did not contain any monitoring or verification provisions. The Bush Administration noted that the United States and Russia already collected information about strategic nuclear forces under START I and during implementation of the Nunn-Lugar Cooperative Threat Reduction Program. Some in Congress questioned, however, whether this information would be sufficient for the duration of the treaty, since START I was due to expire in 2009, three years before the end of implementation under the new treaty.

Nonstrategic Nuclear Weapons

The Strategic Offensive Reductions Treaty also did not contain any limits or restrictions on nonstrategic nuclear weapons. Yet, as was noted above, many Members of Congress had argued that these weapons pose a greater threat to the United States and its allies than strategic nuclear weapons. During hearings before the Senate Foreign Relations Committee, Secretary of Defense Rumsfeld and Secretary of State Powell both agreed that the disposition of nonstrategic nuclear weapons should be on the agenda for future meetings between the United States and Russia, although neither supported a formal arms control regime to limit or contain these weapons. These discussions did not occur, and many analysts outside government have renewed their calls for reductions in nonstrategic nuclear weapons.

2010s: New START

The United States and Russia began to discuss their options for arms control after START in mid-2006. During the Bush Administration, they were unable to agree on a path forward. Neither side wanted to extend START in its original form, as some of the treaty's provisions had begun to interfere with some military programs on both sides. Russia wanted to replace START with a new treaty that would further reduce deployed forces while using many of the same definitions and counting rules in START. The United States initially did not want to negotiate a new treaty, but, under the Bush Administration, would have been willing to extend, informally, some of START's monitoring provisions. In 2008, the Bush Administration agreed to conclude a new treaty, with monitoring provisions attached, but this Treaty would have resembled the far less formal Strategic Offensive Reductions Treaty. In December 2008, the two sides agreed that they wanted to replace START before it expired, but acknowledged that this task would have to be left to negotiations between Russia and the Obama Administration.

The United States and Russia began to hold talks on a new treaty during the first few months of the Obama Administration. In early March 2009, Secretary of State Hillary Clinton and Russia's Foreign Minister Sergey Lavrov agreed that the two nations would seek to reach an agreement that would replace START by the end of 2009. In April, after their meeting in London prior to the G-20 summit, Presidents Obama and Medvedev endorsed these negotiations and their goal of

reaching an agreement by the end of 2009. When Presidents Obama and Medvedev met in Moscow on July 6-7, 2009, they signed a Joint Understanding for the START follow-on Treaty. This statement contained a range for the numerical limits that would be in the treaty—between 500 and 1,100 of strategic delivery vehicles and between 1,500 and 1,675 for their associated warheads. It also included a list of other issues—such as provisions for calculating the limits, provisions on definitions, and a provision on the relationship between strategic offensive and strategic defensive weapons—that would be addressed in the treaty.

START expired on December 5, 2009. At the time, the negotiating teams continued to meet in Geneva, but the negotiations concluded shortly before the end of 2009 without reaching a final agreement. The formal talks resumed in late January 2010, and the parties concluded the New START Treaty in early April 2010. Presidents Obama and Medvedev signed the treaty in Prague on April 8, 2010; it entered into force on February 5, 2011. The two parties completed their required reductions by the treaty's seven-year deadline of February 5, 2018.

Treaty Provisions

Limits on Warheads and Launchers

The New START Treaty contains three central limits on U.S. and Russian strategic offensive nuclear forces. First, it limits each side to no more than 800 deployed and nondeployed ICBM and SLBM launchers and deployed and nondeployed heavy bombers equipped to carry nuclear armaments. Second, within that total, it limits each side to no more than 700 deployed ICBMs, deployed SLBMs, and deployed heavy bombers equipped to carry nuclear armaments. Third, the treaty limits each side to no more than 1,550 deployed warheads. Deployed warheads include the actual number of warheads carried by deployed ICBMs and SLBMs, and one warhead for each deployed heavy bomber equipped for nuclear armaments.

According to New START's Protocol, a deployed ICBM launcher is "an ICBM launcher that contains an ICBM and is not an ICBM test launcher, an ICBM training launcher, or an ICBM launcher located at a space launch facility." A deployed SLBM launcher is a launcher installed on an operational submarine that contains an SLBM and is not intended for testing or training. A deployed mobile launcher of ICBMs is one that contains an ICBM and is not a mobile test launcher or a mobile launcher of ICBMs located at a space launch facility. These deployed launchers can be based only at ICBM bases. A deployed ICBM or SLBM is one that is contained in a deployed launcher. A deployed heavy bomber is one that is equipped for nuclear armaments but is not a "test heavy bomber or a heavy bomber located at a repair facility or at a production facility." Moreover, a heavy bomber is equipped for nuclear armaments if it is "equipped for long-range nuclear ALCMs, nuclear air-to-surface missiles, or nuclear bombs." Nondeployed launchers are, therefore, those that are used for testing or training, those that are located at space launch facilities, or those that are located at deployment areas or on submarines but do not contain a deployed ICBM or SLBM.

The warhead limits in New START differ from those in the original START Treaty. First, the original START Treaty contained several sublimits on warheads attributed to different types of strategic weapons, in part because the United States wanted the treaty to impose specific limits on elements of the Soviet force that were deemed to be "destabilizing." New START, in contrast, contains only a single limit on the aggregate number of deployed warheads. This provides each nation with the freedom to mix their forces as they see fit. This change reflects, in part, a lesser concern with Cold War models of strategic and crisis stability. It also derives from the U.S. desire to maintain flexibility in determining the structure of its own nuclear forces.

Second, under START, to calculate the number of warheads that counted against the treaty limits, the United States and Russia counted deployed launchers, assumed launcher contained an operational missile, and assumed each missile carried an "attributed" number of warheads. The number of warheads attributed to each missile or bomber was the same for all missiles and bombers of that type. The parties then multiplied these warhead numbers by the number of deployed ballistic missiles and heavy bombers to determine the number of warheads that counted under the treaty's limits. Under New START, the United States and Russia will also count the number of deployed launchers. But they will not calculate the number of deployed warheads by multiplying the number of launchers by a warhead attribution number. Instead, each side will simply declare the total number of warheads deployed across their force. This counting method will provide the United States with the flexibility to reduce its forces without eliminating launchers and to structure its deployed forces to meet evolving operational needs.

