
CHAPTER 8

The Biological Weapons Convention: implementing legislation and compliance

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A VERTIC yearbook would not be complete without a chapter on biological weapons and the 1972 Biological Weapons Convention (BWC).¹ The biological weapons-related chapters in previous VERTIC yearbooks focused primarily on verification.² They initially addressed the impact of the absence of verification measures, the need to strengthen the convention through verification measures, and updates on the United Kingdom's practice inspections. Later they considered progress, setbacks and finally the spectacular disintegration of the negotiations for a legally binding agreement—the 'verification protocol'—which would have provided verification and compliance monitoring measures for the convention in 2001.

The challenge of how to resolve the verification conundrum in the BWC remains, particularly as exponential developments in science and technology increase the risks of both intentional and inadvertent non-compliance with the convention—such as the deliberate or coincidental development of novel biowarfare agents and related delivery systems. The BWC inter-Review Conference 'intersessional' meeting process has, since 2002, successfully evaded calls from various quarters for states parties to collectively and explicitly deal with this verification challenge, most recently at the 2015 Meeting of Experts. However the issue will undoubtedly resurface at the convention's Eighth Review Conference in late 2016, as a sizeable number of states parties continue to call for the convention to be strengthened through an additional, legally-binding agreement on verification measures and reiterate their view that compliance can only be determined through verification.

In the absence of agreement to deal with the verification challenge, certain states have mooted a handful of proposals³ in the BWC intersessional process on additional means for demonstrating compliance and enhancing assurance of compliance with the convention. Along with proposals raised by civil society researchers,⁴ these are percolating in the Track I and Track II spheres. It is fair to say that there are divergent opinions on pursuing further confidence-building measures over verification and compliance monitoring measures. However these proposals warrant serious consideration at the Review Conference as well as by states parties that wish to contest the rather

complacent attitude toward compliance in BWC diplomacy by taking on more effective transparency and confidence-building measures unilaterally and by supporting a more systematic and coordinated process for analysing compliance, at least until states parties can collectively revisit verification options.

VERTIC is a non-governmental organisation with longstanding involvement in biological weapons diplomacy and related policy research. Over the years, VERTIC staff have analyzed the BWC verification negotiations, proposed alternative confidence-building, transparency and other measures that could help to alleviate its verification lacunae and, more recently, developed legislative tools to assist states to adhere to the convention and implement it. This legislative work was prompted by BWC states parties renewed interest in national implementation as a result of the intersessional process. VERTIC's legislative assistance work subsequently morphed into a programme providing legislative implementation assistance globally not just for the BWC, but also other international legal instruments that give rise to domestic legislative implementation obligations on chemical, biological, radiological and nuclear (CBRN) weapons non-proliferation. In particular, this work comprehensively addresses legislative requirements for UN Security Council Resolution (UNSCR) 1540 (adopted in 2004) on the non-proliferation of weapons of mass destruction to non-state actors. This expansion was similarly prompted by recognition of the need for tailored legislative assistance provision to help states to fulfil complex implementation requirements. VERTIC is now a 'one-stop shop' for states looking to redress shortfalls across their CBRN national legislation in a harmonised manner.⁵ Given the similarities in national implementation requirements across these international legal instruments, it is efficient for states to take a coordinated approach to identifying and rectifying any deficiencies in their national legal order, especially when they have scarce resources to commit to this challenge.

So it is timely in this VERTIC yearbook, which now specifically includes implementation alongside verification in its purview, to reflect on the issue of national implementation of the convention through national measures. As indicated above, this chapter focuses on one form of national implementing measures—legislative measures—as it relates to compliance with the convention. It acknowledges the requirement for a wider suite of national implementing measures, including administrative and judicial measures as well as other actions and activities such as awareness-raising and training, to facilitate compliance—but focuses specifically on the relationship between implementing legislation and compliance. This is an interesting issue as states parties are discussing proposals to boost transparency and confidence-building about compliance, and on means to enhance assurance of compliance, all of which have the consideration of national implementing legislation as a core component. Any resulting process—whether engaged in by a collective of states parties between themselves on

a voluntary basis, or applied to all states parties by means of collective agreement—will need to encompass all of the BWC obligations that require implementation through domestic legislation and also recognise that the complexity of the legislative framework will necessarily differ for each state, depending on its particular situation and characteristics with regard to the convention.

