

III. Multilateral nuclear arms control, disarmament and non-proliferation treaties and initiatives

TYTTI ERÄSTÖ, SHANNON N. KILE AND VITALY FEDCHENKO

This section reviews the developments that took place in 2020 in three multilateral nuclear arms control, disarmament and non-proliferation treaty frameworks: the 1968 Treaty on the Non-Proliferation of Nuclear Weapons (Non-Proliferation Treaty, NPT), the 2017 Treaty on the Prohibition of Nuclear Weapons (TPNW) and the 1996 Comprehensive Nuclear-Test-Ban Treaty (CTBT). Developments in the Joint Comprehensive Plan of Action (JCPOA) on Iran's nuclear programme are covered in section II. The Covid-19 pandemic complicated procedures during the year, particularly regarding the NPT process. However, it could hardly be blamed for the general deadlock in arms control and disarmament that had persisted for several years.

Postponement of the Non-Proliferation Treaty Review Conference

The states parties of the 1968 Treaty on the Non-Proliferation of Nuclear Weapons meet in quinquennial conferences to review the operation of the treaty.¹ In the years running up to these conferences, a preparatory committee meets to consider procedural and substantive issues and to recommend decisions to the full conference. The 10th Review Conference was initially planned for 27 April–22 May 2020.² However, due to the Covid-19 pandemic, the Review Conference was rescheduled, at first until April 2021 and then until August 2021.³

The 2020 Review Conference was to have been particularly symbolic, since it would have marked the 50th anniversary of the NPT's entry into force in 1970 and a quarter of a century since the treaty was indefinitely extended in 1995. For the same reason, many welcomed its postponement, as the conference appeared set to fail given the political context that prevailed in 2020.⁴ As noted by the president-designate of the 10th Review Conference, Ambassador Gustavo Zlauvinen of Argentina, the NPT was

¹ For a summary and other details of the NPT see annex A, section I, in this volume.

² On earlier developments see Erästö, T. and Kile, S. N., 'Multilateral nuclear arms control, disarmament and non-proliferation treaties and initiatives', *SIPRI Yearbook 2020*, pp. 427–35.

³ United Nations, 'Documentation for the NPT Review Conference', ODA-2020-00022, 30 Mar. 2020; and 10th NPT Review Conference, Letter from the president-designate to NPT states parties, 28 Oct. 2020.

⁴ Einhorn, B., 'Covid-19 has given the 2020 NPT Review Conference a reprieve. Let's take advantage of it', *Bulletin of the Atomic Scientists*, 13 May 2020; and Pugwash Conferences on Science and World Affairs, 'The postponement of the NPT Review Conference: Antagonisms, conflicts and nuclear risks after the pandemic', 6 May 2020.

facing both internal and external challenges.⁵ The former included ‘divisions over the pace and scale of nuclear disarmament, and the implementation of commitments given at previous Review Conferences—not least the commitment by nuclear-weapon States to the total elimination of their nuclear arsenals’.⁶ As examples of external challenges, Zlauvinen mentioned ‘global security conditions defined by poor relations between nuclear-weapon States and the absence of trust and confidence, coupled with the collapse of the nuclear arms control regime and the development of new nuclear weapons systems that are faster, stealthier and more accurate’.⁷

Zlauvinen nevertheless expressed the hope that the hiatus created by the Covid-19 pandemic would provide additional time to find common ground. He sought to facilitate this process by holding consultations with NPT regional groups.⁸

The victory of Joe Biden in the United States presidential election in November raised hopes that the 2010 Russian–US Strategic Arms Reduction Treaty (New START) could still be extended beyond its expiry date in February 2021 and that the JCPOA could be revived (see section II).⁹ Many observers believed that preserving these existing agreements would make the political context more favourable for the forthcoming NPT Review Conference. However, at the same time it was recognized that achieving a consensus outcome would likely remain elusive as long as the nuclear weapon states are not seen to be implementing their disarmament commitments under Article VI of the NPT.