Monitoring and Verification

The New START Treaty contains a monitoring and verification regime that resembles the regime in START, in that its text contains detailed definitions of items limited by the treaty; provisions governing the use of NTM to gather data on each side's forces and activities; an extensive database that identifies the numbers, types, and locations of items limited by the treaty; provisions requiring notifications about items limited by the treaty; and inspections allowing the parties to confirm information shared during data exchanges. At the same time, the verification regime has been streamlined to make it less costly and complex than the regime in START. It also has been adjusted to reflect the limits in New START and the current circumstances in the relationship between the United States in Russia. In particular, it focuses on maintaining transparency, cooperation, and openness, as well as on deterring and detecting potential violations.

Under New START, the United States and Russia continue to rely on their NTM to collect information about the numbers and locations of their strategic forces. They may also broadcast and exchange telemetry—the data generated during missile flight tests—up to five times each year. They do not need these data to monitor compliance with any particular limits in New START, but the telemetry exchange will provide some transparency into the capabilities of their systems.[186] The parties will also exchange a vast amount of data about those forces, specifying not only their distinguishing characteristics, but also their precise locations and the number of warheads deployed on each deployed delivery vehicle. They will notify each other, and update the database, whenever they move forces between declared facilities. The treaty also requires the parties to display their forces, and allows each side to participate in exhibitions, to confirm information listed in the database.

Under New START, each party can conduct up to 18 short-notice, on-site inspections each year; both sides used this full quota of inspections during the three years of the treaty's implementation. The treaty divides these into Type One inspections and Type Two inspections. Each side can conduct up to 10 Type One inspections and up to 8 Type Two inspections. Moreover, during each Type One inspection, the parties will be able to perform two different types of inspection activities—these are essentially equivalent to the data update inspections and reentry vehicle inspections in the original START Treaty. As a result, the 18 short-notice inspections permitted under New START are essentially equivalent to the 28 short-notice inspections permitted under START.

[186] U.S. State Department, Bureau of Verification, Compliance and Implementation, *Telemetry*, Fact Sheet, Washington, DC, April 8, 2010, http://www.state.gov/t/vci/rls/139904.htm.

Relationship Between Offensive and Defensive Weapons

In the Joint Understanding signed at the Moscow summit in July 2009, the United States and Russia agreed that the new treaty would contain a "provision on the interrelationship of strategic offensive arms and strategic defensive arms." This statement, which appears in the preamble to New START, states that the parties recognize "the existence of the interrelationship between strategic offensive arms and strategic defensive arms, that this interrelationship will become more important as strategic nuclear arms are reduced, and that current strategic defensive arms do not undermine the viability and effectiveness of the strategic offensive arms of the parties." Russia and the United States each issued unilateral statements when they signed New START that clarified their positions on the relationship between New START and missile defenses. Russia indicated that it might exercise its right to withdraw from the treaty if the United States increased the capabilities of its missile defenses "in such a way that threatens the potential of the strategic nuclear forces of the Russian Federation." The United States responded by noting that its "missile defense systems are not intended to affect the strategic balance with Russia. The United States missile defense systems would be employed to defend the United States against limited missile launches, and to defend its deployed forces, allies and partners against regional threats."

Officials from the Obama Administration testified to the Senate and repeatedly emphasized that these statements did not impose any obligations on either the United States or Russia and would not result in any limits on U.S. missile defense programs. These statements also did not provide Russia with "veto power" over U.S. missile defense systems. Although Russia has said it may withdraw from the treaty if the U.S. missile defenses threaten "the potential of the strategic nuclear forces of the Russian Federation," the United States has no obligation to consult with Russia to confirm that its planned defenses do not cross this threshold. It may develop and deploy whatever defenses it chooses; Russia can then determine, for itself, whether those defenses affect its strategic nuclear forces and whether it thinks the threat to those forces justifies withdrawal from the treaty.

Implementation

New START has been in force for nine years. According to the U.S. State Department, the United States and Russia have successfully cooperated in implementing the treaty, and both have completed their required reductions. Russia, has raised concerns about the method that the United States has used to eliminate some of its accountable weapons, and has, therefore, been unwilling to agree, unequivocally that the United States is in compliance with the treaty. According to the latest data exchange, with data current as of September 1, 2019, the United States had met its New START levels with 1,376 warheads on 668 deployed launchers, within a total of 800 deployed and nondeployed launchers. On February 5, 2018, Russia reported that it had met the New START limits with 1,426 warheads on 513 deployed launchers, within a total of 757 deployed and nondeployed launchers. The two sides have shared more than 19,700 notifications, and each has conducted its full allotment of 18 on-site inspections each year.

New START was scheduled to expire on February 5, 2021. According to the terms of the treaty, the parties could extend it for a period not to exceed five years, which would extend it through February 2026. Press reports indicate that President Putin proposed that the parties pursue this extension early in the Trump Administration. Some, including General John Hyten, the former chairman of U.S. Strategic Command (STRATCOM), noted that the limits on Russian forces and the transparency afforded by the verification regime continue to serve U.S. national security interests. However, he and others noted that Russia was developing new kinds of long-range nuclear delivery systems that might not count under the treaty limits. While some argued that the United States and Russia should extend New START first, then discuss measures to bring these

weapons into the treaty framework, others suggested that the United States withhold approval of an extension unless Russia first agrees to count these weapons under the treaty limits.

On January 21, 2021, the Biden Administration announced that it planned to extend New START for five years. Russia agreed with this approach. The extension took effect on February 3, 2021. At the time, the State Department noted the extension would provide "the stability and predictability [needed] to enhance and expand discussions with Russia and China" on further nuclear arms reductions.[187]

Compliance Issues

Biannual New START Treaty data exchanges continued during the Coronavirus Disease 2019 (COVID-19) pandemic, but in March 2020 both countries agreed to pause on-site inspections (OSI).[188] After lifting the pause, the United States has invited Russia to conduct OSI in the United States since July 2022. Russia has not agreed to conduct such inspections or to host inspections on its territory.

In January 2023, the State Department stated in a congressionally mandated annual report on New START implementation that it "cannot certify the Russian Federation to be in compliance with the terms of the New START Treaty."[189] It further stated that Russia had refused "to permit the United States to conduct inspection activities on Russian territory" and had not convened a Bilateral Consultative Commission (BCC) under the terms of the Treaty. The report added that, while the United States was not able to make a determination regarding warheads on deployed delivery vehicles due to the lack of inspections, it "assesse[d] that Russia was likely under the New START warhead limit at the end of 2022" and, therefore, was not given a "determination of noncompliance." According to an interview with a senior State Department official, the U.S. "intelligence community was able to confirm … that Russia did not, as of the end of [2023], exceed the caps set by New START.… But without New START, we're not able to perform the verification procedures and feel as confident in our compliance assessments."[190]

Russian Suspension and U.S. Countermeasures

On February 21, 2023, President Putin announced that Russia was "suspending participation" in the New START Treaty and outlined grievances against the United States and NATO.[191] Putin characterized the Treaty as having been concluded at a different time in history, and he said that Russia would not participate while the United States worked toward Russia's "strategic defeat." The Russian Ministry of Foreign Affairs stated that Russia would observe Treaty limits and would not withdraw from the Treaty, but would also not participate in on-site inspections, data

[187] See @StateDeptSpok, Twitter, February 3, 2021.