This chapter is intended to provide some food-for-thought for avid followers of BWC diplomacy on an important but somewhat niche issue—legislation and compliance. It also aims to provide a taste of some of the discussions on ‘compliance assurance’ for those who dip in and out of BWC issues.

The chapter begins by outlining the requirement to take national implementing measures under the BWC. It notes why national legislation, in particular, is required as part of those measures and which treaty obligations typically require implementation through legislation. Next, it discusses the relationship between implementing legislation and compliance, in generic terms, and highlights the need for different models of legislative compliance in the BWC context. Then it considers states parties’ views, collectively and individually, on the relationship between legislation and compliance, and the role of legislation in proposed compliance assurance processes. It concludes with some thoughts on the impact on the treaty regime of states parties’ treatment of the legislative compliance issue.

National implementation through national legislation

The binding obligation on BWC states parties to put in place national implementing measures for the convention is abundantly clear, as Article IV requires states parties to take ‘any necessary measures’ to give effect to the convention at the national level, in accordance with their constitutional processes.⁶

States parties with a common law legal tradition (which maintain that international and national legal systems are distinct) are obliged to transform their obligations under an international legal instrument⁷ into national law (through legislation), as well as take any other appropriate measures. States with a civil law system (which maintain that international and national law form a single legal order), may be able to incorporate treaty obligations automatically into national law on entry into force (these are described as ‘self-executing’ treaties) if this is permitted by their Constitution. However, the BWC is not considered to be a self-executing treaty.⁸ The complexity of the activities required to fulfil the convention’s obligations to prohibit and prevent biological weapons are such that national legislation, in addition to other forms of national measures, is also essential for civil law states parties.

The requirement for domestic legislation, as a core component of such national implementing measures has been examined extensively in other publications.⁹ In essence,

domestic legislation is necessary to prohibit and prevent the development, production, stockpiling, acquisition or retention of the agents, toxins, weapons, equipment and means of delivery specified in Article I. This requires penal legislation to establish penalties and offences for violations, including for biological weapons *use*, which is implicitly prohibited under the convention (and confirmed explicitly by states parties at Review Conferences). Legislation is also required to give effect to obligations on transfer controls (Article III); on consultation and cooperation (Article V), on cooperation with a UN Security Council investigation (Article VI(2)); as well as the Confidence-Building Measure process (to facilitate the collection and submission of national information in CBM returns, which may require explicit authority by means of legislation). The CBM process was instituted at the Second Review Conference in 1986 as a means to strengthen the authority of the convention and enhance confidence in its implementation. States parties' participation in the process is intended to 'prevent or reduce the occurrence of ambiguities, doubts and suspicions, and in order to improve international co-operation in the field of peaceful bacteriological (biological) activities'.¹⁰ It entails collating and submitting information on a series of forms by 15 April each year, for circulation among states parties only.¹¹ If a state already possesses biological weapons, as defined in Article I, then it may also require legislative measures to complete disarmament actions.¹²

From an international law perspective, then, all BWC states parties need to adopt and enforce national legislation, in addition to other necessary national measures, to give effect to the convention. States parties have confirmed this understanding, by collectively noting the importance of legislative (and other measures) in enhancing domestic compliance.¹³ They also collectively agreed at the Seventh Review Conference that enacting and implementing legislation, especially penal legislation (as well as administrative, judicial and other measures), which are designed to enhance domestic implementation of the convention's core obligations, establish legal jurisdiction, and ensure biosafety and biosecurity, would 'strengthen the effectiveness of convention'. They regularly call on each other to enact and implement such measures.¹⁴ More recently, they also collectively specified that laws and regulations are key elements of an effective national export control system.¹⁵

The requirement for legislation as part of national implementation measures is also supported by state practice. A majority of states parties has taken the floor during the standing agenda item on strengthening national implementation during the BWC intersessional process to document and describe their national measures—particularly legislation—as part of their overall national implementation framework. Moreover, those who have not taken the opportunity to speak to the status of their implementing legislation do not claim that they are under no such legislative obligation.