Entry into force of the Treaty on the Prohibition of Nuclear Weapons

On 24 October, an important milestone in the development of disarmament norms was reached: Honduras became the 50th state to ratify or accede to the 2017 Treaty on the Prohibition of Nuclear Weapons. As specified by Article 15, this triggered the entry into force of the treaty 90 days later, on 22 January 2021. By 31 December 2020, 51 states had ratified the treaty and an additional 39 states had signed but not yet ratified it.¹⁰

The TPNW was the result of two rounds of negotiations in 2017 that were based on a United Nations General Assembly decision of December 2016.

⁵ Zlauvinen, G., President-designate of the 10th NPT Review Conference, Statement at the Oslo Nuclear Forum 2020: Challenges to the NPT, 16 Sep. 2020, p. 3.

⁶ Zlauvinen (note 5), p. 3.

⁷ Zlauvinen (note 5), p. 4.

⁸ Arms Control Association, ‘Reviewing the NPT: An interview with Ambassador Gustavo Zlauvinen’, *Arms Control Today*, vol. 51, no. 1 (Jan./Feb. 2021).

⁹ Council for a Livable World, ‘Presidential Candidates: Joe Biden’, [n.d.]. For a summary and other details of the 2010 Russian–US Treaty on Measures for the Further Reduction and Limitation of Strategic Offensive Arms (New START) see annex A, section III, in this volume.

¹⁰ For a summary and other details of the TPNW, including lists of the states parties and signatories see annex A, section I, in this volume.

The negotiations built on an initiative that highlighted the catastrophic humanitarian consequences of the use of nuclear weapons and which had gathered pace since the 2010 NPT Review Conference. The TPNW, which draws from existing international law, including humanitarian law, is the first multilateral treaty to establish a comprehensive ban on nuclear weapons, including their development, deployment, possession, use and threat of use.¹¹

The TPNW has highlighted the tension between the underlying rationales of nuclear disarmament and deterrence. Its supporters view the TPNW as strengthening Article VI of the NPT and serving the ultimate goal of the complete elimination of nuclear weapons, which they regard as the only guarantee against the unacceptable risk of nuclear weapon use. In contrast, the five NPT-recognized nuclear weapon states (China, France, Russia, the United Kingdom and the USA—the P5) have argued that the TPNW could undermine the NPT as well as international stability based on nuclear deterrence.¹² In line with this view, in December 2020 the members of the North Atlantic Treaty Organization (NATO) issued a joint statement on the TPNW's entry into force. They asserted that they do 'not accept any argument that the ban treaty reflects or in any way contributes to the development of customary international law' and that the 'treaty will not change the legal obligations of our countries with respect to nuclear weapons'.¹³

This controversy has been visible in the voting results of all relevant General Assembly resolutions—including one adopted in December 2020, which calls upon 'all States that have not yet done so to sign, ratify, accept, approve or accede to the [TPNW] at the earliest possible date'.¹⁴ While 130 countries voted in favour of this resolution in November, 42 countries—including all 9 nuclear-armed states and the allies of the USA that rely on its extended nuclear deterrence—cast a negative vote.¹⁵

The TPNW's entry into force was welcomed by many states and civil society organizations. For example, as he applauded the 50th ratification, the Irish foreign minister, Simon Coveney, argued that 'the support for the Treaty is a clear indication of the will of the majority of countries to add

¹¹ For background see Kile, S. N., 'Treaty on the Prohibition of Nuclear Weapons', *SIPRI Yearbook 2018*, pp. 307–18; and Erästö, T., 'Treaty on the Prohibition of Nuclear Weapons', *SIPRI Yearbook 2019*, pp. 387–90.

¹² Kile (note 11); and Erästö (note 11).

¹³ North Atlantic Treaty Organization, 'North Atlantic Council statement as the Treaty on the Prohibition of Nuclear Weapons enters into force', Press release, 15 Dec. 2020, para. 3.

¹⁴ UN General Assembly Resolution 75/40, 'Treaty on the Prohibition of Nuclear Weapons', 7 Dec. 2020, A/RES/75/40, 16 Dec. 2020.

