CONVENTION ON THE PROHIBITION OF THE DEVELOPMENT, PRODUCTION AND STOCKPILING OF BACTERIOLOGICAL (BIOLOGICAL) AND TOXIN WEAPONS AND ON THEIR DESTRUCTION

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Introduction

The Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction (hereafter "BTWC") was adopted by the United Nations General Assembly (hereafter "General Assembly") on 16 December 1971, annexed to resolution 2826 (XXVI). The resolution was approved by a vote of 110 to none, with 1 abstention. Four more delegations subsequently informed the Secretariat that they wished to have their votes recorded as having been in favor of the draft resolution. The BTWC was opened for signature on 10 April 1972 and entered into force on 26 March 1975 "after the deposit of instruments of ratification by twenty-two Governments, including the Governments designated as Depositaries of the Convention" (art. XIV (3)). The BTWC had three co-depositaries, as did several other contemporaneous treaties. That was a legal-diplomatic arrangement which allowed to increase participation in treaties and mitigate political complications, such as lack of universal recognition or membership in the United Nations of several States which were deemed essential for ensuring universality of treaties. Currently it has 183 States Parties, the most recent ratification having occurred on 14 August 2019, while 4 signatories have not ratified the BTWC or acceded to it to this date.

Definition of Bacteriological (Biological) Weapons and Toxins

An authoritative definition endorsed by the World Health Organization in a report which narrowly pre-dated the adoption of the BTWC and, presumably, was taken into account by negotiators, described weaponized biological agents as including "those that depend for their effects on multiplication within the target organism, and are intended for use in war to cause decease in man, animals or plants" (Report of a WHO Group of Consultants, "Health Aspects of Chemical and Biological Weapons", Geneva, 1970, p. 12). A more recent reference tool with a clout of international acceptance defines biological weapon as "device or vector that delivers biological agents to target" (S. Tulliu and T. Schmalberger, *Coming to Terms with Security: A Lexicon for Arms Control, Disarmament and Confidence-Building,* UNIDIR, Geneva, 2003, p. 51). It further defines "biological agent" as "infective material that causes death or incapacitation through its pathogenic effects. […] Typically they penetrate the human body through the respiratory or digestive system". Toxins are "non-living poisonous by-products of plants, animals, micro-organisms, or artificial chemical synthesis. Unlike other biological agents toxins cannot reproduce, and therefore cannot produce transmissible diseases; they only affect those organisms exposed. […] Because toxins are not living organisms, they are more stable and therefore easier to handle than other biological agents" (S. Tulliu and T. Schmalberger, *Coming to Terms with Security: A Lexicon for Arms Control, Disarmament and Confidence-Building,* UNIDIR, Geneva, 2003, p. 53). Other sources indicate that bacteriological weapons can cause "deterioration of materiel" (NATO*Term* – The Official NATO Terminology Database). As to toxins, the fact that they can be synthesized draws those of artificial origin closer to chemical weapons, hence the realm of the Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction (hereafter "CWC").

Bacteriological weapons, if used, will inflict innumerable human loss; their destructive effects are multifaceted and protracted. They are indiscriminate and may cause profound physical and psychological trauma to humans, as well as heavy and irreversible damage to the environment. Along with nuclear and chemical weapons, they belong to the category of weapons of mass destruction (hereafter "WMDs"). As early as in 1948, the Commission for Conventional

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Armaments, a subsidiary organ of the United Nations Security Council (hereafter "Security Council"), defined those weapons as "atomic explosive weapons, radio-active material weapons, lethal chemical and biological weapons and any weapons developed in the future which have characteristics comparable in destructive effect to those of the atomic bomb or other weapons mentioned above" (resolution adopted by the Commission for Conventional Armaments at its 13th meeting, 12 August 1948, p. 2). This definition was subsequently reaffirmed by the United Nations practice (General Assembly resolution 32/84B of 12 December 1977, and subsequent resolutions).