The relationship between legislation and compliance

Despite this requirement for national implementing legislation, and states parties' collective understanding and agreement that national legislation is an essential element of the national implementing measures required under Article IV, there is a reluctance among some states parties to discuss or describe implementing legislation as a compliance issue in BWC diplomacy. Legislation is regularly mentioned as having an important role in generating confidence in states parties' compliance and in states parties' *commitment* to compliance. Certainly, legislation is a demonstration of a commitment to compliance, particularly if it is appropriate and effective, and is widely promulgated among stakeholders and routinely enforced. However, the adoption and enforcement of implementing legislation is not just a requirement for effective BWC implementation, as discussed above, or a demonstration of a commitment to compliance. It facilitates compliance. Without it, or enough of it on a range of legal issues, states cannot give effect to the convention's prohibitions. They could not investigate and prosecute biological weapons crimes or breaches of strategic trade controls or bio-safety and biosecurity regimens, for example.

It is well recognised that incomplete legislative implementation in a state party is likely due to insufficient resources, the need for technical assistance and/or competing national priorities. For these states, transparency about their intentions with regard to ensuring effective legislative implementation (now and into the future) helps to assuage any concerns about this aspect of compliance.

This hesitancy by some states to discuss implementing legislation as a compliance issue, and therefore to equate an absence of appropriate and effective national implementing legislation with non-compliance, does not occur solely in the BWC context. It also occurs in other treaty regimes, especially those on highly politicised issues. In those instances, obligations pertaining to national implementing measures and compliance may be treated as separate issues (albeit equally important), or non-implementation of required domestic measures may be treated as a technicality; 'technical' non-compliance, at least anecdotally. The distinction has the effect of downplaying the non-compliance and implying that the non-compliance is not serious; that the state is not at fault (no matter how long the situation persists); and does not intend to be in non-compliance — which is almost always the case in practice. Crucially, non-implementation is distinguished from other forms of non-compliance that would warrant the use of compliance and enforcement mechanisms, particularly deliberate breaches of core prohibitions.¹⁶ This is in contrast to non-compliance in the form of a deliberate, gross treaty violation ('substantive' non-compliance) which, in the non-proliferation and disarmament context, could put the violating state party at a military or other advantage and which,

whether left as a lingering suspicion or allegation, or confirmed through verification, has more serious repercussions for the strength of the treaty regime.

How states parties choose to respond to suspected or proved non-compliance, collectively and individually, as well as how they choose to describe it, is up to them. The distinction between these two types of non-compliance—non-implementation (a technicality) and a gross violation (substantive non-compliance)—is warranted. They each require a different response from states parties to ensure that compliance is achieved. Non-compliance through non-implementation may have serious implications, such as if it exposes the state to being a safe haven for bioterrorism, and the state may be at least partially at fault if it has not taken up repeated offers of necessary assistance. However, as intent is a major factor in distinguishing these different forms of non-compliance, it should not be problematic to refer to complete or partial non-implementation as non-compliance, as long as other states parties respond appropriately, such as by offering and providing necessary technical and other assistance, including through expert partners, and the affected state takes steps to remedy the situation as quickly as possible.

In the BWC context, all states parties have some pre-existing legislation that gives effect to at least some of their obligations under the convention. However, this ranges from some very basic penal provisions that could be applied to punish certain biological weapons-related crimes (at least, biological weapons use where it results in personal injury or death) in some countries, right through to states that have a patchwork of uncoordinated laws on related issues that are not harmonised, or do not have an effective oversight structure, and which still leave undesirable gaps. Pre-existing legislation that was adopted to give effect to other, but related, international obligations or policy concerns will go some way to meeting BWC obligations but not necessarily effectively or comprehensively, and they may be outdated in light of revised applicable standards.

So what would compliance with the BWC's legislative obligation look like? Much like the question frequently posed of verification—'how much is enough?'¹⁷ how much legislation is required? The scope and complexity of national implementing legislation necessary to give effect to the BWC will vary between states parties. That much everyone agrees on. It will depend on the state's specific situation and characteristics, including factors such as:

- whether the state operates a biodefence programme;
- the size (or even, the existence) of a biological science research sector or biotech industry and associated facilities;
- whether it is host to one or more biosafety level 4 (or equivalent) laboratories (which can work with the most dangerous biological agents);¹⁸

- the extent of domestic and cross-border transfers of controlled agents, toxins, equipment and technologies;¹⁹ and
- arguably, its risk of being used as a safe haven for bioterrorism and its risks of other biological weapons-related crimes.