¹⁵ United Nations, 'Treaty on the Prohibition of Nuclear Weapons: Resolution adopted by the General Assembly', Voting data, 7 Dec. 2020; and United Nations, General Assembly, 'General and complete disarmament: Report of the First Committee, Agenda item 103', A/75/399, 16 Nov. 2020.

fresh momentum to achieve the goal of a world free of nuclear weapons'.¹⁶ The president of the International Committee of the Red Cross (ICRC) described the TPNW's entry into force as 'a victory for humanity', arguing that the treaty sets a 'benchmark against which all efforts towards nuclear disarmament and non-proliferation must be judged'.¹⁷ The spokesperson of the UN secretary-general, in turn, characterized the entry into force as 'the culmination of a worldwide movement to draw attention to the catastrophic humanitarian consequences of any use of nuclear weapons'.¹⁸

While nuclear weapon states continued to oppose the TPNW, some observers detected a slight softening in their tone.¹⁹ Behind the scenes, however, the USA reportedly urged countries that had ratified the treaty to withdraw their ratification, describing it as a 'strategic error'.²⁰ As before, China seemed more sympathetic to the TPNW than the other nuclear weapon states, arguing that the treaty's objectives were in line with its long-standing nuclear policy.²¹ This was despite China's participation in previous joint P5 statements that more clearly opposed the treaty.²²

The TPNW's role as an established part of international treaty law is likely to inspire further debates about its practical impact. Some observers have argued that the TPNW's comprehensive prohibition of nuclear weapons will eventually become customary international law, even though the five nuclear weapon states that are party to the NPT have explicitly rejected this possibility.²³ As reported by civil society organizations, the treaty has already influenced the behaviour of several financial institutions, which have divested from companies engaged in production of nuclear weapons as a result of the treaty and the related campaigning.²⁴

¹⁶ Irish Department of Foreign Affairs, 'Statement by Minister Coveney on the 50th ratification of the Treaty on the Prohibition of Nuclear Weapons', 25 Oct. 2020.

¹⁷ International Committee of the Red Cross (ICRC), 'Statement by ICRC President Peter Maurer on the entry into force of the Treaty on the Prohibition of Nuclear Weapons (TPNW)', 25 Oct. 2020.

¹⁸ United Nations, 'Commending ratification of treaty banning nuclear weapons, secretary-general says entry into force is tribute to test-blast survivors', Press Release, SG/SM/20363, 24 Oct. 2020.

¹⁹ Sauer, T. and Nardon, C., 'The softening rhetoric by nuclear-armed states and NATO allies on the Treaty on the Prohibition of Nuclear Weapons', *War on the Rocks*, 7 Dec. 2020.

²⁰ Lederer, E. M., 'US urges countries to withdraw from UN nuke ban treaty', AP News, 22 Oct. 2020.

²¹ Kimball, D. G., 'Ban treaty set to enter into force', *Arms Control Today*, vol. 50, no. 9 (Nov. 2020); and Chinese Mission to the United Nations (@Chinamission2un), 'China has always been advocating complete prohibition and thorough destruction of nuclear weapons, which is fundamentally in line with purposes of #TPNW. China will continuously make relentless efforts towards a nuclear-weapon-free world.', Twitter, 25 Oct. 2020.

²² E.g. P5 joint statement on the Treaty on the Prohibition of Nuclear Weapons, 24 Oct. 2018.

²³ Rauf, T., 'Does the TPNW contradict or undermine the NPT?', *Toda Peace Institute*, 22 Nov. 2020.

²⁴ Snyder, S., 'Nuclear weapons banned, what now for financial institutions?', *Don't Bank on the Bomb*, PAX, [n.d.].

Controversies related to the Comprehensive Nuclear-Test-Ban Treaty

The 1996 Comprehensive Nuclear-Test-Ban Treaty would prohibit the states parties from conducting ‘any nuclear weapon test explosion or any other nuclear explosion’ anywhere in the world.²⁵ Before it can enter into force, the treaty must be ratified by the 44 states named in the treaty’s Annex 2, which possessed nuclear power or research reactors when the treaty was negotiated. Eight of these states—China, Egypt, India, Iran, Israel, the Democratic People’s Republic of Korea (DPRK, North Korea), Pakistan and the United States—have yet to do so.²⁶ No new state signed or ratified the treaty in 2020. As of 1 January 2021 the CTBT had been ratified by 168 states and signed by an additional 14 states.

