

The Chemical Weapons Convention as a Model for WMD Elimination: A Civil Society Perspective on the Biological and Toxin Weapons Convention Negotiations of a Verification Protocol 1994 - 2001

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Summary

It is difficult to escape the conclusion that two decades have been wasted due to the persistent weakness of a crucial component of the Web of Prevention—the Biological and Toxin Weapons Convention (BTWC). Furthermore, with the destruction of chemical weapons now complete, it is evident that both the Chemical Weapons Convention (CWC) and the BTWC face the shared challenge of preventing the resurgence of these weapon systems. They are also inherently connected in addressing the threat posed by toxin and bio-regulatory weapons. Although a rapid strengthening of the BTWC seems unlikely at present, when the opportunity arises, it will likely require adopting key mechanisms such as declarations, visits, and inspections, similar to those of the CWC, to ensure its effectiveness.

1. Introduction

In reflecting on the 9th Review Conference of the Biological and Toxin Weapons Convention (BTWC) of 2022, Ambassador Leonardo Bencini, the President, noted that despite the difficulties there had been significant achievements.¹ These included:

“We established a Working Group tasked with identifying, examining and developing measures to strengthen the Convention and improve its implementation. No issue would be off the table at this Working Group, including compliance and verification – the issue at the heart of the previous deadlock – and the possibility of legally binding measures.”

While rapid progress is unlikely in the present international situation, it can be hoped that States Parties to the Convention will be able to take up this task again in the coming years. Numerous detailed assessments of problem compliance and verification, and of possible solutions, have been made in recent years,² but as we were involved as members of civil society in efforts to help strengthen the Biological and Toxin Weapons Convention (BTWC) almost 30 years ago, it seemed reasonable also to offer some historical reflections on the topic. This is not, of course, to suggest that we can necessarily learn anything from history, but that it is as well to be aware of it.

2. History 1994 - 2001

In September 1994, a Special Conference of States Parties to the Biological and Toxin Weapons Convention (BTWC) agreed on a mandate for further negotiation to strengthen the Convention. The Mandate stated, in part, that:³

“...the Conference, determined to strengthen the effectiveness and improve

the implementation of the Convention and recognizing that effective verification could reinforce the Convention, decides to establish an Ad Hoc Group, open to all States Parties. *The objective of this Ad Hoc Group shall be to consider appropriate measures, including possible verification measures, and draft proposals to strengthen the Convention, to be included, as appropriate, in a legally binding instrument, to be submitted for the consideration of the States Parties. In this context, the Ad Hoc Group shall, inter alia consider:*

.... A system of measures to promote compliance with the Convention, including, as appropriate, measures identified, examined and evaluated in the VEREX Report. *Such measures should apply to all relevant facilities and activities, be reliable, cost effective, non-discriminatory and as non-intrusive as possible, consistent with the effective implementation of the system and should not lead to abuse....*" (Emphases added)

These negotiations ended in failure in 2001 when Ambassador Donald Mahley of the United States rejected the draft Protocol text in a *Statement* that, in part, noted:⁴

"...One overarching concern is the inherent difficulty of crafting a mechanism suitable to address the unique biological weapons threat. *The traditional approach that has worked well for many other types of weapons is not a workable structure for biological weapons...*

The draft Protocol will not improve our ability to verify BWC compliance. It will not enhance our confidence in compliance and will do little to deter those countries seeking to develop biological weapons. In our assessment, the draft Protocol would put national security and confidential business information at risk." (Emphasis added)

The components of the "traditional approach" were set out clearly with their rationale by a former Deputy Director for Intelligence at the US Central Intelligence Agency and been Chief of the US Arms Control and Intelligence Staff before that. In his opinion the traditional approach consisted of declarations, routine and challenge inspections as had been used in previous arms control agreements including the recently agreed Chemical Weapons Convention.⁵

In 2010, Ambassador Mahley expanded on the reasoning behind his 2001 *Statement* noting, interestingly, that one issue of concern to the US was that many saw the Chemical Weapons Convention as a model for the Protocol to the Biological and Toxin Weapons Convention:⁶

"A second albatross around the neck of the BWC Protocol negotiations, though it was not apparent at the outset, was the CWC. The CWC, opened for signature in 1993, became a model for the BWC Protocol in the eyes of many of the most committed Western delegations..." (Emphasis added).