Asking the converse question might be helpful in identifying what aspects of implementation should be addressed by legislation (either primary legislation—laws—or other legislative instruments such as regulations). When might a lack of effective implementing legislation for the BWC so impair the state's ability to fulfil its obligations, depending on its specific situation under the convention, that it could constitute non-compliance? Or put another way, can the state effectively prevent and prohibit biological weapons—or not? It can be helpful to pose some questions of the existing legislation to test how it works. If an exercise to hypothetically test the legal framework determines that existing laws are insufficient to address a plausible scenario, it will help in identifying what additional provisions are needed.

At the most basic level, if any state party is not able to undertake the following activities under existing legal authority, then it cannot effectively fulfil its legislative obligations under the convention:

- investigate and prosecute biological weapons crimes (development, manufacture, production, acquisition, stockpiling, possession, retention, transfer, transport and use etc.);
- investigate and prosecute related activities (assistance, encouragement, inducement, financing, accomplices etc.);
- establish jurisdiction over such offences committed in its territory or under its jurisdiction or control anywhere; establish jurisdiction over such offences committed by natural or legal persons possessing its nationality;
- control transfers of dangerous biological agents and toxins, and related equipment and technology, or non-controlled biological agents and toxins that are suspected of being misused for illegal purposes (through a catch-all clause) (even if this is just a framework structure with offences and penalties, which can be easily amended later in response to specific risks);
- destroy or divert to peaceful uses any of the agents, toxins, weapons, equipment or means of delivery specified in Article I (disarmament, if this is applicable to the state).

It follows that states with more than a basic capability in the relevant scientific industries will require more complex national implementation measures, particularly

legislative measures. Most BWC states parties would fall in this category. If such a state party is not able to undertake the following additional activities under existing legal authority, then it likely cannot effectively fulfil its legislative obligations under the convention:

- account for, secure and physically protect dangerous biological agents and toxins;
- ensure the physical protection of relevant facilities;
- authorise permitted activities involving dangerous biological agents or toxins (by means of licensing and registration) and require personnel reliability checks for persons working with such agents or toxins;
- co-operate and co-ordinate with public health officials and other agencies in the event of an incident involving dangerous biological agents and toxins;
- co-operate with and assist other law enforcement agencies in the event of an incident involving dangerous biological agents and toxins;
- maintain continuous oversight of national implementation, generally, and review and update national implementation policy and measures appropriately (such as through a national interagency body); and
- collate and submit information required under the Confidence-Building Measure returns.

These lists are indicative, not definitive or exhaustive, of legislative compliance requirements. Certain domestic factors, which help to form a picture of a state's specific situation concerning implementation, will need to be taken into account in determining the requirements for compliance with legislative implementation. As the various proposals on compliance assurance acknowledge, the status of legislative (and other) measures needs to be weighed up with other implementation activities to form an overall assessment of compliance.

States parties' views

States parties have conducted meaningful discussions on what might constitute compliance with the convention recently.²⁰ More teasing out of what states understand to constitute compliance with the convention will inform further consideration of appropriate compliance assurance, monitoring and verification techniques. As part of these discussions, some states parties have specified that legislation is an essential element of national implementation and discuss it in compliance terms. Working papers by the United Kingdom, Australia, Switzerland and the United States in the

current intersessional process acknowledge that, while there is no single checklist of actions or omissions that clearly indicate compliance or non-compliance with the convention, there are particular indicators of compliance and non-compliance which can be considered together in making a compliance assessment. Consistently, the adoption and enforcement of legislation, especially penal legislation, and national export control legislation are listed as indicators of compliance.²¹

The United Kingdom and Switzerland make a clear distinction 'between compliance with Articles I and II on the one hand and Articles III and IV on the other'.²² That is, they distinguish between states parties' compliance with the core biological weapons prohibitions and the requirement to disarm biological weapons programmes under Articles I and II—and their comprehensive national implementation obligations under Articles III and IV. The United Kingdom's working paper acknowledged that '[f]ailure to enact comprehensive implementing legislation places a State Party formally in non-compliance with its Article IV obligations. However, this is not in the same category as non-compliance with Article I's core prohibitions . . .'.²³ These papers do not describe this distinction along the lines of non-implementation (or technical) non-compliance and gross violation (substantive) non-compliance as described above; but it is capable of being inferred. The papers do not specify the implications of this distinction, although they do recognise, along with the paper by the United States, that there is a need to be realistic about the implementation burden facing certain states when making compliance judgments. They suggest that for states so burdened, an absence of necessary national implementing measures (including legislation) should not be read as an indicator of an intention not to comply with the core treaty prohibitions, and (in the US working paper) should not necessarily even be considered in a compliance judgment.²⁴ However, the United Kingdom noted that 'a reluctance to enact and enforce national legislation despite repeated offers of assistance' is one (of many) possible indicators of concern about a state party's attitude to compliance. This increases the importance of states parties sharing information on their intent with regard to their legislative implementation obligations.

