

II. Biological weapon disarmament and non-proliferation

FILIPPA LENTZOS

The principal legal instrument against biological warfare is the 1972 Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction (Biological and Toxin Weapons Convention, BWC).¹ The treaty has 184 states parties and 4 signatory states. Ten states have neither signed nor ratified the convention. No state joined the treaty in 2020.

Since March 2020, the global Covid-19 pandemic significantly impacted the functioning of the United Nations.² UN headquarters in New York and the UN Office at Geneva both locked down for months, cancelling or postponing in-person meetings and trying, with varying degrees of success, to move certain forums and functions online. The BWC meetings of experts (MXs), originally scheduled for 25 August to 3 September 2020, were postponed to 2021, as was the BWC meeting of states parties, originally scheduled for 8–11 December 2020.³ A set of 90-minute webinars on each of the MXs ran in October and November 2020, hosted by the BWC Implementation Support Unit and the MX chairs, but held no formal status. Consultations on scheduling the 2021 BWC meetings were still ongoing at the end of 2020.

This section covers states parties' statements marking a milestone of the BWC and in open debate at the UN Security Council; developments in the UN General Assembly with regard to biological weapons; and geopolitical tensions among China, Russia and the United States over biological research activities.

The 45th anniversary of the Biological and Toxin Weapons Convention

On 26 March 2020, the BWC marked its 45th anniversary of entry into force. On the occasion, the UN secretary-general said that the norm against biological weapons remains strong, but that the international community must remain vigilant. He called on states parties to urgently update the treaty's mechanisms for reviewing advances in science and technology,

¹ For a summary and other details of the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction, see annex A, section I, in this volume.

² Nakamitsu, I., 'The Office for Disarmament Affairs remains active and committed—How the Covid-19 pandemic is affecting the work of disarmament', United Nations, Office for Disarmament Affairs, 3 Apr. 2020; and Acheson, R., *Locked Out During Lockdown: An Analysis of the UN System During Covid-19*, Women's International League for Peace & Freedom Report, Sep. 2020.

³ Kenyan Permanent Mission to the United Nations and Other International Organizations, BWC chair's letters of 28 July 2020 and 23 Nov. 2020.

and to work together to improve biosecurity and biopreparedness so that all countries are equipped to prevent and respond to any potential use of bioweapons. He urged states parties ‘to think creatively about the future evolution of the Convention and how to uphold its central role in preventing the misuse of biology for hostile purposes’.⁴

Several states parties issued an anniversary statement. Russia emphasized the BWC’s need for ‘urgent institutional and operational strengthening’ and elaborated its own specific initiatives: ‘to resume the work on the legally binding Protocol to the Convention with effective verification mechanism, to establish under the Convention mobile biomedical units and Scientific Advisory Committee and to improve current confidence-building measures’. Russia also emphasized the need for ‘multilaterally negotiated decisions agreed upon by the States Parties by consensus’ as ‘the only way to provide the necessary assurances of compliance and effective deterrent against use or threat of use of biological weapons’.⁵

India, too, used the opportunity to reiterate its call ‘for institutional strengthening of the Convention, including negotiation of a comprehensive and legally binding Protocol’, for effective BWC implementation, and for full compliance with the treaty ‘in letter and spirit’. India also highlighted the challenges posed by developments in science and technology; the need for international cooperation, including institutional strengthening of the World Health Organization (WHO); the bioterrorism threat; and its efforts to establish an Article VII database to deal with biothreats and bio-emergencies.⁶

The USA, communicating via Twitter, reaffirmed the importance of states parties’ commitments to preventing biological weapons, and noted that the Covid-19 pandemic highlighted the importance of reducing all biological risks.⁷

The anniversary statement by the European Union (EU) spokesperson for foreign affairs and security policy highlighted some of the EU’s international efforts to improve global biosafety and biosecurity, noting that since 2006 it has provided close to €15 million in support of the BWC. The spokesperson said the EU would work towards ‘concrete measures to enhance and further develop’ the treaty at the Ninth Review Conference of the Biological and

⁴ UN Secretary-General, ‘Secretary-general’s message on the forty-fifth anniversary of the entry into force of the Biological Weapons Convention’, 26 Mar. 2020.

⁵ Russian Ministry of Foreign Affairs, ‘Statement of the Ministry of Foreign Affairs of the Russian Federation on the occasion of the 45th anniversary of the BWC entry into force’, 26 Mar. 2020.