That viewpoint would appear to be fully consistent with the 2001 *Statement*. However, his further reflections went on to suggest that the situation in the US Administration during the Ad Hoc Group negotiations was much more complex and contributed to the failure:⁷

"...Concluding a Protocol was never a priority objective for senior political leadership in the US Executive Branch. While *the issue had a few avid followers, it was not discussed in substantive detail, and particularly not regularly, at senior (cabinet, or immediate sub- cabinet) levels*, and there was not government-wide cabinet-level agency internal direction to devote the considerable attention and resources necessary to formulate USG

alternatives to the approaches being espoused by other countries. The results were debilitating to the negotiations, both nationally and internationally.”

Importantly, he added further that:

“Nationally, the shortcoming came as agencies did the homework to determine that proposals currently being discussed in Geneva – usually developed by trying to draw parallels with the CWC, adapted by a country having fewer complicating domestic concerns than the US – were not satisfactory answers to the issues they attempted to address. That allowed the US to act as a sharp critic of the proposals under consideration. *What did not happen was the necessary effort to say “These ideas will not work. Now what ideas can we develop and propose as alternatives that will work?”* (Emphases added)

Therefore, on this account, the US Administration was not united in its view of the impossibility of improving confidence in compliance under the mandate agreed for the Ad Hoc Group, and no serious study of potential alternatives was conducted. Nevertheless, that remained the US position and a stalemate ensured for two decades, with, as has often been noted, some of the States that had appeared to be dragging their feet during the negotiations surprisingly becoming avid advocates of verification.⁸

The situation only changed after the US Statement at the 2022 9th BTWC Review Conference that:⁹

“...There are also harder issues before us; issues that will take more time and effort to address. How do we strengthen implementation of the Convention and enhance mutual assurance of compliance? These are not simple questions.... *We also need to explore what measures – yes, including possible verification measures – might be effective in today’s context...*” (Emphasis added)

The current attempts to investigate these questions will necessarily have to take into account the changes that have occurred since the turn of the century, particularly the rapid advances that have been made in the life and associated sciences, but that does not mean that all of the work that was done during the period of the Ad Hoc Group is irrelevant now. For that reason, the intention here is to briefly review and analyse one Civil Society project that was designed to provide material that could be of use during the Ad Hoc Group negotiations. The position taken by those involved was similar to that of Johnathan Tucker in the conclusion to his comparative analysis of the CWC provisions and the potential BTWC Protocol, that is, that despite the differences:¹⁰

“...Like the chemical treaty, the BWC protocol should establish a set of mutually reinforcing measures ranging from facility declarations to on-site inspections. In addition, the BWC protocol should adopt a CWC-like system of “carrots” and “sticks” to reward states that comply with the treaty while punishing those that remain outside or that fail to adhere to its provisions.”

The Bradford project described and analysed here continued to provide input to the BTWC meetings in Geneva following the cessation of the Ad Hoc Group, but that work is not covered here.

3. The Bradford University Project on Strengthening the Biological Weapons Convention: Description

Dr Graham Pearson retired in 1995 after ten years as Director General and Chief Executive of the UK Chemical and Biological Defence Establishment at Porton Down. He had been a UK Expert at the VEREX meetings in 1992 and 1993 and at the Special Conference to which it reported in 1994. He was thus very familiar with the issues

involved in the Ad Hoc Group negotiations when a little later he joined the Department of Peace Studies at the University of Bradford in the UK as a Visiting Professor. With colleagues at Bradford, other UK colleagues, particularly Dr Nicholas Sims at the London School of Economics, and others from around the world he led a project on strengthening the BTWC for twenty years and was eventually awarded an Honorary Degree by the University for the work he produced on this important issue.

The core of the project was to produce relevant papers for the diplomats in Geneva and other interested parties. These papers were all produced in a distinctive recognisable style (for example, all had a pale green cover and standard presentation of the contents). The first series of *Briefing Papers* began in 1997 and ran to number 33 in February 2001¹¹ (see Table 1).

Table 1: The First Series of Bradford Briefing Papers

- 1 Graham S. Pearson: On-Site Investigations
July 1997
- 2 Graham S. Pearson: The Necessity for Non-Challenge Visits
Sept 1997
- 3 Graham S. Pearson: Discriminating Triggers for Mandatory Declarations
Sept 1997
- 4 Graham S. Pearson & Nicholas A. Sims: National Implementation Measures
Jan 1998
- 5 Graham S. Pearson: An Optimum Organisation
Jan 1998
- 6 Graham S. Pearson: Article X: Some Building Blocks
Mar 1998