[188] U.S. Department of State, "Assistant Secretary Mallory Stewart's Remarks at the Brookings Institution," February 27, 2023.

[189] U.S. Department of State, *Report to Congress on Implementation of the New START Treaty Pursuant to Paragraph (a)(10) of the Senate's Resolution of Advice and Consent to Ratification of the New START Treaty (Treaty Doc. 111-5)*, January 31, 2023.

[190] "Engaging China and Russia on Arms Control: An Interview With Assistant Secretary of State Mallory Stewart," *Arms Control Today*, May 2024, https://www.armscontrol.org/act/2024-05/interviews/engaging-china-and-russia-arms-control-interview-assistant-secretary-state. Also see U.S. Department of State, *2023 Report to Congress on Implementation of the New START Treaty*, December 2023, https://www.state.gov/2023-report-to-congress-on-implementation-of-the-new-start-treaty/.

[191] President of Russia, "Presidential Address to the Federal Assembly," February 21, 2023.

notifications, or consultative meetings.[192] The Ministry of Foreign Affairs also stated that Russia "will continue to strictly comply with the quantitative restrictions stipulated in the Treaty for strategic offensive arms within the life cycle of the Treaty," and "continue to exchange notifications of ICBM and SLBM launches with the United States in accordance with the relevant Soviet-U.S. agreement signed in 1988."[193]

In an interview, President Biden called Russia's suspension of its participation in New START a "big mistake" and said there was "no evidence" of any change to Russia's nuclear posture.[194] On March 15, 2023, the State Department called the announcement "legally invalid," since the New START Treaty does not have a provision for suspension.[195] The State Department also said that Russia "has stopped providing its treaty-mandated notifications," including on "the status and movement of its accountable nuclear forces." The State Department said on March 28 that it had offered to continue mutual data exchange under the Treaty but that Russia had refused. In light of this, the United States announced it "will likewise not provide its biannual data update to Russia."[196] The State Department has indicated, however, that, like Russia, the United States will "provide notification of ICBM and SLBM launches in accordance with the 1988 Ballistic Missile Launch Notification Agreement and to provide notifications of exercises in accordance with the 1989 Agreement on Reciprocal Advance Notification of Major Strategic Exercises."[197]

[192] Ministry of Foreign Affairs of the Russian Federation, "Foreign Ministry Statement in Connection with the Russian Federation Suspending the Treaty on Measures for the Further Reduction and Limitation of Strategic Offensive Arms (New START)," February 21, 2023.

[193] Ibid.

[194] Julia Mueller, "Biden: 'No Evidence' Russia Changing Nuclear Posture Despite Suspending Treaty," *The Hill*, February 22, 2023.

[195] U.S. Department of State, "Russian Noncompliance with and Invalid Suspension of the New START Treaty," March 15, 2023.

[196] U.S. Department of State, Press Briefing, March 28, 2023.

[197] U.S. Department of State, *Report On The Reasons That Continued Implementation Of The New START Treaty is in The National Security Interest Of The United States*, July 26, 2023, https://www.state.gov/report-on-the-reasons-that-continued-implementation-of-the-new-start-treaty-is-in-the-national-security-interest-of-the-united-states/.

Appendix A. List of Treaties and Agreements

This appendix lists a wide range of arms control treaties and agreements. The date listed in each entry indicates the year in which the negotiations were completed. In some cases, entry into force occurred in a subsequent year.

The Geneva Protocol, 1925: Bans the use of poison gas and bacteriological weapons in warfare.

The Antarctic Treaty, 1959: Demilitarizes the Antarctic continent and provides for scientific cooperation on Antarctica.

Memorandum of Understanding ... Regarding the Establishment of a Direct Communications Link (The Hot Line Agreement), 1963: Provides for a secure, reliable communications link between Washington and Moscow. Modified in 1971, 1984, and 1988 to improve the method of communications.

Limited Test Ban Treaty, 1963: Bans nuclear weapons tests or any nuclear explosions in the atmosphere, outer space, and under water.

Outer Space Treaty, 1967: Bans the orbiting or stationing on celestial bodies (including the moon) of nuclear weapons or other weapons of mass destruction.

Treaty for the Prohibition of Nuclear Weapons in Latin America (Treaty of Tlatelolco), 1967: Obligates nations in Latin America not to acquire, possess, or store nuclear weapons on their territory.

Treaty on the Non-Proliferation of Nuclear Weapons, 1968: Nonnuclear signatories agree not to acquire nuclear weapons; nuclear signatories agree to cooperate with nonnuclear signatories in peaceful uses of nuclear energy.

Seabed Arms Control Treaty, 1971: Bans emplacement of military installations, including those capable of launching weapons, on the seabed.

Agreement on Measures to Reduce the Risk of Outbreak of Nuclear War (Accident Measures Agreement), 1971: Outlines measures designed to reduce the risk that technical malfunction, human failure, misinterpreted incident, or unauthorized action could start a nuclear exchange.

Biological Weapons Convention, 1972: Bans the development, production, stockpile, or acquisition of biological agents or toxins for warfare.

Agreement ... on the Prevention of Incidents On and Over the High Seas, 1972: Establishes "rules of the road" to reduce the risk that accident, miscalculation, or failure of communication could escalate into a conflict at sea.

Interim Agreement ... on Certain Measures with Respect to the Limitation of Strategic Offensive Arms (SALT I Interim Agreement), 1972: Limits numbers of some types of U.S. and Soviet strategic offensive nuclear weapons.

Treaty ... on the Limitation of Anti-Ballistic Missile Systems (ABM Treaty), 1972: Limits United States and Soviet Union to two ABM sites each; limits the number of interceptor missiles and radars at each site to preclude nationwide defense. Modified in 1974 to permit one ABM site in each nation. U.S. withdrew in June 2002.

Agreement ... on the Prevention of Nuclear War, 1973: United States and Soviet Union agreed to adopt an "attitude of international cooperation" to prevent the development of situations that might lead to nuclear war.

Treaty ... on the Limitation of Underground Nuclear Weapons Tests (Threshold Test Ban Treaty), 1974: Prohibits nuclear weapons tests with yields of more than 150 kilotons. Ratified and entered into force in 1990.