⁶ Indian Ministry of External Affairs, ‘45th anniversary of entry into force of the Biological and Toxin Weapons Convention (BWC)’, 27 Mar. 2020.

⁷ US Department of State, Bureau of International Security and Nonproliferation (@StateISN), Twitter, 26 Mar. 2020, <<https://twitter.com/StateISN/status/1243146775864709123>>.

Toxin Weapons Convention, and urged all states not yet party to the BWC to join without delay.⁸

While the UN and some of its member states made statements marking the 45th anniversary, the statements did not give rise to new initiatives and do not appear to have carried any specific momentum.

United Nations Security Council open debate on pandemics and security

Characterizing global health risks, such as pandemics and epidemics, as a threat to international peace and security, the UN Security Council convened a virtual, high-level open debate on ‘Pandemics and Security’ on 2 July 2020, chaired by Germany’s minister for foreign affairs, Heiko Maas. The aim of the debate was ‘to exchange views on the security implications of international health threats, epidemics and pandemics and the corresponding role of the Security Council in maintaining international peace and security’.⁹

Opening the debate, the UN secretary-general focused on the implications of Covid-19 for the maintenance of peace and security, and noted that the pandemic ‘has already shown some of the ways in which preparedness might fall short if a disease were to be deliberately manipulated to be more virulent, or intentionally released in multiple places at once’. In considering how to improve global responses to future disease threats, the secretary-general urged states to ‘devote serious attention to preventing the deliberate use of diseases as weapons’. He emphasized the need to strengthen the BWC ‘by enhancing its role as a forum for the consideration of preventative measures, robust response capacities and effective counter-measures’. He pointed out that ‘the best counter to biological weapons is effective action against naturally occurring diseases’, and that ‘strong public and veterinary health systems are not only an essential tool against Covid-19, but also an effective deterrent against the development of biological weapons’. He continued: ‘All of these issues must be on the agenda next year at the Convention’s Review Conference.’ The secretary-general also noted that the pandemic highlights the risks of bioterrorist attacks and that Security Council Resolution 1540 and its follow-ups remain a key component of the international non-proliferation architecture to prevent bioterrorism.¹⁰

⁸ Battu-Henriksson, V., EU Spokesperson for Foreign Affairs and Security Policy, ‘Non-proliferation: Statement by the spokesperson on the 45th anniversary of the entry into force of the Biological and Toxin Weapons Convention’, 26 Mar. 2020.

⁹ UN Secretary-General, ‘Secretary-general’s remarks to Security Council open video-conference on the maintenance of international peace and security: Implications of Covid-19’, 2 July 2020.

¹⁰ UN Secretary-General (note 9); and UN Security Council Resolution 1540, 28 Apr. 2004.

The Security Council debate included over a dozen statements delivered by ministers and representatives, as well as nearly 50 statements submitted in writing.¹¹ Of particular relevance to biological weapon disarmament and non-proliferation were the statements from Canada and Georgia.

Canada's statement emphasized that 'more work is needed to build capacity to prevent, detect and respond to all manner of infectious disease threats, whether natural, accidental or deliberate in origin'.¹² It welcomed the meeting as an important first step for the Security Council to focus more attention on global health security, and asked it to consider holding additional briefings on the implications for international peace and security of global health security challenges. The statement noted that Canada had recently joined Denmark, Republic of Korea (South Korea), Qatar and Sierra Leone in launching the Group of Friends of Solidarity for Global Health Security, and that the group is ready to support the Security Council in a 'comprehensive consideration of global health security moving forward'. Canada also highlighted its own health security capacity-building efforts that are supporting the global response to Covid-19, including biological laboratories in Africa, the Middle East and the Caribbean, and an infectious disease early warning system in South East Asia delivered through Canada's Weapons Threat Reduction Program.¹³

The Georgian statement drew attention to the deliberate intensification of hybrid warfare tools by Russia against Georgia. It claimed that 'fabricated propaganda myths' were constantly attacking the Richard Lugar Center for Public Health Research, one of the key laboratories in Georgia's response to Covid-19.¹⁴ According to the statement, the disinformation alleges that the Georgian Government has deliberately spread the coronavirus in the occupied Tskhinvali region and collected biological samples from residents in the region. The myths were seen to 'undermine the trust of the local population towards the Government of Georgia' and to create deliberate 'chaos on the ground'. Georgia stressed that the Russian disinformation campaign 'represents an open attack on the health protection of the population and the national security of Georgia'.¹⁵

Following the 'Pandemics and Security' meeting, Russia circulated a letter to the Security Council raising 'serious concern' about references to the BWC at the debate, since Covid-19 'has no direct relevance to the Convention'. Moreover, Russia did 'not see any reason for the inclusion of this issue

¹¹ United Nations, Security Council, Letter dated 8 July 2020 from the President of the Security Council addressed to the Secretary-General and the Permanent Representatives of the members of the Security Council, S/2020/663, 9 July 2020.