- 7 Graham S. Pearson: Article X: Further Building Blocks
Mar 1998
- 8 Graham S. Pearson: Article X: Pharmaceutical Building Blocks
July 1998
- 9 Graham S. Pearson: Article X: Specific Measures to Achieve Implementation
July 1998
- 10 Graham S. Pearson: The Strengthened BTWC Protocol: An Integrated Regime
July 1998
- 11 J. P. Perry Robinson: The CWC Verification Regime: Implications for the Biotechnological and Pharmaceutical Industry
July 1998
- 12 Graham S. Pearson: Article III: Some Building Blocks
Oct 1998
- 13 Graham S. Pearson: Article III: Further Building Blocks
Oct 1998
- 14 Graham S. Pearson & Nicholas A. Sims: National Implementation Measures: An Update
Oct 1998
- 15 an R. Kenyon: Non-Compliance Concern Investigations: Initiation Procedures
Oct 1998
- 16 Graham S. Pearson: The BTWC Protocol Implementation: Practical Considerations
Oct 1998
- 17 Malcolm R. Dando: The Strengthened BTWC Protocol: Implications for the Biotechnology and Pharmaceutical Industry
Oct 1998
- 18 Graham S. Pearson & Malcolm R. Dando: Visits: An Essential and Effective Pillar
Jan 1999

19 Daniel Feakes: The Future BTWC Organization: Some Observations from the OPCW
Jan 1999

20 Graham S. Pearson: Visits: An Essential Portfolio
Apr 1999

21 Mark Wheelis: Outbreaks of Disease: Current Official Reporting
Apr 1999

22 Graham S. Pearson: Article VII Measures: Optimizing the Benefits
July 1999

23 Graham S. Pearson: BTWC Security Implications of Human, Animal and Plant Epidemiology
July 1999

24 Philip van Dalen: Outbreaks of Disease: Current European Reporting
Sept 1999

25 Graham S. Pearson & Malcolm R. Dando: The Emerging BTWC Protocol: An Integrated Reliable and Effective Regime
Sept 1999

26 Graham S. Pearson: Visits: The Emerging Portfolio
Nov 1999

27 Graham S. Pearson: The Emerging Protocol: A Quantified Evaluation of the Regime
Nov 1999

28 Graham S. Pearson: The BTWC Protocol: Improving the Implementation of Article III of the Convention
Jan 2000

29 Graham S. Pearson: Maximizing Security Benefits from Technical Cooperation in Microbiology and Biotechnology
July 2000

30 Ian R. Kenyon & Nicholas A. Sims: Draft Resolution Establishing the Preparatory Commission for the Organisation for the Prohibition of Biological Weapons
July 2000

31 Daniel Feakes & Ian R. Kenyon: The CWC Paris Resolution: Unresolved Issues
July 2000

32 Graham S. Pearson: Scientific and Technical Implications of the Implementation of the BTWC Protocol
Nov 2000

33 Graham S. Pearson: The BTWC Protocol: Improving the Implementation of Article III of the Convention: Pragmatic Considerations

A wide range of expert authors contributed to this first series of *Briefing Papers* and many different issues of relevance were produced. As the negotiations progressed, a new set of *Evaluation Papers* began in 1999 and contained 22 papers by August 2001. These papers were produced by Graham Pearson and Nicholas Sims (Table 2).

Table 2: The Bradford Evaluation Papers

1 Graham S. Pearson: The BTWC Protocol: An Overall Evaluation
July 1999

2 Graham S. Pearson & Nicholas A. Sims: Article X: National Implementation Measures
July 1999

3 Nicholas A. Sims: Articles XVI, XVII, XVIII, XIX and XXIII: Status of the Annexes and Appendices, Signature, Ratification, Accession and Authentic Texts
Sept 1999

4 Nicholas A. Sims: Article XV: Duration and Withdrawal
Sept 1999

5 Graham S. Pearson & Nicholas A. Sims:
Article XX: Entry into Force
Sept 1999

6 Graham S. Pearson & Nicholas A. Sim:
Article XXI: Reservations
Sept 1999

7 Graham S. Pearson & Nicholas A. Sims:
Article XXII: Depositary/ies
Sept 1999

8 Nicholas A. Sims: Article V: Measures to
Redress a Situation and to Ensure
Compliance
Nov 1999

9 Nicholas A. Sims: Article XI: Relationship
of the Protocol to the BTWC and Other
International Agreements
Nov 1999

10 Nicholas A. Sims: Article XII: Settlement
of Disputes
Nov 1999

11 Graham S. Pearson & Nicholas A. Sims:
Article XIII: Review of the Protocol
Nov 1999

12 Graham S. Pearson & Nicholas A. Sims:
Article XIV: Amendments
Jan 2000

13 Graham S. Pearson & Nicholas A. Sims:
Article VI: Assistance and Protection
Against Biological and Toxin Weapons
Jan 2000