Treaty ... on Underground Nuclear Explosions for Peaceful Purposes (Peaceful Nuclear Explosions Treaty), 1976: Extends the limit of 150 kilotons to nuclear explosions occurring outside weapons test sites. Ratified and entered into force in 1990.

Concluding Document of the Conference on Security and Cooperation in Europe (Helsinki Final Act), 1975: Outlines notifications and confidence-building measures with respect to military activities in Europe.

Convention on the Prohibition of Military or any other Hostile Use of Environmental Modification Techniques, 1978: Bans the hostile use of environmental modification techniques that have lasting or widespread effects.

Treaty ... on the Limitation of Strategic Offensive Arms (SALT II), 1979: Places quantitative and qualitative limits on some types of U.S. and Soviet strategic offensive nuclear weapons. Never ratified.

The Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed To Be Excessively Injurious or To Have Indiscriminate Effects: This Convention, also known as the Convention on Conventional Weapons (CCW), was concluded in Geneva in 1980 and entered into force in 1993. Protocol II (Protocol on Prohibitions or Restrictions on the Use of Mines, Booby-traps and Other Devices) contains rules for marking, registering, and removing minefields, in an effort to reduce indiscriminate casualties caused by antipersonnel landmines. Protocol IV prohibits laser weapons designed to cause blindness.

Document of the Stockholm Conference on Confidence- and Security-Building Measures and Disarmament in Europe (Stockholm Document), 1986: Expands on the notifications and confidence-building measures in the Helsinki Final Act. Provides for ground and aerial inspection of military activities.

Treaty of Rarotonga, 1986: Establishes a Nuclear Weapons Free Zone in the South Pacific. The United States signed the Protocols in 1996; the Senate has not yet provided its advice and consent to ratification.

Agreement ... on the Establishment of Nuclear Risk Reduction Centers, 1987: Establishes communications centers in Washington and Moscow and improves communications links between the two.

Treaty ... on the Elimination of their Intermediate-Range and Shorter-Range Missiles, 1987: Bans all U.S. and Soviet ground-launched ballistic and cruise missiles with ranges between 300 and 3,400 miles. U.S. announced withdrawal on February 1, 2019.

Agreement ... on Notifications of Launches of Intercontinental Ballistic Missiles and Submarine Launched Ballistic Missiles, 1988: Obligates United States and Soviet Union to provide at least 24 hours' notice before the launch of an ICBM or SLBM.

Agreement on the Prevention of Dangerous Military Activities, 1989: Outlines cooperative procedures that are designed to prevent and resolve peacetime incidents between the armed forces of the United States and Soviet Union.

U.S.-U.S.S.R. Chemical Weapons Destruction Agreement, 1990: Mandates the destruction of the bulk of the U.S. and Soviet chemical weapons stockpiles.

Vienna Document of the Negotiations on Confidence- and Security-Building Measures, 1990: Expands on the measures in the 1986 Stockholm Document.

Treaty on Conventional Armed Forces in Europe (CFE Treaty), 1990: Limits and reduces the numbers of certain types of conventional armaments deployed from the "Atlantic to the Urals."

Treaty ... on the Reduction and Limitation of Strategic Offensive Arms (START), 1991: Limits and reduces the numbers of strategic offensive nuclear weapons. Modified by the Lisbon Protocol of 1992 to provide for Belarus, Ukraine, Kazakhstan, and Russia to succeed to Soviet Union's obligations under the treaty. Entered into force on December 5, 1994.

Vienna Document of the Negotiations on Confidence- and Security-Building Measures, 1992: Expands on the measures in the 1990 Vienna Document.

Treaty on Open Skies, 1992: Provides for overflights by unarmed observation aircraft to build confidence and increase transparency of military activities.

Agreement ... Concerning the Safe and Secure Transportation, Storage, and Destruction of Weapons and Prevention of Weapons Proliferation, 1992: Provides for U.S. assistance to Russia for the safe and secure transportation, storage, and destruction of nuclear, chemical, and other weapons.

Agreement Between the United States and Republic of Belarus Concerning Emergency Response and the Prevention of Proliferation of Weapons of Mass Destruction, 1992: Provides for U.S. assistance to Belarus in eliminating nuclear weapons and responding to nuclear emergencies in Belarus.

Treaty ... on the Further Reduction and Limitation of Strategic Offensive Arms (START II) 1993: Would have further reduced the number of U.S. and Russian strategic offensive nuclear weapons. Would have banned the deployment of all land-based multiple-warhead missiles (MIRVed ICBMs), including the Soviet SS-18 "heavy" ICBM. Signed on January 3, 1993; U.S. Senate consented to ratification in January 1996; Russian Duma approved ratification in April 2000. Treaty never entered into force.

Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction: Bans chemical weapons and requires elimination of their production facilities. Opened for signature on January 13, 1993; entered into force in April 1997.

Agreement ... Concerning the Disposition of Highly Enriched Uranium Resulting from the Dismantlement of Nuclear Weapons in Russia, 1993: Provides for U.S. purchase of highly enriched uranium removed from Russian nuclear weapons; uranium to be blended into low enriched uranium for fuel in commercial nuclear reactors. Signed and entered into force on February 18, 1993.

Agreement Between the United States and Ukraine Concerning Assistance to Ukraine in the Elimination of Strategic Nuclear Arms, and the Prevention of Proliferation of Weapons of Mass Destruction: Provides for U.S. assistance to Ukraine to eliminate nuclear weapons and implement provisions of START I. Signed in late 1993, entered into force in 1994.

Agreement Between the United States and Republic of Kazakhstan Concerning the Destruction of Silo Launchers of Intercontinental Ballistic Missiles, Emergency Response, and the Prevention of Proliferation of Weapons of Mass Destruction, 1993: Provides for U.S. assistance to Kazakhstan to eliminate nuclear weapons and implement provisions of START I.

Trilateral Statement by the Presidents of the United States, Russia, and Ukraine, 1994: Statement in which Ukraine agreed to transfer all nuclear warheads on its territory to Russia in exchange for

security assurances and financial compensation. Some compensation will be in the form of fuel for Ukraine's nuclear reactors. The United States will help finance the compensation by purchasing low enriched uranium derived from dismantled weapons from Russia.

Treaty of Pelindaba, 1996: Establishes a nuclear weapons free zone in Africa. The United States has signed, but not yet ratified Protocols to the Treaty.

Comprehensive Nuclear Test Ban Treaty (CTBT), 1996: Bans all nuclear explosions, for any purpose. The United States and more than 130 other nations had signed the treaty by late 1996. The U.S. Senate voted against ratification in October, 1999.