While the CTBT is still not in force, considerable progress has been made on the operational aspects of the treaty by the Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO Prep-Com). The CTBTO PrepCom is a plenary body composed of all the treaty’s states signatories. It is assisted by a Provisional Technical Secretariat (PTS), which is working to establish the CTBT verification regime. When completed, this will consist of a International Monitoring System (IMS) with 321 seismic, hydroacoustic, infrasound and radionuclide monitoring stations and 16 laboratories around the globe to detect evidence of any nuclear explosion; and an International Data Centre (IDC) to process and analyse the data registered at the monitoring stations and transmit it to member states. As of 1 January 2021, 302 of these 337 facilities were certified operational, a further 9 had been installed, 5 were under construction and 21 were planned.²⁷ The effectiveness of the IMS has been demonstrated by successful detection of six nuclear tests conducted by North Korea in 2006–17.²⁸ In addition, the PrepCom continues to develop procedures for on-site inspections (OSIs) to verify whether a nuclear explosion has taken place.²⁹

Challenges to multilateralism

Historically, the CTBTO PrepCom’s decisions have been taken by consensus. In 2020, however, that consensus was challenged on two occasions, both connected to the elections of the PTS’s management.

²⁵ CTBT, Article I(1). For a summary, list of states signatories and other details of the CTBT see annex A, section I, in this volume.

²⁶ As of 1 Jan. 2021, India, North Korea and Pakistan had not signed the treaty. The other 5 had signed but not ratified the treaty. The most recent Annex 2 state to ratify the treaty was Indonesia, on 6 Feb. 2012.

²⁷ CTBTO, ‘Station profiles’, [n.d.].

²⁸ Fedchenko, V., ‘Nuclear explosions, 1945–2017’, *SIPRI Yearbook 2018*, 461–69.

²⁹ E.g. CTBTO, ‘Largest-ever CTBT on-site inspection exercise concludes successfully’, Press release, 9 Dec. 2014.

The PTS is headed by the executive secretary, who oversees its staff and its annual budget of around US\$130 million. The second four-year term of the third executive secretary, Lassina Zerbo of Burkina Faso, was due to end on 31 July 2021. All previous executive secretaries served two consecutive terms: Wolfgang Hoffmann of Germany (1997–2005) and Tibor Tóth of Hungary (2005–13).³⁰ This corresponds with general good practice across the international organizations of the United Nations system and will be enforced by the CTBT itself when it enters into force.³¹

At the end of the nomination process in October 2020, only one candidate had been nominated: Robert Floyd, director general of the Australian Safeguards and Non-proliferation Office.³² However, in June 2020 Zerbo had stated that he would be available to serve another term if this were acceptable to the states signatories.³³ This created a controversy among the states signatories, some of which, including Australia, Germany, Italy, Japan, the Netherlands, the United Kingdom and the United States, oppose the third term as a matter of policy. Others, including Russia, consider that a third term could offer continuity during the challenging times of the Covid-19 pandemic and disagreements between nuclear powers.

The states signatories were supposed to discuss the matter on 25–27 November 2020, but the meeting was postponed due to a Covid-19 pandemic-related lockdown in Vienna. No new date for the leadership selection deliberation had been chosen as of December 2020.³⁴

The discussions on the choice of executive secretary occurred against the backdrop of another, and possibly more damaging, disagreement in the PrepCom on whether countries with unpaid dues could vote in the election of the executive secretary. According to the resolution establishing the CTBTO PrepCom, states that have not paid their financial contribution within a year of it falling due may not vote in PrepCom decisions.³⁵ As of July 2020, more than 70 states were in that category, evidently due to the effects of the Covid-19 pandemic. Of these, 29 applied for an exemption due to exceptional circumstances in order to be able to vote in the executive secretary selection

³⁰ Thakur, R., 'Choosing the next overseer of the nuclear-test-ban treaty', The Strategist, Australian Strategic Policy Institute (ASPI), 17 Nov. 2020.