14 Ian R. Kenyon, Graham S. Pearson &
Nicholas A. Sims: Article IX: The
Organization
Jan 2000

15 Graham S. Pearson & Nicholas A. Sims:
Preamble
Mar 2000

16 Graham S. Pearson & Nicholas A. Sims:
Article IV: Confidentiality Provisions
Mar 2000

17 Graham S. Pearson, Nicholas A. Sims,
Malcolm R. Dando & Ian R. Kenyon: The
BTWC Protocol: Proposed Complete Text for
an Integrated Regime
Mar 2000

18 Graham S. Pearson, Nicholas A. Sims,
Malcolm R. Dando & Ian R. Kenyon: The
BTWC Protocol: Revised Proposed Complete
Text for an Integrated Regime
July 2000

19 Graham S. Pearson, Nicholas A. Sims,
Malcolm R. Dando & Ian R. Kenyon The
BTWC Protocol: Proposed Complete Text for
an Integrated Regime
Sept 2000

20 Graham S. Pearson, Nicholas A. Sims &
Malcolm R. Dando: The Composite Protocol
Text: An Effective Strengthening of the
Biological and Toxin Weapons Convention
Apr 2001

21 Graham S. Pearson, Nicholas A. Sims &
Malcolm R. Dando: The Composite Protocol
Text: An Evaluation of the Costs and
Benefits to States Parties
July 2001

22 Graham S. Pearson, Nicholas A. Sims &
Malcolm R. Dando: The US Rejection of the
Composite Protocol: A Huge Mistake based
on Illogical Assessments
Aug 2001

Large Guides, *Key Points* for the 4th and the
5th Review Conference were also produced
under the project, and in 2001 a third series
of *Review Conference Papers* was also
initiated (Table 3).

Table 3: The Bradford Review Conference Papers

No.9 The Resumed Fifth BTWC Review Conference: Maximizing the Benefits from the Final Declaration, by Graham S. Pearson and Nicholas Sims, October 2002 in PDF 2002

No.8 Return to Geneva: Uncertainties and Options, by Graham S. Pearson and Nicholas Sims, October 2002 in PDF 2002

No.7 Return to Geneva: A Comprehensive List of Measures by Graham S. Pearson, August 2002 in PDF 2002

No.6 Return to Geneva: The United Kingdom Green Paper by Graham S. Pearson in PDF 2002

No.5 Return to Geneva: The Next Stage of the BTWC Fifth Review Conference by Nicholas A. Sims in PDF 2002

No.4 The US Statement at the Fifth Review Conference: Compounding the Error in Rejecting the Composite Protocol by Graham S. Pearson, Malcolm R. Dando & Nicholas A. Sims in PDF 2002

No.3 New Scientific and Technological Developments of Relevance to the Fifth Review Conference in PDF 2001

No.2 The Functions of the BTWC Review Conferences: Maximizing the Benefits from the Fifth Review Conference, Review Conference Paper No. 2, 2001 in PDF 2001

No.1 The Fifth BTWC Review Conference: Opportunities and Challenges, Review Conference Paper No. 1, 2001 in PDF 2001

These *Review Conference Papers*, which eventually reached number 31 in 2012, had reached number 9 in 2002 when the broken 2001 – 2002 Fifth Review Conference resumed. All of this work was funded through a series of grants from non-Government charitable sources.

In addition, Graham Pearson obtained a number of grants in order to organise several NATO Advanced Research Workshops (ARWs) and Advanced Studies Institutes (ASIs). These involved diplomats and scientific experts who were involved in the negotiations in Geneva. Some examples of the reports from these meetings with the report editors are shown in Table 4.

Table 4: Examples of NATO ARWs and ASIs

Verification of the Biological and Toxin Weapons Convention: 32 (NATO Science Partnership Subseries: 1, 32) Hardcover - Illustrated, 31 July 2000
by Malcolm R. Dando (Editor), G.S. Pearson (Editor), Tibor Toth (Editor)

Scientific and Technical Means of Distinguishing Between Natural and Other Outbreaks of Disease
Editors: Malcolm Dando, Graham Pearson, Bohumir Kriz
Part of the book series: NATO Science Partnership Subseries: 1 (ASDT, volume 35)

Maximizing the Security and Development Benefits from the Biological and Toxin Weapons Convention
Editors: Malcolm R. Dando, Cyril Klement, Marian Negut, G.S. Pearson
Copyright: 2002

The Role of Biotechnology in Countering BTW Agents
Editors: Alexander Kelle, Malcolm R. Dando, Kathryn Nixdorff
Copyright: 2001

During this period, Professor Pearson also published a study of *UNSCOM – The UNSCOM Saga: Chemical and Biological Non-Proliferation* and started his Report from Geneva on the meetings of Experts and States Parties for the Harvard/Sussex *CBW Conventions Bulletin*.