Ottawa Treaty, 1997: Convention for universal ban against the use of antipersonnel landmines, signed in 1997 and entered into force in 1999. The United States and other significant military powers are not signatories.

Strategic Offensive Reductions Treaty (Moscow Treaty), 2002: Obligates the United States and Russia to reduce strategic nuclear forces to between 1,700 and 2,200 warheads. Does not define weapons to be reduced or provide monitoring and verification provisions. Reductions must be completed by December 31, 2012. Treaty lapsed upon entry into force of New START. Signed in May 2002, entered into force June 1, 2003.

Treaty … On Measures for the Further Reduction and Limitation of Strategic Offensive Arms (New START), 2010: Obligates the United States and Russia to reduce strategic nuclear forces to 1,550 warheads on up to 700 deployed delivery vehicles, within a total of 800 deployed and nondeployed delivery vehicles. Reductions must occur within 7 years, treaty remains in force for 10 years. Signed on April 10, 2010, entered into force on February 5, 2011.

Treaty On the Prohibition of Nuclear Weapons, 2017: Obligates the parties to never "develop, produce, manufacture, otherwise acquire, possess or stockpile nuclear weapons or other nuclear explosive devices." Parties agree not to host nuclear weapons that are owned or controlled by another state or to transfer, receive control over, or assist others in developing nuclear weapons. The United States has not signed this treaty and does not support its entry into force.

Appendix B. The U.S. Treaty Ratification Process

Article II, Section 2, Clause 2 of the U.S. Constitution establishes responsibilities for treaty ratification. It provides that the President "shall have Power, by and with the Advice and Consent of the Senate, to make Treaties, provided two thirds of the Senators present concur." Contrary to common perceptions, the Senate does not ratify treaties; it provides its advice and consent to ratification by passing a resolution of ratification. The President then "ratifies" a treaty by signing the instrument of ratification and either exchanging it with the other parties to the treaty or depositing it at a central repository (such as the United Nations).

In Section 33 of the Arms Control and Disarmament Act (P.L. 87-297, as amended), Congress outlined the relationship between arms control agreements and the treaty ratification process. This law provides that "no action shall be taken under this or any other law that will obligate the United States to disarm or to reduce or to limit the Armed Forces or armaments of the United States, except pursuant to the treaty-making power of the President under the Constitution or unless authorized by further affirmative legislation by the Congress of the United States."

In practice, most U.S. arms control agreements have been submitted as treaties, a word reserved in U.S. usage for international agreements submitted to the Senate for its approval in accordance with Article II, Section 2 of the Constitution. The Senate clearly expects future arms control obligations would be made only pursuant to treaty in one of its declarations in the resolution of ratification of the START Treaty. The declaration stated: "The Senate declares its intention to consider for approval international agreements that would obligate the United States to reduce or limit the Armed Forces or armaments of the United States in a militarily significant manner only pursuant to the treaty power set forth in Article II, Section 2, Clause 2 of the Constitution."

Nonetheless, some arms control agreements have been made by other means. Several "confidence building" measures have been concluded as legally binding international agreements, called executive agreements in the United States, without approval by Congress. These include the Hot Line Agreement of June 20, 1963, the Agreement on Prevention of Nuclear War of June 22, 1973, and agreements concluded in the Standing Consultative Commission established by the Anti-ballistic Missile Treaty. In another category that might be called statutory or congressional-executive agreements, the SALT I Interim Agreement was approved by a joint resolution of Congress in 1972. In a third category, the executive branch has entered some arms control agreements that it did not submit to Congress on grounds that they were "politically binding" but not "legally binding." Such agreements include several measures agreed to through the Conference on Security and Cooperation in Europe, such as the Stockholm Document on Confidence- and Security-Building Measures and Disarmament in Europe, signed September 19, 1986.

Senate Consideration

The conclusion or signing of a treaty is only the first step toward making the agreement legally binding on the parties. First, the parties decide whether to ratify, that is, express their consent to be bound by, the treaty that the negotiators have signed. Each party follows its own constitutional process to approve the treaty.

In the United States, after a treaty has been signed, the President at a time of his choice submits to the Senate the treaty and any documents that are to be considered an integral part of the treaty and requests the Senate's advice and consent to ratification. The President's message is accompanied by a letter from the Secretary of State to the President which contains an analysis of the treaty.

After submittal, the Senate may approve the agreement, approve it with various conditions, or not approve it.

Senate consideration of a treaty is governed by Senate Rule XXX, which was amended in 1986 to simplify the procedure.[198] The treaty is read a first time and the injunction of secrecy is removed by unanimous consent, although normally the text of a treaty has already been made public. The treaty is then referred to the Senate Committee on Foreign Relations under Senate Rule XXV on jurisdiction. After consideration, the committee reports the treaty to the Senate with a proposed resolution of ratification that may contain any of the conditions described below. If the committee objects to a treaty, or believes the treaty would not receive the necessary majority in the Senate, it usually simply does not report the treaty to the Senate and the treaty remains pending indefinitely on the committee calendar.[199]

After it is reported from the committee, a treaty is required to lie over for one calendar day before Senate consideration. The Senate considers the treaty after adoption of a nondebatable motion to go into executive session for that purpose.[200] Rule XXX provides that the treaty then be read a second time, after which amendments to the treaty may be proposed. The majority leader typically asks unanimous consent that the treaty be considered to have passed through all the parliamentary stages up to and including the presentation of the resolution of ratification. After the resolution of ratification is presented, amendments to the treaty itself, which are rare, may not be proposed. The resolution of ratification is then "open to amendment in the form of reservations, declarations, statements, or understandings." Decisions on amendments and conditions are made by a majority vote. Final approval of the resolution of ratification with any conditions that have been approved requires a two-thirds majority of those Senators present.

After approving the treaty, the Senate returns it to the President with the resolution of ratification. If he accepts the conditions of the Senate, the President then ratifies the treaty by signing a document referred to as an instrument of ratification. Included in the instrument of ratification are any of the Senate conditions that State Department officials consider require tacit or explicit approval by the other party. The ratification is then complete at the national level and ready for exchange or deposit. The treaty enters into force in the case of a bilateral treaty upon exchange of instruments of ratification and in the case of a multilateral treaty with the deposit of the number of ratifications specified in the treaty. The President then signs a document called a proclamation which publicizes the treaty domestically as in force and the law of the land.

If the President objects to any of the Senate conditions, or if the other party to a treaty objects to any of the conditions and further negotiations occur, the President may resubmit the treaty to the Senate for further consideration or simply not ratify it.