³¹ CTBT (note 25), Article 49. After entry into force, the Technical Secretariat of the CTBTO will be headed by a director-general.

³² Payne, M., Australian Minister for Foreign Affairs, 'Australian candidate nominated to lead the Comprehensive Nuclear-Test Ban Treaty Organisation', Media release, Australian Department of Foreign Affairs and Trade, 18 Sep. 2020.

³³ Kimball, D., 'CTBTO begins leadership selection process', *Arms Control Today*, vol. 50, no. 8 (Oct. 2020).

³⁴ Kimball, D., 'Pandemic delays CTBTO leadership vote', *Arms Control Today*, vol. 50, no. 10 (Dec. 2020).

³⁵ CTBT Meeting of States Signatories, Resolution establishing the Preparatory Commission for the Comprehensive Nuclear Test-Ban Treaty Organization, adopted 19 Nov. 1996, CTBT/MSS/RES/1, 27 Nov. 1996, para. 5(b).

process. A proposal by the Group of African States that would have allowed all 29 states to vote did not receive the necessary two-thirds majority. A Russian proposal that would have restored voting rights to 15 states that were in partial arrears, had negotiated a payment plan or were engaged in a civil war was opposed by the USA because it would have given voting rights to Iran. The Russian proposal did not receive the necessary majority either, although countries such as France, Germany and Switzerland split from the US position and voted for it. Finally, a Canadian proposal to restore the voting rights of nine states ‘dealing with exceptional circumstances’ was approved.³⁶

This voting process was unique in the 24-year history of the PrepCom, where the decisions are usually taken by consensus. This disunity has been plausibly attributed by commentators to intensifying competition between nuclear powers that has caused an increased politicization of discussions in international organizations, including the CTBTO PrepCom.³⁷

US allegations of nuclear testing

As in previous years, in 2020 the USA raised questions about whether China and Russia were adhering to their moratoriums on nuclear explosive testing, which is tantamount to questioning their compliance with their commitments under the CTBT.³⁸ Specifically, a report issued in April by the US Department of State claimed that both countries had engaged in activities that were inconsistent with the ‘zero-yield’ standard regarding nuclear testing.³⁹ According to this standard, all nuclear test explosions with any yield exceeding zero are prohibited. It had been established during the negotiation of the CTBT but is not explicitly codified in the treaty itself.⁴⁰ Both countries denied the US assertions, which have not been substantiated by publicly available evidence.⁴¹

³⁶ Kimball, D., ‘CTBTO clears path for leadership decision’, *Arms Control Today*, vol. 50, no. 9 (Nov. 2020).

³⁷ Liechtenstein, S., ‘Bickering at the nuclear test-ban organization reflects global hardening’, *PassBlue*, 21 Oct. 2020.

³⁸ On earlier allegations see e.g. Erästö and Kile (note 2), pp. 428–30; and US Department of State, *Adherence to and Compliance with Arms Control, Nonproliferation, and Disarmament Agreements and Commitments* (Department of State: Washington, DC, Aug. 2019), pp. 39–40.

³⁹ US Department of State, ‘Executive summary of findings on adherence to and compliance with arms control, nonproliferation, and disarmament agreements and commitments’, Apr. 2020, p. 8. The full report was issued in June. US Department of State, *Adherence to and Compliance with Arms Control, Nonproliferation, and Disarmament Agreements and Commitments* (Department of State: Washington, DC, June 2020), pp. 48–51.

⁴⁰ US Department of State, Bureau of Arms Control, Verification, and Compliance, ‘Scope of the Comprehensive Nuclear Test-Ban Treaty’, Fact sheet, 2013.

⁴¹ Chinese Ministry of Foreign Affairs, ‘Foreign Ministry spokesperson Zhao Lijian’s regular press conference on April 16, 2020’, 16 Apr. 2020; and Russian Ministry of Foreign Affairs, ‘Commentary by the Information and Press Department (MFA of Russia) on executive summary of the 2020 Adherence to and Compliance with Arms Control, Nonproliferation, and Disarmament Agreements and Commitments (Compliance Report)—United States Department of State’, 23 Apr. 2020.