4. The Bradford University Project on Strengthening the Biological Weapons Convention: Analysis

There is obviously far too much detailed material produced within this project for a full analysis of it to be sensibly made in the space available here. However, it is possible to ask whether the Protocol might have begun the process of strengthening the Convention and whether it was in fact based on the CWC experience. We can attempt to do that by examining two of the *Evaluation Papers* published in 2001 just before and after the US rejected the Chairman's Composite Protocol text.

Evaluation Paper 21 of July 2001 was titled *The Composite Protocol Text: An Evaluation of the Costs and Benefits to States Parties*.¹² In paragraph 5, the Paper sets out how the evaluation is to be carried out:

“This Evaluation Paper examines the value of the Protocol by making comparisons, first between the Biological and Toxin Weapons Convention (BTWC) with its Protocol regime and the BTWC alone, and then between the BTWC with its Protocol regime and the Chemical Weapons Convention (CWC) regime, given that both Conventions overlap — and rightly so — in the areas of toxins, bioregulators and peptides...”

We will deal with these two comparisons separately here, but the Paper makes an important point before turning to the comparisons, pointing out that the aim was never to produce a ‘verification’ Protocol but rather to find ways on increasing confidence in compliance amongst States Parties that the:¹³

“...whole thrust has been to focus on compliance — to increase transparency as well as the quantity and quality of information about activities and facilities

within States Parties of particular relevance to the Convention. Over time this transparency will help to build confidence between States Parties that they are in compliance with the Convention...”

This point is very important, particularly with regard to the rejection of the Composite Protocol — or of any further development of it — by the United States.

The comparison of the BTWC and Protocol with the BTWC is summarised in Tables 1 and 2 within the Paper and it is concluded that the Protocol would bring significant benefits to the States Parties and over time would increase confidence in compliance:¹⁴ Furthermore, it continues to note that international cooperation and assistance would also be improved:

“...The international cooperation and assistance provisions address a genuine need to counter outbreaks of disease and through improvements in infrastructure in areas such as biosafety and good manufacturing practice to meet internationally accepted standards bring benefits for health and safety as well as for prosperity. The Protocol as a whole thus brings improved health, safety, security and prosperity to all States Parties.”

Of course, it may be noted in relation to the ongoing discussions of strengthening the Convention after the 9th Review Conference in 2022, that the protocol had detailed provisions for International Cooperation and a Cooperation Committee. See Table 1 on page 5 (row 10) in the Evaluation Paper.

Turning then to the comparison with the CWC, the Paper begins by emphasising again that there is a critical overlap between the BTWC and the CWC with regard to the so-called mid-spectrum agents like toxins and bioregulators.¹⁵ Therefore, the Paper argues that it is not surprising that the:

“... BTWC Protocol regime has adopted some concepts where appropriate from the CWC regime. It is not, however, just a simple copy which ignores the fundamental differences between the two areas. The Protocol is, however, much more elaborated than the CWC and has been finely tailored to address the fundamental difference in the nature of biological agents as well as to capture the facilities of greatest relevance to the Convention...”

Indeed, the text continues:

“... If we ignore the chemical weapon and chemical weapon production facility elements of the CWC, then the basic architecture of the BTWC Protocol regime and the CWC regime is the **same**. The qualitative differences between the regimes are in the detail: the BTWC Protocol regime has built on the confidence-building measures agreed by all the States Parties at the Second Review Conference in 1986 and extended at the Third Review Conference in 1991. In respect of the monitoring of dual-purpose materials and facilities, the two regimes are very comparable, with the Protocol regime imposing a less onerous but more focussed burden in respect of declarations and visits whilst the international cooperation provisions are much more extensive than those of the CWC.” (The bold items in this and succeeding quotations are in the original text).

With Footnote 7 in the quotation above explaining further that:

“⁷ This difference results because the CWC was negotiated when a number of States had admitted to having stockpiles of chemical weapons and to having chemical weapon production facilities which are required to be destroyed under the CWC. In contrast, when the BTWC was negotiated in the early 1970s the US had already announced that it would destroy its stockpile and no other State admitted

to having stockpiles of biological weapons or to biological weapon production facilities. Consequently, Article II of the Convention makes no mention of production facilities.... As the BTWC has been in force since 1975 and no State has admitted to a stockpile of biological weapons there are no provisions in the Protocol requiring the declaration and destruction under verification of such weapons.”

Table 3 of the *Evaluation Paper* then sets out a detailed comparison of the BTWC with the Protocol and the CWC.