Approval with Conditions

The Senate may stipulate various conditions on its approval of a treaty. Major types of Senate conditions include amendments, reservations, understandings, and declarations or other

[198] The 1986 amendment eliminated a stage in which the Senate met "as in Committee of the Whole" and acted on any proposed amendment to the treaty.

[199] For further information, see *Rejection of Treaties: A Brief Survey of Past Instances*. CRS Report No. 87-305 F, by Ellen C. Collier, March 30, 1987. (Archived. For copies, congressional clients may contact Amy Woolf.)

[200] Earlier, treaties could only be taken out of the order in which they were reported from the committee and appeared on the Senate Executive Calendar by debatable motion. In 1977 the Threshold Test Ban and Peaceful Nuclear Explosions Treaties were ordered reported by the committee and then delayed partly so that they would not be placed on the Senate calendar ahead of the Panama Canal Treaties. Senate Committee on Foreign Relations. *Treaties and Other International Agreements: The Role of the United States Senate*. November 1993, p. 101.

statements or provisos. Sometimes the executive branch recommends the conditions, such as the December 16, 1974, reservation to the 1925 Geneva Protocol prohibiting the use of poison gas and the understandings on the protocols to the Treaty for the Prohibition of Nuclear Weapons in Latin America.

An amendment to a treaty proposes a change to the language of the treaty itself, and Senate adoption of amendments to the text of a treaty is infrequent. A formal amendment to a treaty after it has entered into force is made through an additional treaty often called a protocol. An example is the ABM (Anti-Ballistic Missile) Protocol, signed July 3, 1974, which limited the United States and the Soviet Union to one ABM site each instead of two as in the original 1972 ABM Treaty. While the Senate did not formally attach amendments to the 1974 Threshold Test Ban and 1976 Peaceful Nuclear Explosion treaties, it was not until Protocols relating to verification were concluded in 1990 that the Senate approved these two Treaties.

A reservation is a limitation or qualification that changes the obligations of one or more of the parties. A reservation must be communicated to the other parties and, in a bilateral treaty, explicitly agreed to by the other party. President Nixon requested a reservation to the Geneva Protocol on the use of poison gases stating that the protocol would cease to be binding on the United States in regard to an enemy state if that state or any of its allies failed to respect the prohibition. One of the conditions attached to the INF treaty might be considered a reservation although it was not called that. On the floor the sponsors referred to it as a Category III condition. The condition was that the President obtain Soviet consent that a U.S.-Soviet agreement concluded on May 12, 1988, be of the same effect as the provisions of the treaty.

An understanding is an interpretation or elaboration ordinarily considered consistent with the treaty. In 1980, the Senate added five understandings to the agreement with the International Atomic Energy Agency (IAEA) for the Application of Safeguards in the United States. The understandings concerned implementation of the agreement within the United States. A condition added to the INF treaty resolution, requiring a presidential certification of a common understanding on ground-launched ballistic missiles, might be considered an understanding. The sponsor of the condition, Senator Robert Dole, said, "this condition requires absolutely nothing more from the Soviets, but it does require something from our President."[201]

A declaration states policy or positions related to the treaty but not necessarily affecting its provisions. Frequently, like some of the understandings mentioned above, declarations and other statements concern internal procedures of the United States rather than international obligations and are intended to assure that Congress or the Senate participate in subsequent policy. The resolution of ratification of the Threshold Test Ban Treaty adopted in 1990 made approval subject to declarations (1) that to preserve a viable deterrent a series of specified safeguards should be an ingredient in decisions on national security programs and the allocation of resources, and (2) the United States shared a special responsibility with the Soviet Union to continue talks seeking a verifiable comprehensive test ban. In a somewhat different step, in 1963 the Senate attached a preamble to the resolution of ratification of the limited nuclear test ban treaty. The preamble contained three "Whereas" clauses of which the core one stated that amendments to treaties are subject to the constitutional process.

The important distinction among the various conditions concerns their content or effect. Whatever designation the Senate applies to a condition, if the President determines that it may alter an international obligation under the treaty, he transmits it to the other party or parties and further negotiations or abandonment of the treaty may result.

[201] *Congressional Record*, May 27, 1988, p. S6883.

During its consideration of the SALT II Treaty, the Senate Foreign Relations Committee grouped conditions into three categories to clarify their intended legal effect; (I) those that need not be formally communicated to or agreed to by the Soviet Union, (II) those that would be formally communicated to the Soviet Union, but not necessarily agreed to by them, and (III) those that would require the explicit agreement of the Soviet Union. In the resolution of ratification of the START Treaty, the Senate made explicit that some of the conditions were to be communicated to the other parties.

The Senate approves most treaties without formally attaching conditions. Ten arms control treaties were adopted without conditions: the Antarctic, Outer Space, Nuclear Non-Proliferation, Seabed, ABM, Environmental Modification, and Peaceful Nuclear Explosions Treaties, the Biological Weapons and the Nuclear Materials Conventions, and the ABM Protocol. In some of these cases, however, the Senate Foreign Relations Committee included significant understandings in its report.

Even when it does not place formal conditions in the resolution of ratification, the Senate may make its views known or establish requirements on the executive branch in the report of the Foreign Relations Committee or through other vehicles.[202] Such statements become part of the legislative history but are not formally transmitted to other parties. In considering the Limited Nuclear Test Ban Treaty in 1963, the Senate turned down a reservation that "the treaty does not inhibit the use of nuclear weapons in armed conflict," but Senate leaders insisted upon a written assurance on this issue, among others, from President Kennedy. In reporting the Nuclear Non-Proliferation Treaty, the committee stated that its support of the treaty was not to be construed as approving security assurances given to the nonnuclear-weapon parties by a U.N. Security Council resolution and declarations by the United States, the Soviet Union, and the United Kingdom. The security assurances resolution and declarations were, the committee reported, "solely executive measures."[203]

For Further Reading

The Congressional Role in Arms Control. Part IX in *Fundamentals of Nuclear Arms Control*, Subcommittee on Arms Control, International Security and Science of Committee on Foreign Affairs Committee Print, December 1986.

CRS Report No. 90-548 F, *Executive Agreements Submitted to Congress: Legislative Procedures Used Since 1970*.

CRS Report No. 93-276 F, *Senate Approval of Treaties: A Brief Description with Examples from Arms Control.*

Treaties and Other International Agreements: The Role of the United States Senate, Senate Foreign Relations Committee Print, November 1993.