Historical Predecessors

In the aftermath of the widespread use of chemical weapons during World War I – despite prohibitions on the use in war of asphyxiating and poisonous weapons imposed by the first (1899) and second (1907) Hague Peace conferences – victorious powers joined by others negotiated and concluded the Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare (hereafter "Geneva Protocol"). While immediate heir to arrangements reached at the Peace conferences, the Protocol was a by-product of the conference for the supervision of the international trade in arms and ammunition, which was held in Geneva under the auspices of the League of Nations from 4 May to 17 June 1925. The original proposal covered only poisonous gases, as did earlier arrangements, including the Treaty of Versailles which prohibited "the use of asphyxiating, poisonous or other gases and all analogous liquids, materials or devices being prohibited, their manufacture and importation" with respect to Germany (art. 171). However, "at the suggestion of Poland, this was broadened to ban biological methods of warfare as well" (T. Graham Jr., "Limitations on Chemical and Biological Weapons", in P. B. Stephan, B. Klimenko (eds.), *International Law and International Security: Military and Political Dimensions – A U.S.-Soviet Dialogue*, 1991, p. 116). The Protocol thus linked chemical and biological weapons as prohibited means of warfare.

That link would have been reaffirmed had the Conference for the Reduction and Limitation of Armaments convened in 1932 by the League of Nations resulted in the conclusion of a broad-ranging convention on disarmament. Discussions at the Conference were based on art. 39 of the Draft Convention framed by the Preparatory Disarmament Commission: "The High Contracting Parties undertake, subject to reciprocity, to abstain from the use in war of asphyxiating, poisonous or similar gases and of all analogous liquids, substances or processes. They undertake unreservedly to abstain from the use of all bacterial methods of warfare" (League of Nations, Conference for the Reduction and Limitation of Armaments, Preliminary Report on the Work of the Conference, prepared by the President, Mr. Arthur Henderson, Geneva, July 1936, p. 103). The reciprocity reservation was conspicuously absent from the undertaking with respect to bacterial methods of warfare. No legal document was born out of negotiations, and the Conference itself idled until 1937, when it was formally discontinued.

Brief Negotiating History

The post-World War II era witnessed considerable declaratory and institutional activity related to general and complete disarmament (for a summary of proposals on the general and complete disarmament, see *The United Nations and Disarmament 1945-1970*, United Nations, 1970, pp. 78-125). Proposed principles, outlines and draft treaties included prohibitions on WMDs, including bacteriological weapons. Initiatives went beyond the prohibition on the use in war, already imposed by the Geneva Protocol, and suggested imposition of comprehensive bans. Attempts to reconcile the competing drafts led, in September 1961, to the Joint Statement of Agreed Principles for Disarmament Negotiations, also known as the McCloy-Zorin Declaration named after John McCloy, President Kennedy's principal disarmament adviser and negotiator, and Valerian Zorin, the Soviet Ambassador to the United Nations. The Joint Statement, in para 3 (b), envisaged "the elimination of all stockpiles of nuclear, chemical, bacteriological, and other weapons of mass destruction and cessation of the production of such weapons" (Letter dated 20 September 1961 from the Permanent Representatives of the Union of Soviet Socialist Republics and the United States of America to the United Nations addressed to the President of the General Assembly (A/4879, 20 September 1961)). That provision was reproduced in the joint document submitted in

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May 1962 by the delegations of the Soviet Union and the United States to the Conference of the Eighteen-Nation Committee on Disarmament (Working Draft of Part I of the Treaty on General and Complete Disarmament (in a Peaceful World) proposed by the USA and the USSR (ENDC/40/Rev.1, 31 May 1962)).

As attempts to develop a comprehensive approach to disarmament proved to be futile, focus of international negotiations shifted towards partial measures. With respect to bacteriological weapons, discussions at the United Nations were triggered by several proposals submitted to the General Assembly in 1966, leading to the adoption of a resolution that extracted the issue of chemical and biological weapons from general and complete disarmament, while calling for "strict observance by all States of the principles and objectives" of the Geneva Protocol (General Assembly resolution 2162 B (XXI) of 5 December 1966 and Report of the Secretary-General, "Chemical and Bacteriological (Biological) Weapons and the Effects of Their Possible Use" (A/7575/Rev.1- S/9292/Rev.1, 1 July 1969)). However, the linkage of two classes of WMDs proved to be a stumbling block to negotiations. It was only during the 1971 session of the Conference of the Committee on Disarmament (formerly the Eighteen-Nation Committee on Disarmament) that "a general consensus emerged… that it would be possible… to negotiate, as a first step, a draft convention on biological and toxin weapons" while continuing to seek "effective measures for the prohibition of development, production and stockpiling of chemical weapons" (Report of the Conference of the Committee on Disarmament, 23 February to 30 September 1971, para. 37). On 5 August 1971, the delegation of the Soviet Union and of six States associated with it, and the delegation of the United States, introduced separate but identical texts of the draft Convention (Report of the Conference of the Committee on Disarmament, 23 February to 30 September 1971, para. 39), which the General Assembly approved and requested the depositary Governments to open "for signature and ratification at the earliest possible date" (General Assembly resolution 2826 (XXVI) of 16 December 1971).