On this basis, the Paper concludes that with regard to the comparison with the CWC:¹⁶

“The aim of the [BTWC] Protocol throughout has been to create a package of measures that will increase transparency and build confidence between States Parties that they are in compliance with the Convention. *It is a **not** a verification Protocol in the narrow sense – it is misleading to suggest otherwise. The heart of the Protocol is thus made up of mandatory declarations, the declaration follow-up procedures and the provisions for investigations.* A balance has necessarily to be struck as to which facilities are to be declared: the Protocol declaration triggers embrace a wide range of the facilities and activities of most relevance to the Convention:

- a. Biodefence programmes and facilities.
- b. Maximum biological containment facilities
- c. High biological containment facilities engaged in certain specified production or genetic modification activities
- d. Plant pathogen containment facilities over a particular floor area
- e. Work with listed agents and/or toxins of a particular character: production above

a certain capacity; genetic modification activities; and intentional aerosolization.

- f. Production facilities in excess of certain capacities or producing human or animal vaccines.” (Emphasis added).

And therefore, that:

“Those who argue that the CWC regime is not relevant to considerations of the BTWC Protocol regime are ignoring the facts that **both** regimes address dual-use materials and technology, **both** have general purpose criteria in the basic prohibition which ensures that past, present and future agents are all covered and **both** cover the prohibition of toxins, bioregulators and peptides. *It is evident that the Protocol regime has been developed from that of the CWC and had been tailored to address the particular nature of biological agents and toxins.*” (Emphasis added)

It was therefore unlikely that members of the Project would be in agreement with the US rejection of the Protocol.

That, indeed, proved to be a correct appreciation. *Evaluation Paper* 22 of August 2001 titled *The US Rejection of the Composite Protocol: A Huge Mistake Based on Illogical Assessment* ran to 48 pages of text and tables that consider the Statements made by Ambassador Mahley and other US official statements in detail.¹⁷ We concentrate here on the question of whether the approach taken by the CWC of mandatory declarations, confirmatory visits and potential investigations were what the negotiations were intended to achieve and were achieved, but rejected by the US. The *Evaluation Paper* states that:¹⁸

“The US statement continues to say that **‘Our overarching concern is the inherent difficulty of crafting a mechanism suitable to address the unique biological weapons threat’** and

that the traditional approach that has worked well for many other types of weapons **‘is not a workable structure for biological weapons’**. If this is indeed the case, one has to ask why the United States agreed to the conclusions of the Special Conference in 1994 at which Don Mahley said in regard to the mandate of the Ad Hoc Group that:

“First, the commitments contained in the Convention, especially the obligations in Article I, were fully valid and must remain unchanged. The United States would strongly oppose any effort to amend the Convention, but it fully supported the preparation of a protocol containing a regime to strengthen it. Secondly, ...all measures included in the protocol should be mandatory and legally binding. The measures set forth in the protocol should help strengthen the Convention by establishing an official benchmark for identifying discrepancies or ambiguities pertaining to facilities or activities and for seeking clarification, providing a mechanism for pursuing specific activities of concern and allowing for direct diplomatic engagement to resolve compliance concerns. Thirdly, the ad hoc committee should focus on developing a legally binding regime based on the measures proposed by VEREX Group and the conclusions as reported to the States parties. Fourthly, the selection process should consider both off-site measures, **such as mandatory declarations**, and on-site measures, **such as facility visits**, providing a solid foundation for the verification regime.”

The *Evaluation Paper* reiterates this point in its paragraph 24 as follows:

“Moreover, the United States was one of the 29 States who joined in July 1998, a year after the Ad Hoc Group had transitioned to negotiation of the rolling text of the Protocol, in submitting Working Paper No. 296 to the Ad Hoc Group. This stated that ‘the above States Parties

consider that the measures to strengthen compliance should include, inter alia, the following elements, and that discussion on these should focus on ensuring their efficiency, practicality and cost effectiveness. They include:

- Declarations of a range of facilities and activities of potential relevance under the Convention, inter alia, to enhance transparency;
- Provisions for visits to facilities in order to promote accurate and complete declarations and thus further enhance transparency and confidence;
- Provision for rapid and effective investigations into concerns over non-compliance, including both facility and field investigations; and
- A cost-effective and independent organization, including a small permanent staff, capable of implementing the Protocol effectively.'

The Working Paper [No. 296] concludes by stating that "They [the above States Parties] call upon the Ad Hoc Group as a whole to demonstrate leadership by intensifying its efforts towards the successful and early adoption of a legally-binding Protocol that will address the global threat posed by biological and toxin weapons.' The language in the US statement of 25 July 2001 is totally illogical when considered against this background."