¹² United Nations, S/2020/663 (note 11), annex 22, p. 45.

¹³ United Nations, S/2020/663 (note 11), annex 22, pp. 45–46.

¹⁴ United Nations, S/2020/663 (note 11), annex 31, pp. 66–67.

¹⁵ United Nations, S/2020/663 (note 11), annex 31, p. 67.

in the agenda of the Review Conference', and asserted that strengthening public and veterinary health systems should be considered by the WHO, the Food and Agriculture Organization and the World Organisation for Animal Health. The letter also emphasized the need for institutional and operational strengthening of the BWC and, in a nod towards Russia's introduction in the upcoming UN General Assembly of a new resolution on the Secretary-General's Mechanism for Investigation of Alleged Use of Chemical and Biological Weapons (UNSGM), it also noted that 'the principles and procedures of the Secretary-General's Mechanism, established in 1988, should be updated' (see below).¹⁶

The First Committee of the UN General Assembly

The UN General Assembly committee on disarmament and international security (First Committee) convened virtually from 6 October to 4 November 2020. In the general debate statements, 6 groups of states and 65 individual states referred to biological weapons—an unusually high number, likely reflecting both the Covid-19 pandemic and the upcoming Ninth Review Conference of the BWC.¹⁷ Most of the remarks emphasized the importance of the BWC and expressed support for the treaty. Many highlighted the need to universalize and implement the BWC effectively.

Several states referred to Covid-19's devastating impacts as a stark example of the potential consequences and disruption if biological weapons were ever used. Many, including Australia, Canada, Greece, Finland, France, India, Ireland, Nepal, the Netherlands and the Association of Southeast Asian Nations (ASEAN), said the pandemic underscored the need to strengthen the BWC. China said that 'Covid-19 has sounded the alarm on biosecurity and highlighted the importance and urgency of strengthening global biosecurity governance'.¹⁸

For Russia and the Non-Aligned Movement (NAM) in particular, but also for others states like Brazil, China, Spain and the Netherlands, strengthening the BWC meant negotiating a legally binding verification mechanism. Many states signalled that this was a main priority for them at the Ninth Review Conference. For other states, strengthening the BWC meant a range of activities, including greater international cooperation, assistance and preparedness; proper and sustained financial support for the treaty;

¹⁶ United Nations, Security Council, Letter dated 28 July 2020 from the Permanent Representatives of the Russian Federation to the UN addressed to the President of the Security Council, S/2020/756, 29 July 2020.

¹⁷ Lentzos, F., 'Biological Weapons', *First Committee Monitor*, vol. 18, no. 3 (25 Oct. 2020), p. 9.

¹⁸ Geng, S., China statement at the General Debate of the First Committee of the 75th session of the UN General Assembly, New York, 12 Oct. 2020, p. 7; and Lentzos, F., 'Biological Weapons', *First Committee Monitor*, vol. 18, no. 2 (18 Oct. 2020), p. 11.

more institutional capacity and fostering of synergies between relevant international organizations; establishment of a scientific advisory body; improved implementation of the treaty's confidence-building measures and adoption of additional transparency measures such as peer review; creation of mobile biomedical units to assist in responding to deliberate outbreaks; and development of a voluntary code of conduct for life scientists.¹⁹

Kazakhstan repeated its 'surprise' proposal (first introduced by the President of Kazakhstan at the 75th General Debate of the General Assembly) to establish an International Agency for Biological Safety as a special multilateral body to strengthen the BWC, but without providing further details.²⁰

Several unsupported allegations and insinuations of activities in contravention of the BWC were made during the general debate. Iran said it was 'deeply concerned about the clandestine biological weapon programs pursued by some countries'.²¹ Syria said that 'Israel's arsenal of nuclear, chemical and biological weapons remains the greatest threat for peace and security in the Middle East region'.²² China said: 'The international community is highly concerned with the US military's biological programs. We urge the US to act in an open, transparent and responsible manner and fully clarify its activities in numerous bio-labs overseas'.²³ The USA, one of the three depositary governments of the treaty, spoke of Covid-19 as 'the plague unleashed onto the world by the People's Republic of China' and the need to hold China to account, but did not refer to the BWC in its statement.²⁴