The Convention

The BTWC, comprising 15 articles, is a compact treaty, barely half the size of a single article VIII of the CWC.

a. Definition

The BTWC does not offer a comprehensive definition of weapons-grade agents and toxins, rather it applies a "type/quantity/purpose" criterion: "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, protective or other peaceful purposes" (art. I (1)). However, the negotiating history of the BTWC, part of which comprised the reports of the United Nations Secretary-General and the WHO, presumably could inform understanding of the range of prohibited agents and toxins as supplementary means of interpretation in the sense of art. 32 of the Vienna Convention on the Law of Treaties.

b. Prohibitions

Prohibitions on items and activities are provided for in articles I through III of the BTWC.

Under art. I, States Parties undertake "never in any circumstances to develop, produce, stockpile or otherwise acquire or retain" agents, or toxins in association with "weapons, equipment or means of delivery designed to use such agents or toxins for hostile purposes or in armed conflict". The phrase "never in any circumstances" indicates renunciation of reciprocity, whether in terms of acquisition or the use of biological weapons. As to the use, in addition to direct reference to, and re-affirmation of the principles and objectives of the Geneva Protocol in the Preamble, the assumption that the BTWC prohibits the deployment, whether first or retaliatory, is reinforced by the ban on items "designed to use such agents or toxins". Furthermore, reference to "hostile purposes" and "armed conflict" make it clear that the prohibition embraces situations of international and non-international armed conflict, as well as situations below the threshold of an

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armed conflict, including "internal disturbances and tensions" in the sense of art. 1 (1) of the Protocol (II) Additional to the Geneva Conventions.

Art. II obliges States Parties "to destroy, or to divert to peaceful purposes […] all agents, toxins, weapons, equipment and means of [their] delivery", that is, all items prohibited under art. I. The term "peaceful purposes", which also appears in art. I (1) and X, is not defined, if only by way of enumeration of permitted activities.

Art. III contains an undertaking "not to transfer to any recipient whatsoever, directly or indirectly, and not in any way to assist, encourage, or induce any State, group of States or international organizations to manufacture or otherwise acquire" any items specified in art. I. This prohibition is rather similar to that of art. I of the Treaty on the Non-Proliferation of Nuclear Weapons (hereafter "NPT"), except that the BTWC adds an international organization to prohibited third-party recipients. An authority assumed that this prohibition was designed to be also applicable to "sub-national groups or individuals" (J. Goldblat, *Arms Control: The New Guide to Negotiations and Agreements*, Second Edition, PRIO – SIPRI, 2003, p. 139), but that avenue would be explicitly cut off almost three decades into the BTWC being in force (on 28 April 2004 the Security Council of the United Nations unanimously adopted a resolution obliging States to refrain from supporting by any means non-State actors from developing, acquiring, manufacturing, possessing, transporting, transferring or using WMDs, including biological weapons, and their means of delivery (Security Council resolution 1540 (2004) of 28 April 2004)).

c. Permissions

Art. I permits acquisition of microbial or other biological agents, or toxins for prophylactic, protective and other peaceful purposes. The two specified purposes - prophylactic and protective - may cover medical and sanitary activities, including research, development and production of antidotes and vaccines, methods of immunization and treatment, design and manufacture of protective gear, filtration and purification systems. Art. X adds "prevention of disease" to the list of peaceful purposes. The BTWC does not identify other peaceful purposes that may be pursued by acquisition of agents and toxins. Whether research and development of means of defense from prohibited weapons meets the requirement of peaceful purposes or not, they are not banned by the BTWC.

Art. X encourages "exchange of equipment, materials and scientific and technological information for the use of bacteriological (biological) agents and toxins for peaceful purposes" between States Parties – again, similar to the NPT (art. IV et al.).

Another avenue of cooperation is assistance to be provided by a State Party to another State Party upon its request, "if the Security Council decides that such Party has been exposed to danger as a result of violation of the Convention" (art. VII).

d. Implementation, Verification, Compliance

According to art. IV, each State Party to the BTWC commits, in accordance with its constitutional processes, to take any necessary measures to prohibit and prevent all activities prohibited under art. I "within the territory of such State, under its jurisdiction or under its control anywhere". Implementation measures imply legislative and other regulatory acts ranging from export controls to criminal and administrative penalties for violations. The term "jurisdiction" should be understood within the meaning attributed to it by applicable provisions of the law of the sea, air law and space law. Jurisdiction and control may apply to few remaining non-self-governing territories, as well as to occupied territories. Related to national implementation, it may be international criminalization of the use of weapons, prohibited by the BTWC, in international and non-international armed conflicts, as provided for under amendment to art. 8 (2b and 2e) of the Rome Statute of the International Criminal Court.