The significance of the CWC with regard to the development of the Protocol is emphasised again in a passage on the utility of on-site activities. Paragraph 34 of the Evaluation Paper begins:¹⁹

"The statement goes on to say that when the US **examined the prospects of the most intrusive and extensive on-site activities physically possible ... we discovered that the results of such intrusiveness would still not provide**

useful, accurate or complete information. This is hardly surprising as such a conclusion applies equally to the completeness of information under any on-site inspection under any arms control regime. It is, however, a sweeping conclusion that is misleading in its assertion that such on-site activities would not provide **useful** information. It is evident from past experience that on-site activities have provided and do provide useful information — concerns can either be resolved or reinforced. It is also misleading to suggest that on-site activities need to be considered in isolation. They form a key element of an integrated regime comprising mandatory declarations, follow-up procedures and investigations which in the composite Protocol text provide a structured and elaborated framework for the provision of accurate information about the activities and facilities of the most relevance to the Convention...."

And it proceeds to illustrate the point as follows:

"...This brings immense benefits as was noted by Dr John Gee, Deputy Director General of the OPCW, addressing the success of the declarations made under the CWC, who said that:

What is significant is the fact that declarations have been made and the key parts of each State Party's declarations are available to all other States Parties....This has been a considerable confidence-building measure.... This process has answered a lot of questions that were out there prior to entry into force.... all the other countries had to go on were press reports and intelligence estimates and so forth. The whole process of having declarations available to other States Parties has been a great success and a very substantial confidence-building measure.

If the situation with the Protocol in place is compared to the alternative of simply

continuing with the Convention, it is impossible to see how a conclusion — as has been stated recently in evidence to a Congressional Subcommittee — can be reached that ‘a Protocol would not improve our ability to effectively verify compliance with the BWC either in terms of certifying that a country is in compliance with, or in violation of, its obligation’. Without the Protocol all that any country has to go on are press reports, intelligence estimates and so on; intelligence estimates have necessarily to be worst case assumptions and may well give undue credence to rumour and innuendo or simply fail to recognise perfectly legal reasons for an activity...”

Thus, the Analysis section of the Evaluation Paper states that:²⁰

“The United States statement of 25 July 2001 makes a number of assertions and exhortations which do not stand up to detailed analysis. It is evident that the United States in rejecting the Protocol is making a **huge mistake** — and more to the point — one that is based on illogical assessments. *It is primarily evaluating the Protocol against some national standards — and not against the Protocol mandate that the United States not only agreed to but was instrumental in drawing up having proposed many of the elements...*” (Emphasis added)

So, there is no doubt, on this assessment, that the BTWC Protocol was based on the traditional arms control standard mode of structure and function embodied in the Chemical Weapons Convention.

5. The Future?

As the originator of the idea of a web of deterrence²¹ that later expanded into the concept of a web of prevention, Graham Pearson always saw the possible Protocol as an element in the overall layered system of

preventing the hostile misuse of the chemical and biological sciences. Therefore, in order to address the new agenda in Geneva after the failure of the Protocol negotiations, the project he organised at Bradford continued to provide *Briefing Papers* in a Second Series of 19 papers from January 2003 to November 2005 and in a Third Series of 11 papers from July 2012 to July 2015. Additionally, as mentioned previously, a new series of 31 *Review Conference Papers* ran from 2001 to March 2012 and large *Key Points Guides* were produced for the 6th and 7th Review Conferences.²²

Nevertheless, it is hard to avoid the conclusion that twenty years have been lost because a central element of the Web of Prevention — the Biological and Toxin Weapons Convention — remains weak. Moreover, now that the phase of destruction of chemical weapons has been concluded, it is clear that the CWC and the BTWC face the same problem of preventing the re-emergence of these weapon systems and that they are inevitably joined in the need to cover toxin and bio-regulatory weapons.²³

It has to be acknowledged that the revolution in the Life and associated Sciences has continued since the time of the Protocol negotiations, but the revolution was already underway at that time.²⁴ It seems that the critical question remains much the same as it was during the 1990s, and that is, whether States Parties can have confidence that other States do not have offensive biological weapons programmes. In its 2024 compliance report the United States defined such programmes as follows:²⁵

“The United States’ definition of a state biological warfare program is a leadership-approved effort intended to acquire, develop, modify, produce, or retain biological warfare agents for use or potential use as a weapon. A biological

warfare program would probably include one or more of the following:

- *Researching, acquiring, developing, modifying, producing, retaining, or testing biological weapons (BW) agents and/or BW agent dispersal devices for use as a weapon;*
- Facilities producing or intended to produce BW agents and/or BW agent dispersal devices for use as a weapon;
- Training, doctrine, or plans for use of BW agents as a weapon; and,
- Use or attempted use of a BW agent as a weapon.” (Emphases added).