As noted above, legislative implementation is an element of a number of proposals for means to enhance assurance in compliance with the BWC, essentially through providing information on legislative measures enacted and on their enforcement, through additional transparency and confidence-building measures (TCBMs). Such proposals do not envisage sanctions or enforcement; rather, transparency is intended to provide information on implementation that could assure other states parties that this obligations is being fulfilled, and create an environment for cooperation and assistance to facilitate strengthened implementation and compliance.

However, certain other states parties maintain that assessments of compliance with national implementing measure (including legislation) obligations should not be

conducted as a separate activity to assessments of implementation of all aspects of the convention (that is, including those implementation obligations that do not necessitate domestic implementing legislation). These states consider that proposals for additional confidence-building measure tools do not address all aspects of BWC implementation and that they can only have a transparency and confidence-building role, as they do not have the same status as a declaration and cannot be used in a process to formally assess compliance.²⁵ For example, a statement by Iran on behalf of the Non-Aligned Movement specified that, in the BWC context, 'the assurance of compliance with the convention's provisions has to be undertaken collectively through appropriate multilateral verification arrangements'.²⁶

In contrast to the minimalist approach to demonstrating compliance with national implementing requirements that is taken in the current CBM process ('yes/no' responses to four questions), national legislation is the central component in the 'Compliance Assessment' process proposed by Canada. Under this more expansive approach, states parties would prepare and submit an initial detailed submission to the BWC Implementation Support Unit, and thereafter submit annual updates, on their national implementing legislation and regulations as well as their overall national implementation programme, including descriptions of how the laws work in practice and how they are enforced, including helpful flowcharts.²⁷ The process is intended to demonstrate a commitment to national implementation and compliance, and could result in 'an assessment of compliance of the national program to the BTWC'.²⁸

Another proposal similarly recommends instituting additional TCBMs, that could be undertaken unilaterally, bilaterally or multilaterally, to provide reassurance of compliance in addition to the existing CBM process. These would entail comprehensive reporting on, inter alia, domestic legislation, including penal laws; transfer control regulations; and national biosecurity measures.²⁹ This proposal specifically highlights a role for regional cooperative assistance in undertaking such measures, which in itself would have a compliance assurance function.

A related proposal suggests further consideration of what sort of information would help prevent or reduce the occurrence of ambiguities, doubts and suspicions about compliance under the existing CBM process, as part of an overhaul intended to improve participation rates.³⁰ The proposal notes that 'transparency around capabilities and intentions lies at the heart of assessing compliance and promoting mutual confidence in the BTWC context'. In legislative implementation terms, the current CBM returns do not enable effective reporting of this crucial aspect of capability—or intentions, for that matter—without a more intensive documentation of national legislative and regulatory systems, along the lines of that proposed by Canada.

'Peer review' proposals go one step further, by incorporating a review process for information submitted through a confidence-building measure information exchange.

France's peer review proposal is intended both to generate confidence in compliance (including through in-country transparency visits) and facilitate the provision of necessary assistance to rectify any deficiencies. It suggests a modular approach, with the first module concentrating on national legislation and regulations, and the possibility of adding further modules as desired. The BENELUX countries (Belgium, Netherlands and Luxembourg) have taken up France's call for peer review trials by announcing that they will conduct a peer review exercise among themselves and contribute their findings to the Eighth Review Conference.³¹ This peer review process suggests using a 'questionnaire tool' that applies objective principles, criteria and standards for implementing legislation to gather the baseline information for review.

VERTIC has already developed a survey template on national implementing measures for the BWC and related requirements of UNSCR 1540, which it uses in its legislative assistance work to identify existing relevant legislative and other provisions. As with France's proposed questionnaire tool, VERTIC's surveys are not compliance assessments; rather, they identify what measures are in place against a comprehensive range of implementation obligations which the respective state can use to assess its own compliance against its specific circumstances and, aided by VERTIC's technical expertise, rectify whichever gaps it has identified as it sees fit.