Both the First Committee and the General Assembly adopted draft resolution A/C.1/75/L.52 on the BWC without a vote (Resolution 75/88).²⁵ Changes from last year's version were minimal. Hungary, which following usual practice introduced the resolution, said this was because the pandemic precluded in-person informal consultations being held, and that Hungary's priority was to preserve consensus, something felt to be particularly important in a year preceding a review conference.²⁶

¹⁹ Lentzos (note 18), p. 11.

²⁰ Issetov, A., Kazakhstan statement to the First Committee of the 75th session of the UN General Assembly, New York, 12 Oct. 2020, p. 3; Lentzos (note 18), p. 12; and Zanders, J. P., 'Biological weapons: A surprise proposal from Kazak worth exploring', *The Trench*, 6 Oct. 2020.

²¹ Ravanchi, M. J., Iranian statement to the First Committee of the 75th session of the UN General Assembly, New York, 14 Oct. 2020, p. 2.

²² Al-Ja'afari, B., Syria statement to the First Committee of the 75th session of the UN General Assembly, New York, 16 Oct. 2020; and Press TV, 'Israel's arsenal of nuclear, chemical warfare poses great risk to Middle East peace: Syria UN envoy', 17 Oct. 2020.

²³ Geng (note 18), p. 8.

²⁴ Wood, R., US statement to the First Committee of the 75th session of the UN General Assembly, New York, 9 Oct. 2020.

²⁵ UN General Assembly Resolution 75/88, 7 Dec. 2020; and Reaching Critical Will, 'Draft resolutions, voting results, and explanations of vote from First Committee 2020', [n.d.].

²⁶ Balázs, S., Hungary statement to the First Committee of the 75th session of the UN General Assembly, New York, 16 Oct. 2020, p. 4.

The biennial draft resolution A/C.1/75/L.18 on ‘Measures to uphold the 1925 Geneva Protocol’, which prohibits the use of chemical and biological weapons, was agreed in the First Committee by 179 states.²⁷ There were three abstentions, from Israel and the USA, who usually abstain on the resolution, and from the Central African Republic. No state voted against. In the General Assembly, 182 states voted for the resolution, including the Central African Republic, with Israel and the USA abstaining.²⁸ The resolution renewed its previous call to all states ‘to observe strictly the principles and objectives of the Protocol’. The resolution also called upon states that continue to maintain reservations to the Geneva Protocol to withdraw these reservations.

A new resolution on the UN Secretary-General’s Mechanism

In contrast to the regular resolutions on the BWC and the Geneva Protocol, a new draft resolution (A/C.1/75/L.65/Rev.1) to update the UNSGM generated significant controversy in the First Committee in 2020.²⁹ Introduced by Russia, the draft resolution encourages states to assess the effectiveness of the UNSGM, and requests the UN secretary-general to seek states’ views on the technical guidelines and procedures that operationalize the UNSGM. Russia argued that much has changed in the scientific, technical and diplomatic environment in the 30 years since the guidelines and procedures were agreed on in 1990 and that a review is warranted.³⁰ The resolution also sought to ‘reaffirm the foundational nature of the CWC and the BWC in investigating the alleged use of chemical and biological weapons’.³¹

Several states expressed misgivings that the resolution seems to imply there is a problem with the UNSGM and weakens its credibility and independence. Australia, Switzerland and the United Kingdom in a joint statement, and the EU, Canada, New Zealand and the USA in separate statements, all urged member states to vote against the resolution on the grounds that it was politically motivated and would undermine the UNSGM.³² They argued that the resolution misrepresented the UNSGM by placing undue emphasis on the link with the BWC and the authority of the UN Security Council, when in

²⁷ United Nations, General Assembly, ‘Measures to uphold the authority of the 1925 Geneva Protocol’, A/C.1/75/L.18, 6 Oct. 2020; and United Nations, First Committee voting results on A/C.1/75/L.18, 4 Nov. 2020.

²⁸ United Nations, General Assembly voting results on A/75/399 DR VIII, 7 Dec. 2020.

²⁹ United Nations, General Assembly, ‘Secretary-General’s Mechanism for Investigation of Alleged Use of Chemical and Biological Weapons’, A/C.1/75/L.65/Rev.1, 22 Oct. 2020.