[202] For a discussion of methods by which Congress influences arms control negotiations, see House Committee on Foreign Affairs. *Fundamentals of Nuclear Arms Control*. Part IX—The Congressional Role in Nuclear Arms Control. Prepared for the Subcommittee on Arms Control, International Security, and Science by the Congressional Research Service. June 1986.

[203] Senate. Executive Report 91-1, March 6, 1969. 91st Cong., 1st sess.

Appendix C. U.S. Laws[204]

The main legislative pillars of U.S. nuclear nonproliferation policy are the Atomic Energy Act of 1954, as amended by the Nuclear Nonproliferation Act of 1978, and the Arms Export Control Act of 1968.

The Atomic Energy Act of 1954 (AEA)[205]

The Atomic Energy Act of 1954 established legal authority for the commercial and military development of nuclear energy. It gave primary authority for the development and oversight of the U.S. government's nuclear programs to a civilian agency: the Atomic Energy Commission (now the Nuclear Regulatory Commission). In 1974, these duties were divided between the NRC and the Department of Energy. A major purpose of the act was to establish controls on the export of nuclear materials, goods, information, and technology. Under the AEA, the State Department must negotiate an agreement for nuclear cooperation as a precondition for exports of sensitive U.S. nuclear technology to any foreign country. Each agreement must meet several standards outlined in the AEA. Moreover, the act contains penalties and restrictions for countries that do not uphold the terms of nuclear agreements with the United States. Congress reviews all such agreements before they can enter into force.

The Nuclear Non-Proliferation Act of 1978 (NNPA)[206]

Congress and the Carter Administration viewed U.S. leadership and control over the international nuclear fuel cycle as an effective means of restraining the spread of uranium enrichment and plutonium reprocessing facilities throughout the world. Enrichment and reprocessing technologies are key technologies for states aspiring to develop nuclear weapons. While reaffirming the U.S. commitment to be a reliable supplier of nuclear technology and fuels, the act established an important new requirement for nations importing U.S. nuclear technology and materials: they must accept full-scope safeguards on their entire nuclear program. This standard was adopted by NSG members in 1992. The act also established a requirement of prior U.S. approval for retransfers or reprocessing of material or equipment, as well as to material produced using U.S.-exported technology. These measures gave the United States much more control over the foreign uses of U.S.-origin nuclear material.

Title III of the NNPA includes such varied measures as requiring the Department of Energy to obtain NRC licenses to distribute source and special material and establishment of criteria for terminating nuclear exports from the United States (which affects bilateral nuclear cooperation agreements) to include detonation of a nuclear device, termination/abrogation or violation of IAEA safeguards, or engaging in activities involving nuclear material that have significance in the manufacture of nuclear explosive devices (covering a wide array of activities). Additional prohibited acts included violating a nuclear cooperation agreement with the United States; assisting a nonnuclear-weapon state in activities involving nuclear material that could potentially help in the manufacture or acquisition of a nuclear explosive device; or enriching any U.S. source or special material without the permission of the United States. The NNPA requires (in Section

[204] This section drawn from CRS Report RL31502, *Nuclear, Biological, Chemical, and Missile Proliferation Sanctions: Selected Current Law*, by Dianne E. Rennack.

[205] P.L. 83-703, 42 U.S.C. 2011.

[206] P.L. 95-242, 22 U.S.C. 3201.

601) the President to report annually to Congress on the government's efforts to prevent nuclear proliferation.

The Arms Export Control Act (AECA)[207]

The Arms Export Control Act (AECA), as amended, authorizes U.S. government military sales, loans, leases, financing, and licensing of commercial arms sales to other countries. The AECA coordinates such actions with other foreign policy considerations, including nonproliferation, and determines eligibility of recipients for military exports, sales, leases, loans, and financing.

- **Section 3(f) (22 U.S.C. 2753(f))** prohibits U.S. military sales or leases to any country that the President determines is in material breach of binding commitments to the United States under international treaties or agreements regarding nonproliferation of nuclear explosive devices and unsafeguarded special nuclear material.
- **Section 40 (22 U.S.C. 2780)** prohibits exports or assistance in exporting (financial or otherwise) munitions to countries that provide support for terrorism. Included in the definition of acts of international terrorism are "all activities that the Secretary [of State] determines willfully aid or abet the international proliferation of nuclear explosive devices to individuals or groups or willfully aid or abet an individual or groups in acquiring unsafeguarded special nuclear material." The President can rescind a determination or waive sanctions if essential to the national security interests of the United States.
- **Section 101 (22 U.S.C. 2799aa)** (formerly Section 669 of the Foreign Assistance Act) prohibits foreign economic or military assistance to countries that deliver or receive nuclear enrichment equipment, materials, or technology unless the supplier agrees to place such under safeguards and the recipient has full-scope safeguards. The President, who makes the determination, can waive sanctions if they will have a serious adverse effect on vital U.S. interests, given assurances that the recipient will not acquire, develop, or assist others in acquiring or developing nuclear weapons.
- **Section 102 (22 U.S.C. 2799aa-1)** (formerly Section 670 of the Foreign Assistance Act) prohibits foreign economic or military assistance to countries that deliver or receive nuclear reprocessing equipment, material, or technology to or from another country; or any nonnuclear-weapon state that illegally exports from the United States items that would contribute to nuclear proliferation. The President, who makes the determination, can waive the sanction if he finds that ending assistance would adversely affect U.S. nonproliferation objectives or jeopardize the common defense and security. The section further prohibits assistance (except humanitarian or food assistance), defense sales, export licenses for U.S. Munitions List items, other export licenses subject to foreign policy controls, and various credits and loans to any country that the President has determined transfers a nuclear explosive device, design information, or component to a nonnuclear-weapons state, or is a nonnuclear-weapons state and receives a nuclear device, design information, or component, or detonates a nuclear explosive device.

[207] P.L. 90-629, 22 U.S.C. 2751. Title 22 of the *U.S. Code*, Chapter 39, addresses Arms Export Control. Subchapter VII addresses control of missiles and missile exports or technology. Subchapter VIII addresses chemical weapons and biological weapons, and subchapter X addresses nuclear nonproliferation controls.

Much of the language on nuclear nonproliferation controls that had been incorporated into the Foreign Assistance Act earlier (including the 1977 Glenn-Symington amendments on enrichment and reprocessing and the 1985 Pressler amendment related to Pakistan) were incorporated into the AECA in 1994 by the Nuclear Proliferation Prevention Act (see discussion below).