A civil society proposal extends the peer review process further by calling for declarations (reaffirming their commitment to the convention's core prohibitions), in addition to documentation (through reporting on national implementation measures) and demonstration (through regular visits), in a new '3D Bio' initiative. This proposal is intended specifically for those states parties with biological defence programmes and biosafety level 4 (or equivalent) laboratories.³²

Impact on the treaty regime

A perception that legislative compliance with the BWC is largely a procedural issue, however widely held, belies its importance in preventing biological weapons and can result in some unintended negative consequences for the BWC regime, not least making it more difficult to prioritise BWC implementation at the national policy level. Legislatures always have more bills proposed than time available to consider them. It takes a committed government, and national champions willing to shepherd it through complex national policy processes and ensure full inter-agency coordination and co-operation, to undertake the process, overcome the hurdles along the way and enact legislation in anything less than a couple of years. More complex legislation and regulatory frameworks, such as to establish national export controls or biosecurity regimes, can take even longer. In particular, without an explicit requirement for a national

oversight structure, such as the Chemical Weapons convention requires, it can prove difficult to requisition a budget line to undertake national implementation oversight and enforcement functions.

For as long as the consideration of compliance continues to feature as part of a confidence-building measure process in the BWC regime (in addition to states parties individual assessments of each others' compliance), rather than a more sophisticated, systematic compliance determination process of the type that necessitates an international verification organisation, then states parties may feel justified in maintaining the convention's nascent secretariat as an administrative office, with skeletal staffing and resources. That will continue to constrict the regime's outreach activities and its ability to centralise the matching of offers and requests for assistance, including with national implementation requirements, long after the functional (but time-bound) equivalent structure for the related obligations in UNSCR 1540—the 1540 Group of Experts—expires. The BWC regime needs to be strengthened, to an appropriate scale, to assist states parties to keep up with the risks of intentional and inadvertent non-compliance through the rapid developments in related science and technology.

Endnotes

- 1 Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction. The treaty was opened for signature on 10 April 1972 and entered into force on 26 March 1975.
- 2 These include chapters by Erhard Geissler (1991, 1992), Barbara Hatch Rosenberg (1993, 1994), John Walker (1994), Robert Mathews (1995, 1996) Nicholas Sims (2000), Marie Chevrier (2001), Jenni Rissanen (2002) and Jez Littlewood (2003).
- 3 For example, calls for additional information to be included in the annual confidence-building measure returns (United Kingdom); a compliance assessment process (Canada, Czech Republic and Switzerland); a peer review mechanism (France); and a bio-transparency and openness initiative (United States): see 'BWC compliance - a conceptual discussion: preliminary views by Australia', submitted by Australia, BWC/MSP/2013/MX/WP.2, 29 July 2013, p. 3.
- 4 For example, UNIDIR's study on peer review mechanisms, 'A peer-review mechanism for the Biological and Toxin Weapons Convention', submitted by France, BWC/MSP/2012/WP.12, 18 December 2012, which elaborates on the concept that France submitted in its earlier working paper to the Seventh Review Conference in 2011. See also Filippa Lentzos, '3D Bio: declare, document and demonstrate', *Non-Proliferation Papers*, No. 45, April 2015, EU Non-Proliferation Consortium.
- 5 The author acknowledges the work of her VERTIC staff colleagues, past and present, on this programme: Yasemin Balci, Sonia Drobysz, Rocío Escarriaza Leal, Bilqees Esmail and Scott Spence. All views expressed in this paper, however, are her own.
- 6 For more description on the Article IV obligation see Angela Woodward, 'The Biological Weapons Convention and UNSCR 1540', *Global non-proliferation and counter-terrorism: the impact of UNSCR 1540*, Olivia Bosch and Peter van Ham (editors), Brookings Press, Chatham House, and Clingendael, 2007, pp. 100–101.
- 7 In the context of this chapter, a convention, but equally a treaty, protocol or other form of legal agreement between states; the nomenclature is an irrelevant distinction.