The US State Department report asserted that certain activities at China's former nuclear testing grounds at Lop Nur 'raise concerns' that China might not be adhering to its nuclear weapon testing moratorium, judged against the zero-yield standard.⁴² It mentioned China's 'use of explosive containment chambers' and extensive excavation activities at Lop Nur. It also accused China of 'frequently blocking the flow of data from its [IMS] stations' to the CTBTO IDC.⁴³ The latter accusation was effectively refuted by the CTBTO.⁴⁴ The US report itself concluded that there are 'other, more plausible explanations for China's withholding information from IMS stations' than activities inconsistent with the CTBT.⁴⁵

The US report also repeated the assertion that 'Russia has conducted nuclear weapons experiments that have created nuclear yield and are not consistent with the US "zero-yield" standard'.⁴⁶ It did not indicate when or how many low-yield nuclear tests Russia may have carried out, nor did it provide evidence to support the accusation. Some US analysts have concluded that there is probably no evidence that Russia has conducted or is conducting such tests, only that it has long had the capability—along with China and the USA—to do so.⁴⁷

The day after the State Department report was released, the Russian deputy foreign minister, Sergey Ryabkov, responded that 'we repeat once again that we did not take any steps that would include elements of deviation from our obligations stemming from our unilateral moratorium on nuclear testing and from our ratification of the [CTBT]'.⁴⁸ Ryabkov stressed that, while Russia had ratified the CTBT in June 2000, the USA had expressed its unwillingness to ratify the treaty and therefore had no right to make accusations on that subject.⁴⁹ He also suggested that the latest unsubstantiated allegations from the USA were consistent with repeated US attempts to dismantle existing arms control regimes by accusing Russia

⁴² US Department of State, Apr. 2020 (note 39), p. 8.

⁴³ US Department of State, Apr. 2020 (note 39), p. 8.

⁴⁴ Gordon, M. R., 'Possible Chinese nuclear testing stirs US concern', *Wall Street Journal*, 15 Apr. 2020.

⁴⁵ US Department of State, June 2020 (note 39), p. 50.

⁴⁶ US Department of State, Apr. 2020 (note 39), p. 8.

⁴⁷ Borger, J., 'China may have conducted low-level nuclear test, US claims', *The Guardian*, 16 Apr. 2020. See also Sood, R., 'At the edge of a new nuclear arms race', *The Hindu*, 27 Apr. 2020.

⁴⁸ 'US may be prepping site in Nevada to test nukes, Russian diplomat warns', TASS, 16 Apr. 2020.

⁴⁹ While the USA stated in its 2018 Nuclear Posture Review that it 'will not seek Senate ratification of the [CTBT]', it has made no such formal notification to the treaty depositary and it remains a state signatory. US Department of Defense (DOD), *Nuclear Posture Review* (DOD: Arlington, VA, Feb. 2018), pp. xvii, 63, 72.

and others of violating them, thereby justifying a US withdrawal from the regimes and clearing the way for a US nuclear arms build-up.⁵⁰

In response to the US State Department report, a spokesperson for the Chinese Ministry of Foreign Affairs stated that China fully ‘supports the purpose and objective of the treaty, stays committed to the nuclear testing moratorium, and has made important contribution to the work of the [CTBTO]’.⁵¹ He noted that the ‘data transmission of the monitoring stations in China has been highly commended by the [CTBTO PTS]’ and added that ‘In disregard of facts and driven by ulterior motives, the US is leveling irresponsible and groundless allegations against China’.⁵²

US consideration of a resumption in nuclear testing

According to a US media report, during an inter-agency meeting in mid May 2020 senior US national security officials had discussed the option of conducting a so-called demonstration nuclear explosion.⁵³ This would be the first US nuclear explosive test since 1992 and would mark a reversal from a decades-long freeze on such tests. The proposal followed the US allegations that China and Russia had conducted low-yield tests and at a time when the US administration was trying to extend Russian–US arms control negotiations to include China (see section I). Some of the participants in the discussion had reportedly asserted that a US demonstration of the ability to conduct a ‘rapid test’ could give the USA leverage in these negotiations. The meeting did not conclude with any decision about whether to carry out such a test, with the officials reported to be in serious disagreement over the idea.⁵⁴