Export Administration Act of 1979 (EAA)

The Export Administration Act of 1979 (P.L. 96-72) authorizes the executive branch to regulate private sector exports of particular goods and technology to other countries. Although the act most recently expired in 2001, export controls have been implemented under executive orders and the International Emergency Economic Powers Act (IEEPA).[208] The EAA coordinates such actions with other foreign policy considerations, including nonproliferation, and determines eligibility of recipients for exports. Section 5 (50 U.S.C. app. 2404) authorizes the President to curtail or prohibit the export of any goods or services for national security reasons: to comply with other laws regarding a potential recipient country's political status or political stability, to cooperate with international agreements or understandings, or to protect militarily critical technologies. Section 6 (50 U.S.C. app. 2405) authorizes the President to curtail or prohibit the export of goods or services for foreign policy reasons. Within Section 6, for example, Section 6(j) establishes the State Department's list of countries found to be supporting acts of international terrorism, a list on which many other restrictions and prohibitions in law are based.

Export-Import Bank Act of 1945

The Export-Import Bank Act of 1945 (P.L. 79-173) establishes the Export-Import Bank of the United States and authorizes the Bank to finance and facilitate exports and imports and the exchange of commodities and services between the United States and foreign countries. Key nuclear-nonproliferation-related provisions were added in 1978. These include Section 2(b)(1)(B) (12 U.S.C. 635(b)(1)(B)) and Section 2(b)(4) (12 U.S.C. 635(b)(4)), which together allow the Bank to deny credit generally if that credit does not help advance U.S. nuclear proliferation policy, and specifically, if a person or country has (1) violated, abrogated or terminated a nuclear safeguards agreements, (2) violated a nuclear cooperation agreement with the United States, or (3) aided or abetted a nonnuclear-weapon state to acquire a nuclear explosive device or to acquire unsafeguarded special nuclear material. There is a provision for presidential waiver.

The Export-Import Bank Act of 1945 was amended in 2002[209] to allow denial of Ex-Im Bank financing for violations of the Foreign Corrupt Practices Act, the Arms Export Control Act, the International Emergency Economic Powers Act, or the Export Administration Act of 1979, extending its purview from strictly nuclear to CW, BW, and missile-related concerns.

Nuclear Proliferation Prevention Act of 1994

In 1994 Congress approved the Nuclear Proliferation Prevention Act (NPPA, Title VIII, of the Foreign Relations Authorization Act, Fiscal Years 1994 and 1995, P.L. 103-236), which primarily strengthened penalties against persons who aid or abet the acquisition of nuclear weapons or unsafeguarded nuclear weapons materials, or countries (nonnuclear-weapon states) that obtain or explode nuclear devices. Sanctions include cutoff of U.S. assistance, prohibition on involvement with U.S. government procurement, stringent licensing requirements for technology exports, and

[208] See CRS Report R41916, *The U.S. Export Control System and the Export Control Reform Initiative*, by Ian F. Fergusson and Paul K. Kerr.

[209] See The Export-Import Bank Reauthorization Act of 2002, P.L. 107-189.

opposition to loans or credits from international financial institutions. These sanctions were imposed on India and Pakistan following their nuclear tests in May 1998 but were gradually relaxed. Legislation passed in the 106th Congress extended the President's authority to relax sanctions on India and Pakistan for a year, and the Senate passed a bill suspending sanctions on the two countries for five years. The FY2000 Department of Defense appropriations bill (P.L. 106-79) extended the authority to suspend sanctions. Following the September 11 terrorist attacks, President Bush lifted all remaining sanctions on India and Pakistan in response to support of U.S. operations in Afghanistan.

The NPPA defined for the first time in U.S. law the term "nuclear explosive device." It defined "terrorism" as used in the AECA to include activities that assist groups or individuals to acquire any nuclear explosive device. It included a sense of Congress that identified 24 measures to strengthen IAEA safeguards, some of which have been implemented. Relevant sections include Section 821 (22 U.S.C. 3201 note), which requires U.S. government procurement sanctions; Section 823 (22 U.S.C. 3201 note), which requires U.S. executive directors of international financial institutions to vote against finance that might promote nuclear proliferation; and Section 824 (22 U.S.C. 3201 note), which takes aim at financial institutions and persons involved with financial institutions from assisting nuclear proliferation through the provision of financing.

Nunn-Lugar/Cooperative Threat Reduction Program Legislation

In late 1991, Congress passed the Soviet Nuclear Threat Reduction Act (which became known as the Nunn-Lugar Amendment), establishing programs to assist with the safe and secure storage and dismantlement of nuclear weapons in Russia and the Newly Independent States (NIS). These programs initially focused on the "loose nukes" problem but have broadened their focus to address a variety of proliferation risks associated with weak political control over nuclear materials, equipment, and expertise, as well as CW, BW, and missiles. This effort has expanded to include the CTR program in DOD and nonproliferation programs in DOE and the State Department.[210] The FY2008 defense authorization bill expanded the program to countries outside the former Soviet Union and eliminated the annual certification requirements for the CTR program.[211]

Iran-Iraq Arms Nonproliferation Act of 1992

Section 1602 of the Defense Authorization for FY1993 (Title XVI, P.L. 102-484, as amended) extended existing sanctions on Iraq to Iran. The law states that it is the policy of the United States to oppose any transfer to Iran or Iraq that could contribute to either country's ability to acquire nuclear, chemical, biological, or advanced conventional weapons. Section 1604 requires the President to impose sanctions against any person whom he has determined to be engaged in such transfers. Section 1605 similarly addresses activities of foreign governments. The 104th Congress amended the law (by passage of Section 1408(a), P.L. 104-106, National Defense Authorization Act for Fiscal Year 1996) to make it apply to transfers contributing to the development of weapons of mass destruction as well as advanced conventional weapons.

[210] See CRS Report 97-1027, *Nunn-Lugar Cooperative Threat Reduction Programs: Issues for Congress*, by Amy F. Woolf.

[211] See CRS Report RL31957, *Nonproliferation and Threat Reduction Assistance: U.S. Programs in the Former Soviet Union*, by Amy F. Woolf.

Iran, North Korea and Syria Nonproliferation Act

The law (P.L. 106-178) imposes penalties on countries whose companies help Iran's efforts to acquire weapons of mass destruction and missile delivery systems. In 2005, P.L. 109-112, the Iran Nonproliferation Amendments Act, added Syria to the law and added sanctions for transfers to and from those countries. In 2006, Congress also added North Korea to the act (P.L. 109-353).

Comprehensive Iran Sanctions, Accountability and Divestment Act (CISADA)

This law (P.L. 111-195) imposes penalties on foreign financial institutions and companies that, among other provisions, assist Iran in the development of weapons of mass destruction.[212]

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[212] CRS Report RS20871, *Iran Sanctions*, by Kenneth Katzman.