- 8 See Nicholas Sims, 'Strengthening structures for the Biological and Toxin Weapons Convention: options for remedying the institutional deficit', *Toward a stronger BTWC*, Disarmament Forum No. 3, 2006. UNIDIR: Geneva, 2006, p. 18; and Treasa Dunworth, Robert J. Mathews and Timothy L.H. McCormack, 'National implementation of the Biological Weapons Convention', *Journal of Conflict & Security Law* (2006), Vol. 11 No. 1, pp. 98–99. This has also been formally acknowledged collectively by states parties through Review Conference outcomes calling for all states parties to adopt legislative, administrative, judicial and other measures, including penal legislation; see *Additional agreements reached by previous Review Conferences relating to each article of the Convention*, Prepared by the BWC Implementation Support Unit, UN Office for Disarmament Affairs, Geneva, Switzerland, February 2012, Section VI, [on] Article IV, 2. On legislative, regulatory and administrative measures, p. 7.
- 9 In particular, see Treasa Dunworth, Robert J. Mathews and Timothy L.H. McCormack, 'National implementation of the Biological Weapons Convention', *Journal of Conflict & Security Law* (2006), Vol. 11 No. 1, pp. 993–118.
- 10 'History and operation of the confidence-building measures', BWC/CONF.VII/INF.1, 28 September 2011, p. 2.
- 11 The current iteration of the forms requests information and declarations as follows: exchange of data on research centres and laboratories (CBM A, Part 1); exchange of information on national biological defence research and development programmes (CBM A, Part 2); exchange of information on outbreaks of infectious diseases and similar occurrences caused by toxins (CBM B); encouragement of publication of results and promotion of use of knowledge (CBM C); (CBM D has been deleted); declaration of legislation, regulations and other measures (CBM E); declaration of past activities in offensive and/or defensive biological research and development programmes (CBM F); declaration of vaccine production facilities (CBM G). The CBMs were revised at the Third Review Conference (in 1991), Sixth Review Conference (procedural changes only, in 2006) and Seventh Review Conference (in 2011). For more information, see: 'History and operation of the confidence-building measures', BWC/CONF.VII/INF.1, 28 September 2011; 'Final Document of the Seventh Review Conference', BWC/CONF.VII/7, 13 January 2012.
- 12 These legislative requirements are comprehensively examined in Treasa Dunworth, Robert J. Mathews and Timothy L.H. McCormack, 'National implementation of the Biological Weapons Convention', *Journal of Conflict & Security Law* (2006), Vol. 11 No. 1, pp. 93–118.
- 13 *Additional agreements reached by previous Review Conferences relating to each article of the Convention*, Prepared by the BWC Implementation Support Unit, UN Office for Disarmament Affairs, Geneva, Switzerland, February 2012, Section VI, [on] Article IV, 2. On legislative, regulatory and administrative measures, p. 7.
- 14 Most recently at the BWC Seventh Review Conference: *Final Document*, BWC/CONF.VII/7, 13 January 2012, Article IV, p. 11.
- 15 For example, in the 'Synthesis of considerations, lessons, perspectives, recommendations, conclusions and proposals drawn from the presentations, statements, working papers and interventions on the topics under discussion at the [2015] Meeting of Experts', submitted by the Chairman, BWC/MSP/2015/L.1, 5 November 2015, p. 8, which does not have binding status, as one might infer from its tortuous title.
- 16 On non-implementation as non-compliance, see Peter Van den Bossche, 'In search of remedies for non-compliance: the experience of the European Community', 3 *Maastricht J. Eur. & Comp. Law* 371, 1996, pp. 372–374.
- 17 This is also the title of a seminal work on arms control verification; see Allan S. Krass, *Verification: how much is enough?*, SIPRI. Taylor & Francis: London, 1985, books.sipri.org/product_info?c_product_id=234
- 18 'Biosafety Level 4 is required for work with dangerous and exotic agents that pose a high individual risk of aerosol-transmitted laboratory infections and life-threatening disease that is frequently fatal, for which there are no vaccines or treatments, or a related agent with unknown risk of transmission'; US Centres for Disease Control, *Biosafety in Microbiological and Biomedical Laboratories*, 5th Edition, Section IV – Laboratory Biosafety Level Criteria, www.cdc.gov/biosafety/publications/bmb15/bmb15_sect_iv.pdf
- 19 Such as those specified in the Australia Group control lists, the European Union's regime for the control of exports, transfers, brokering and transit of dual-use items, or the United States government's 'Select Agents and Toxins' list.