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The BTWC does not envisage a verification regime to monitor compliance, unlike contemporaneous treaties concluded in late 1960s to early 1970s: the NPT which relied on an external mechanism – the International Atomic Energy Agency, or the Treaty for the Prohibition of Nuclear Weapons in Latin America and the Caribbean (Treaty of Tlatelolco) which established its own dedicated compliance machinery – the Agency for the Prohibition of Nuclear Weapons in Latin America and the Caribbean (OPANAL), or bilateral treaties regulating strategic nuclear weapons of the United States and the Soviet Union, which formalized the use of national technical means - seismic and space technologies, side-looking airborne, and over-the-horizon radars, etc., which allowed to collect data related to treaty-limited activity of another party, and did not require access to its national territory.

In lieu of a verification and compliance mechanism, the States Parties undertook "to consult one another and to co-operate in solving any problems" that may arise with respect to the application of the BTWC (art. V). Possible consultations could be unspecified "appropriate international procedures within the framework of the United Nations". Should consultations prove to be of no avail, any State Party is entitled to lodge a complaint, supported by all possible evidence, with the Security Council, which may then initiate an investigation (art. VI) (the United Nations Special Commission (UNSCOM) established under the terms of the Security Council resolution 687 (1991) of 3 April 1991 with a mandate to oversee the destruction, among others, of Iraq's biological weapons and related facilities, had been formed and had operated outside the BTWC framework and was intentionally kept outside the scope of this Introductory Note).

Compliance issues may also be raised at quinquennial conferences of States Parties with a general mandate to review the operation of the BTWC, in particular taking into account "any new scientific and technological developments relevant to the Convention" (art. XII).

e. Relationship with Chemical Weapons

While the de-linking of biological and chemical weapons as subject matters of international negotiations opened the way for conclusion of the BTWC, the text of the treaty underscores the close relationship between the two classes of WMDs. The preamble recognizes the historical importance of the Geneva Protocol, declares the goal of comprehensive prohibition of chemical weapons and describes the BTWC as "a first possible step towards the achievement" of that goal. Art. VIII reaffirms that the BTWC does not diminish or otherwise alter obligations that States Parties bear under the Geneva Protocol. Furthermore, art. IX obligates States Parties to pursue in good faith negotiations with a view to reaching early agreement on effective and comprehensive measures for the prohibition of chemical weapons. Eventually that relationship would be recognized by the CWC which in its own preamble recognized the principles and objectives of the BTWC and referred to obligations under art. XI of the latter. However, 38 States Parties to the BTWC are not parties to the Geneva Protocol and two, while parties to the latter, are not parties to the CWC.

f. Amendments and Withdrawal

Art. XI entitles each State Party to propose amendments to the BTWC, although it does not specify a forum where such proposals could be negotiated. So far there have been none.

While the BTWC is of unlimited duration, it permits a withdrawal in case a State Party reckons that "extraordinary events" within the realm of the Convention "have jeopardised the supreme interests of its country" (art. XIII (2)). However, unlike in two earlier major treaties with direct bearing on international security and disarmament – the Antarctic Treaty and the Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water, the BTWC reproduces the withdrawal clause of the NPT and binds a State Party to notify not only all other Parties, but also the Security Council of such intention, and provide "a statement of the extraordinary events it regards as having jeopardised its supreme interests".

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Subsequent Activities

Since the BTWC entered into force, the States Parties convened eight review conferences, the ninth due in 2021. In particular, the Second Review Conference (1986) agreed upon a politically-binding set of confidence-building measures that were amended at subsequent conferences. Measures included exchanges of various data, in particular on research centers and laboratories, on national biological defense research and development programs, as well as declaration of legislation, regulations and other measures of past activities in offensive and/or defensive biological research and development programs, and of vaccine production facilities.

The Fourth, Sixth and Seventh Review Conferences reaffirmed that the use by States Parties, in any way and under any circumstances, of microbial or other biological agents or toxins, that was not consistent with prophylactic, protective or other peaceful purposes, was effectively a violation of art. I.