Although at present, rapid strengthening of the BTWC is unlikely; when that becomes possible it seems to us that, amongst other things, it is going to require consideration of the standard core mechanism of declarations, visits and inspections along the lines of the CWC, if it is to be effective.²⁶

Endnotes:

¹ J. Revill and M.G. Maceda, (Eds.) *Reflections on Review Conferences: The Non-Proliferation Treaty, The Biological Weapons Convention and The Chemical Weapons Convention*. UNIDIR, Geneva, 2023, p. 14.

² See, for example, N. Cropper, *et al Creating a Verification Protocol for the Biological Weapons Convention: A Modular-Incremental Approach*, Next Generation for Biosecurity Competition. Nuclear Threat Initiative, Washington, D.C. 2022.

³ Special Conference of the States Parties to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction, Final Report, BWC/SPCONF/1, United Nations, Geneva, 19 – 30 September, 1994, p. 10.

⁴ Donald Mahley *Biological Weapons Convention: Statement by the United States to the Ad Hoc Group of Biological Weapons States Parties*, Geneva, Switzerland, 25 July 2001, State Department Archive at USA.gov. p. 2.

⁵ D. J. MacEachin, “Routine and Challenge: Two Pillars of Verification”, *The CBW Conventions Bulletin*, 39 (1 – 3), 1998.

⁶ Donald A. Mahley “A Personal Assessment of the BWC Protocol Negotiations”, *The CBW Conventions Bulletin*, 86(1 – 5), 2010, p. 2.

⁷ *Ibid.*, p. 4.

⁸ See, for example, J. Littlewood, *The Biological Weapons Convention; A Failed Revolution*, Ashgate, Aldershot, 2005, pp. 209 -212.

⁹ “Statement delivered by Bonnie Jenkins, United States Under Secretary of State for Arms Control and International Security”, Ninth Biological Weapons Review Conference, Geneva, Switzerland, 29 November 2022, p. 2.

¹⁰ J.B. Tucker, “Verification Provisions of the Chemical Weapons Convention and their Relevance to the Biological Weapons Convention”, in G.S. Pearson *et al* (Eds.), *Biological Weapons Proliferation: Reasons for Concern, Courses of Action*, Stimson Center, Washington, D.C. pp.2=76-104, 100 at <https://www.jstor.org/stable/resrep10897.14>.

¹¹ The Papers are available on the Web of Prevention Clearing House website at <https://www.opbw.org/sbtwc/sbtwc/html>.

¹² See the full text of Evaluation Paper 21 on the Web of Prevention Website. This quotation is from page 2.

¹³ Paragraph 10, p. 4.

¹⁴ Paragraphs 12 to 14, pp.3 – 5.

¹⁵ Paragraphs 15 to 17, pp. 6 to 8.

¹⁶ Paragraphs 25 and 27, pp. 14 and 15.

¹⁷ The full text is available on the Web of Prevention Clearing House website as in endnote 11 above.

¹⁸ Paragraph 22, pp. 12 and 13.

- ¹⁹ Paragraph 34, pp. 17 and 18.
- ²⁰ Paragraph 80, p. 39.
- ²¹ Graham S. Pearson, “The Vital Importance of the Web of Deterrence”, Proceedings of Sixth International Symposium on “Protection against Chemical and Biological Warfare Agents”, Stockholm, 10 - 15 May 1998, pp. 23-31; Graham S. Pearson, “Prospects for Chemical and Biological Arms Control: The Web of Deterrence”, *The Washington Quarterly*, Spring 1993, pp.145 - 162.
- ²² The full texts of both of these documents are available on the Web of Prevention website.
- ²³ M. Crowley and M.R. Dando, *Toxin and Bioregulator Weapons: Preventing the Misuse of the Chemical and Life Sciences*, Palgrave Macmillan, Springer Nature, Cham, Switzerland, 2022.
- ²⁴ See for example *Novel Toxins and Bioregulators: The Emerging Scientific and Technological Issues Related to the Verification of the Biological and Toxin Weapons Convention*, External Affairs and International Trade, Ottawa, Canada, September 1991. This extensive analysis was circulated to States Parties at the Third Review Conference in September 1991.
- ²⁵ *Adherence to and Compliance with Arms Control, Nonproliferation, and Disarmament Agreements and Commitments*, Department of State, Washington, D.C. April 2024, p.22 .
- ²⁶ D. J. MacEachin, no. 5.