- 20 Recent discussions were prompted by working papers to BWC treaty meetings, in particular see: ‘Proposal for a working group to address compliance issues’, submitted by Australia, Japan and New Zealand, BWC/CONF.VII/WP.11, 19 October 2011; and ‘We need to talk about compliance’, submitted by Australia, Canada, Japan, New Zealand and Switzerland, BWC/MSP/2012/WP.11, 12 December 2012.
- 21 For example, see ‘We need to talk about compliance: a response to BWC/MSP/2012/WP.11’, BWC/MSP/2013/MX/WP.1, 2 July 2013, submitted by the United Kingdom of Great Britain and Northern Ireland; ‘BWC compliance – a conceptual discussion: preliminary views by Australia’, submitted by Australia, BWC/MSP/2013/MX/WP.2, 29 July 2013; ‘Compliance with the BWC: preliminary considerations by Switzerland’, submitted by Switzerland, BWC/MSP/2013/MX/WP.12, 9 August 2013; A response to BWC/MSP/2012/WP.11: ‘We need to talk about compliance’, submitted by the United States, BWC/MSP/2014/MX/WP.10, 4 August 2014 (this paper implies that legislation, among other measures, is an indicator of compliance). Another working paper which emphasises the importance of legislative, among other measures, to ensure national implementation and demonstrate political support for the convention is ‘National implementation of the Biological Weapons’ Convention, submitted by Australia, Japan, Malaysia, Republic of Korea and Thailand, BWC/MSP/2014/MX/WP.11, 5 August 2014.
- 22 ‘We need to talk about compliance: a response to BWC/MSP/2012/WP.11’, BWC/MSP/2013/MX/WP.1, 2 July 2013, submitted by the United Kingdom of Great Britain and Northern Ireland, p.3 and ‘Compliance with the BWC: preliminary considerations by Switzerland’, submitted by Switzerland, BWC/MSP/2013/MX/WP.12, 9 August 2013, p. 2.
- 23 ‘We need to talk about compliance: a response to BWC/MSP/2012/WP.11’, BWC/MSP/2013/MX/WP.1, 2 July 2013, submitted by the United Kingdom of Great Britain and Northern Ireland, p.3
- 24 The US does not assess compliance with national implementing measure obligations in its formal compliance assessments of other BWC states parties; see 2015 *Report on Adherence to and Compliance With Arms Control, Nonproliferation, and Disarmament Agreements and Commitments*, US Department of State, 5 June 2015, www.state.gov/t/avc/rls/rpt/2015/243224.htm
- 25 For example, see ‘Intervention by India on strengthening national implementation (to the BWC Meeting of Experts, 2015)’, 13 August 2015.
- 26 Statement on behalf of the Non-Aligned Movement and other states parties to the BWC, by Delegation of the Islamic Republic of Iran, on national implementation, 13 August 2015 (to the BWC Meeting of Experts, 2015).
- 27 Switzerland and the Czech Republic have joined Canada in preparing sample submissions for such a process; see ‘National Implementation of the BTWC Compliance Assessment’, submitted by Canada and Switzerland, BWC/MSP/2012/MX/WP.17, 3 August 2012; and ‘National implementation of the BTWC: compliance assessment: update’, submitted by Canada, the Czech Republic and Switzerland, BWC/MSP/2012/WP.6, 5 December 2012.
- 28 BWC/MSP/2012/MX/WP.17, p. 2.
- 29 ‘Providing Reassurance on Biological Weapons Convention (BWC) Implementation’, submitted by Australia, Brunei Darussalam, Chile, Costa Rica, Ecuador, Ghana, Japan, Malaysia, Norway, Republic of Korea and Thailand, 11 August 2015.
- 30 ‘Next steps on the CBMs: some key questions for 2013’, submitted by the United Kingdom of Great Britain and Northern Ireland, BWC/MSP/2012/WP.1, 12 November 2012.
- 31 ‘BENELUX BTWC Peer Review, outline of key features and objectives’, submitted by Belgium, Luxembourg and Netherlands, BWC/MSP/2015/MX/WP.13/Rev.1, 10 August 2015.
- 32 ‘3D Bio: Declare, Document and Demonstrate’, *Non-Proliferation Papers* No. 45, EU Non-Proliferation Consortium, April 2015, www.nonproliferation.eu/web/documents/nonproliferationpapers/3b-bio-declare-document-and-demonstrate-46.pdf.