The news reports about the discussion elicited criticism and condemnation from governments, civil society groups and international organizations. The CTBTO Group of Eminent Persons issued a statement expressing ‘deep concern’ about the reports. The group warned that a demonstration nuclear test explosion would, if carried out, ‘break the global moratorium on nuclear weapon test explosions and severely undermine the [CTBT] regime’.⁵⁵

From the technical perspective, the process of conducting a ‘rapid test’ would be slow and difficult. The 1993 presidential directive on the US

⁵⁰ TASS (note 48). On the US withdrawal from the Treaty on Open Skies see chapter 13, section V, in this volume. On the US withdrawal from the Intermediate-range Nuclear Forces (INF) Treaty see Topychkanov, P. and Davis, I., ‘Russian–United States nuclear arms control and disarmament’, *SIPRI Yearbook 2020*, pp. 399–409.

⁵¹ Chinese Ministry of Foreign Affairs (note 41).

⁵² Chinese Ministry of Foreign Affairs (note 41).

⁵³ Hudson, J. and Sonne, P., ‘Trump administration discussed conducting first US nuclear test in decades’, *Washington Post*, 23 May 2020.

⁵⁴ Hudson and Sonne (note 53).

⁵⁵ CTBTO, ‘Members of CTBTO Group of Eminent Persons warn against any demonstration nuclear test explosion’, Press release, 29 May 2020.

nuclear moratorium mandates the US Department of Energy to maintain a capability to conduct a nuclear test within 2–3 years.⁵⁶ In June 2020 the US Senate Armed Services Committee approved an amendment to the 2021 budget to authorize \$10 million specifically for a potential nuclear test.⁵⁷ But, even if the decision to conduct a ‘rapid test’ were to have been taken in mid 2020, the necessary preparations would likely have taken until 2022 or 2023.

The 1974 Threshold Test-Ban Treaty (TTBT) prohibits the USA from conducting nuclear tests with a yield exceeding 150 kilotons.⁵⁸ This limits the choice of warhead designs in the US arsenal available for testing.⁵⁹ In addition, under the 1963 Partial Test-Ban Treaty (PTBT), a hypothetical nuclear test could only be conducted underground.⁶⁰ In practical terms, this means at the Nevada Test Site (NTS). Experts with direct experience of nuclear weapon testing have pointed out multiple complications associated with testing at the NTS. These include its location in proximity to the Las Vegas metropolitan area, the significantly diminished readiness of the public to tolerate risks of venting of radioactivity into the atmosphere, the increased risks of seismic effects on high-rise buildings, and a failure to preserve knowledge and expertise on nuclear testing.⁶¹

By the end of the year, it seemed unlikely that the USA would conduct any such a test.

⁵⁶ White House, ‘US policy on stockpile stewardship under an extended moratorium and a comprehensive test ban’, Presidential Decision Directive/NSC-15, 3 Nov. 1993, p. 5. See also Nikitin M. B. D. and Woolf, A. F., ‘US nuclear weapons tests’, In Focus no. IF11662, US Congress, Congressional Research Service, 4 Dec. 2020.

⁵⁷ Kimball, D., ‘Nuclear testing, never again’, *Arms Control Today*, vol. 50, no. 6 (July/Aug. 2020).

⁵⁸ For a summary and other details of the 1974 Soviet–US Treaty on the Limitation of Underground Nuclear Weapon Tests (Threshold Test-Ban Treaty, TTBT) see annex A, section III, in this volume.

⁵⁹ On the US nuclear weapon stockpile see chapter 10, section I, in this volume.

⁶⁰ For a summary and other details of the 1963 Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water (Partial Test-Ban Treaty, PTBT) see annex A, section I, in this volume.

⁶¹ Hopkins, J. C., ‘Nuclear test readiness: What is needed? Why?’, *National Security Science*, Dec. 2016, pp. 9–15; and Kelley, R., ‘Trump and Senator Cotton embrace enhanced testing & face kilotons of surprises’, *IDN-InDepthNews*, 14 July 2020.