The Sixth Review Conference decided to establish an Implementation Support Unit (ISU) for the BTWC tasked with providing administrative support to meetings within the framework of the Convention, as well as its comprehensive implementation and universalization.

Review conferences developed intersessional methods of work, including Meetings of Experts and Meetings of States Parties.

However, potentially the most far-reaching effort initiated by the Third Review Conference, which established the Ad Hoc Group of Governmental Experts (VEREX) to identify and examine possible verification measures, later developed into a process to negotiate a legally-binding verification protocol to the BTWC, failed to produce a draft treaty.

Apart from activities within the BTWC framework, the General Assembly keeps Convention-related matters on its annual agenda.

Conclusion

The BTWC became the first treaty, currently approaching universality in membership, which prohibited an entire class of WMDs. Apart from being a legal instrument of disarmament, it also bans – by means of interpretation of its text and ensuing understandings reached by States Parties – the use of prohibited items as means of warfare, hence its overlap with international humanitarian law. Despite occasional setbacks, ranging from compliance issues to failure to conclude a verification protocol, it remains a key legal instrument of prevention of proliferation of WMDs and a cornerstone of international security.

This Introductory Note was written in January 2021.

Related Materials

A. Legal Instruments

Treaty of Peace with Germany, Versailles, 28 June 1919.

Vienna Convention on the Law of Treaties, Vienna, 23 May 1969, United Nations, *Treaty Series*, vol. 1155, p. 331.

Rome Statute of the International Criminal Court, Rome, 17 July 1998, United Nations, *Treaty Series*, vol. 2187, p. 3, as amended. In particular, amendment to article 8 (Weapons which use microbial or other biological agents, or toxins).

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B. Documents

League of Nations, Conference for the Reduction and Limitation of Armaments, Preliminary Report on the Work of the Conference, prepared by the President, Mr. Arthur Henderson, Geneva, July 1936, p. 103.

Resolution adopted by the Commission for Conventional Armaments at its 13th meeting, 12 August 1948, and a Second Progress Report of the Commission (S/C.3/32/Rev.1, 18 August 1948), p. 2.

Letter dated 20 September 1961 from the Permanent Representatives of the Union of Soviet Socialist Republics and the United States of America to the United Nations addressed to the President of the General Assembly (A/4879, 20 September 1961).

Conference of the Eighteen-Nation Committee on Disarmament, Working Draft of Part I of the Treaty on General and Complete Disarmament (in a Peaceful World) proposed by the USA and the USSR (ENDC/40/Rev.1, 31 May 1962).

General Assembly resolution 2162 B (XXI) of 5 December 1966 (Question of general and complete disarmament).

Report of the Secretary-General, "Chemical and Bacteriological (Biological) Weapons and the Effects of Their Possible Use" (A/7575/Rev.1- S/9292/Rev.1, 1 July 1969).

Report of a WHO Group of Consultants, "Health Aspects of Chemical and Biological Weapons", Geneva, 1970, p. 12.

Report of the Conference of the Committee on Disarmament, 23 February to 30 September 1971 (A/8457, *Official Records of the Disarmament Commission, Supplement for 1971* (DC/234)), para 37.

General Assembly resolution 2826 (XXVI) of 16 December 1971 (Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction).

General Assembly resolution 32/84B of 12 December 1977 (Prohibition of the development and manufacture of new types of weapons of mass destruction and new systems of such weapons).

Security Council resolution 687 (1991) of 3 April 1991.

Security Council resolution 1540 (2004) of 28 April 2004.

C. Doctrine

J. Goldblat, *Arms Control: The New Guide to Negotiations and Agreements*, Second Edition, PRIO – SIPRI, 2003, p. 139.

T. Graham Jr., "Limitations on Chemical and Biological Weapons", in P. B. Stephan, B. Klimenko (eds.), *International Law and International Security: Military and Political Dimensions – A U.S.-Soviet Dialogue*, 1991, p. 116.

S. Tulliu and T. Schmalberger, *Coming to Terms with Security: A Lexicon for Arms Control, Disarmament and Confidence-Building,* UNIDIR, Geneva, 2003, p. 51.

B. Tuzmukhamedov, "Legal Dimensions of Arms Control Agreements: An Introductory Overview", *Collected Courses of the Hague Academy of International Law,* vol. 377, 2015.

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United Nations, *The United Nations and Disarmament 1945-1970*, United Nations, 1970, pp. 78-125.

D. Additional Resources

NATO*Term* – The Official NATO Terminology Database.

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