³⁰ United Nations, A/C.1/75/L.65/Rev.1 (note 29), paras 6–7.

³¹ UN Web TV, ‘First Committee, 12th meeting: General Assembly, 75th session’ (Video recording), 4 Nov. 2020.

³² European Union, ‘EU Explanation of vote: United Nations 1st Committee: Draft Res L.65 UN Secretary-General’s Mechanism for Investigation of Alleged Use of Chemical and Biological Weapons’, Statement to the First Committee, 4 Nov. 2020; UN Web TV (note 31); and Lentzos, F., ‘Biological weapons’, *First Committee Monitor*, vol. 18, no. 4 (8 Nov. 2020), p. 15.

fact the UNSGM is completely autonomous and the secretary-general does not require UN Security Council approval to initiate the mechanism. Close neighbours to Russia reiterated their support for the UNSGM, with Latvia expressing concern at attempts to ‘undermine’ the UNSGM and Lithuania saying that ‘any attempts to compromise its integrity, independence and efficiency are completely unacceptable’.³³

The draft resolution initially called for the UN secretary-general to establish a group of governmental experts (GGE), with a proposed membership of up to 15 states, to make consensus recommendations on updating the UNSGM technical guidelines and procedures. However, in light of opposition from a large number of states from different regional groups, Russia abandoned its ambition to create a GGE on this topic and dropped it from the resolution. While this addressed some concerns, many states still considered some language in the resolution as undermining the UNSGM. For example, the resolution stressed the role of the UN Security Council in investigating alleged breaches of the BWC, and that any allegations brought to the UN secretary-general’s attention by any state party to the BWC must be considered and addressed within the framework of the BWC.³⁴ Both aspects are part of Russia’s previously articulated position on limiting any BWC-related investigation and compliance-assessment efforts taking place outside of the BWC framework and the UN Security Council.³⁵

The draft resolution also called on states parties to strengthen the BWC by ‘resuming’ multilateral negotiations in order to conclude a non-discriminatory legally binding protocol to the treaty.³⁶ While many states agree that there is a need for a legally binding mechanism, not all believe this necessitates a return to the protocol negotiations of the 1990s. The verifiability of the BWC has been a divisive topic for many years among its states parties, and the continuing references to it in the draft resolution is another sign that it will be a key topic at the Ninth Review Conference.

The UNSGM resolution is consistent with other efforts, including misinformation and disinformation campaigns, to stop, hinder, undermine and contest the authority and work of investigation teams within the Organisation for the Prohibition of Chemical Weapons and the UN.³⁷ Syrian chemical weapons investigations, as well as other experiences, point to investigations becoming more contentious, complex and important, and

³³ Pildegovičs, A., Latvian Permanent Representative to the UN, Statement to the First Committee of the 75th session of the UN General Assembly, New York, 15 Oct. 2020; and Lithuania, Statement to the First Committee of the 75th session of the UN General Assembly, New York, 15 Oct. 2020.

³⁴ United Nations, A/C.1/75/L.65/Rev.1 (note 29), paras 3–4.

³⁵ Lentzos, F., ‘Biological weapon disarmament and non-proliferation’, *SIPRI Yearbook 2020*, p. 479.

³⁶ United Nations, A/C.1/75/L.65/Rev.1 (note 29), p. 2.

³⁷ Lentzos, F. and Littlewood J., ‘How Russia worked to undermine UN bioweapons investigations’, *Bulletin of the Atomic Scientists*, 11 Dec. 2020.

suggest that any bioweapons investigations led by the secretary-general would be politically difficult and technically complex. Previous experiences also suggest that if a perpetrator has a supporter on the Security Council, any effort at attribution will be challenged at every level.³⁸

The majority of states recognized these problems with the draft UNSGM resolution by overwhelmingly rejecting it in the First Committee on 4 November 2020. Although it was eventually co-sponsored by China, Nicaragua and Venezuela, there were only 31 votes in favour, 63 votes against, and 67 abstentions.³⁹ In addition, five individual paragraphs were voted on, all of them rejected by similar margins.⁴⁰

The evolving China–Russia–United States relationship

Geopolitical tensions among the USA, China and Russia continued to spill over into the biological field in 2020, with several allegations being aired in public statements. During a regular press briefing by the Chinese Ministry of Foreign Affairs on 4 August 2020, for example, spokesperson Wang Wenbin, in answer to a question about alleged activities in South Korea, accused the USA of conducting activities of ‘biological militarization in many countries’ that are not transparent, safe or justified.⁴¹ Two days later, the Russian Ministry of Foreign Affairs made similar accusations in a press briefing about the US military conducting biological activities in the post-Soviet space. Ministry spokesperson Alexey Zaytsev suggested that Russia would seek to resolve the issue by activating the consultative mechanism under Article V of the BWC and calling on the USA ‘to sit down at the negotiating table and discuss, in a bilateral format, the [Russian] concerns’ about the activity.⁴²

On 27 August 2020, the US Department of Commerce placed several new entities, including three research facilities of the 48th Central Scientific Research Institute in Kirov, Sergiev Posad and Yekaterinburg—described as Russian ‘Ministry of Defense facilities associated with the Russian biological weapons program’—on its list of entities considered to pose a security risk to US interests, making them subject to export control restrictions.⁴³ The 48th Central Scientific Research Institute, including the Kirov facility, was part

³⁸ Lentzos and Littlewood (note 37).

³⁹ United Nations, General Assembly, First Committee voting results on A/C.1/75/L.65/Rev.1, 4 Nov. 2020.

⁴⁰ Reaching Critical Will (note 25).

⁴¹ Chinese Ministry of Foreign Affairs, ‘Foreign Ministry Spokesperson Wang Wenbin’s regular press conference on August 4, 2020’, Press release, 4 Aug. 2020.

⁴² Russian Ministry of Foreign Affairs, ‘Briefing by Deputy Director of the Information and Press Department Alexey Zaytsev, Moscow, August 6, 2020’, News, 6 Aug. 2020.

⁴³ US Department of Commerce, Bureau of Industry and Security, ‘Addition of entities to the Entity List, and revision of entries on the Entity List’, *Federal Register*, vol. 85, no. 167, 27 Aug. 2020.

of Russian efforts to develop and test a coronavirus vaccine, and the listing came within weeks of the Sputnik V vaccine being announced.⁴⁴

The US assistant secretary of state for international security and nonproliferation, Christopher Ford, called attention to these sanctions on 12 November 2020 at the annual conference of the EU Non-Proliferation and Disarmament Consortium, which he said also ‘highlighted in public for the first time the fact that there is a Russian biological weapons program’.⁴⁵ There is no open-source independent validation of this claim, but scholars have queried the state of Russian compliance with the BWC and the claim is considered to ‘colour’ how Russia’s biotechnology investments should be viewed.⁴⁶ The US Government’s annual report on treaty compliance noted in June 2020 that ‘Russian government entities remained engaged during the reporting period [2019] in dual-use activities, potentially for purposes incompatible with the BWC’.⁴⁷ On China, the report noted that it ‘continues to develop its biotechnology infrastructure and pursue scientific cooperation with countries of concern’, and that ‘researchers at Chinese military medical institutes’ may be undertaking ‘biological activities of a possibly anomalous nature’ that have ‘potential dual-use applications’.⁴⁸

Conclusions and prospects for the Ninth Review Conference

The Ninth Review Conference of the BWC, originally scheduled for 2021, is likely to be postponed until 2022. While states parties generally recognize the need to strengthen the BWC—especially in light of the pandemic—there are no signs the treaty has attracted high-level political commitment to do so and there are no new initiatives apparent so far. For now, the Review Conference seems destined to divide according to traditional points of contention, most obviously on a legally binding protocol.

⁴⁴ ‘US adds Russian chemical research facilities to sanctions list’, UNIAN, 26 Aug. 2020; and Norton, B., ‘US sanctions Russian research institute that developed Covid-19 vaccine’, Strategic Culture Foundation, 29 Aug. 2020.

⁴⁵ Ford, C., Speech to the EU Consortium on Nonproliferation and Disarmament Annual Conference, 12 Nov. 2020.

⁴⁶ Zilinskas, R. A. and Mauger, P., *Biosecurity in Putin’s Russia* (Lynne Rienner: Boulder, CO, 2018); and Gronvall, G. K. and Bland, B., ‘Life-science research and biosecurity concerns in the Russian Federation’, *Nonproliferation Review*, Special issue on chemical and biological warfare (forthcoming 2021), online 5 Feb. 2021.

⁴⁷ US Government, *Adherence to and Compliance with Arms Control, Non-Proliferation, and Disarmament Agreements and Commitments* (US Department of State: Washington, DC, June 2020), p. 62.

⁴⁸ US Government (note 47), p. 57.