

25th Workshop of the Pugwash Study Group on the Implementation of the Chemical and Biological Weapons Conventions: Towards a Successful Outcome for the Sixth Review Conference¹

18-19 November 2006, Geneva, Switzerland

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This workshop was hosted by the Association Suisse de Pugwash in association with GIPRI, the Geneva International Peace Research Institute, using the grant provided by the Swiss Federal Authorities.

The workshop took place on the eve of the BWC Sixth Review Conference and was attended by sixty-one participants, all by invitation and in their personal capacities, from a number of countries including Australia, Belgium, Czech Republic, France, Germany, Israel, Italy, Japan, Pakistan, Russian Federation, Sweden, Switzerland, the United Kingdom (UK) and the United States of America (USA). This report is the sole responsibility of its author, who was asked to prepare a brief account of the proceedings of the meeting in consultation with the Steering Committee. It does not necessarily reflect a consensus of the workshop as a whole, nor of the Study Group. The workshop was strictly governed by the Chatham House Rule, so reference to specific speakers is not detailed here.

I

Chemical Weapons Convention; Progress in Implementation

The first presentation examined the progress of the CWC in the context of its approaching 10th anniversary since it entered into force in 1997. However, it was argued that this is not simply an occasion for celebration but also an important occasion for conveying the image of a mature organisation that is advancing well compared to other WMD regimes, and for initiating discussions about future activities, involving both diplomats and academics. Several key issues were focused on as particular challenges for the future of the CWC.

The Destruction of Chemical Weapons: It has become clear that the ten-year destruction period envisaged in the CWC is inadequate for both Russia and the USA. It has also been suggested that the USA will fail to meet the proposed extended 2012 deadline. Given this situation, modalities need to be agreed upon and options for extension should be discussed at the Eleventh Session of the Conference of State Parties to the CWC, being held 5-8th December, 2006.

¹ A list of participants and papers is included below in this document.

Compliance Concerns: A further challenge for the CWC is the concern that some CWC member states may not have declared all relevant CW facilities or may subsequently fail to meet the extended destruction deadline. The mechanism of the OPCW Executive Council is proposed as the best approach to dealing with compliance concerns rather than a bilateral confrontational approach.

'Nonlethal' incapacitants: The development of 'nonlethal' incapacitating chemicals, which is of growing interest for counterterrorism operations, is a major challenge for the CWC. While such developments, if intended for "Law enforcement including domestic riot control purposes" (CWC Art II.9.d) are not prohibited, the development, production and use of such chemicals for military or paramilitary purposes comes under the prohibition of the Convention. Despite attempts by some states parties to address this issue in the First Review Conference, it has largely been neglected. The topic has been considered too sensitive to broach at OPCW meetings, but solutions must be approached in forthcoming reviews.

It was suggested that the Second Review Conference, scheduled for April 2008, would be a good opportunity for the states parties to the CWC and the OPCW to address these and other challenges.

The next presentation examined the status and problems of implementation of the CWC. It argued that while, in terms of universality, there were a relatively high number of states parties to the CWC, some of those states not party to the convention were important exceptions in terms of their possible CW capabilities.

It was noted that, currently, one of the most important activities in the implementation of the CWC is CW destruction. It was reiterated that the originally scheduled ten-year destruction period has proven to be insufficient and, while the ongoing destruction process has accelerated, it was suggested that even the extended time schedule is unlikely to be met by both Russia and the USA.

Recommendations of the OPCW Scientific Advisory Board were discussed, including mechanisms for amending schedules, instruments for submitting data on novel agents and measures for providing cover against unscheduled and new toxic compounds. The need for verification of the chemical industry and inspections was also stressed.

Finally, it was noted that the problems of scientific and technological developments are expected to attract attention at the Second Review Conference.

II

The Sixth Review Conference - Achieving a successful outcome

This agenda item opened with an authoritative presentation on prospects for the Sixth Review Conference. The presentation focused on the expected outcome report of the Sixth Review Conference and proposals for future intersessional meetings.

Outcome Report of the Sixth Review Conference

The Sixth Review Conference is expected to produce an outcome document, on the basis, inter alia, of the article-by-article review. It was emphasised that this document should be:

- Concise and accessible. The importance of communicating the outcome to the media, the scientific community, industry and the general public was noted in order to ensure shared effort and shared responsibility across governments, commerce and civil society.
- A reaffirmation of the norms and the core elements of the Convention. It was noted that it would be useful to recall the understanding that the Convention applies to all relevant scientific and technological developments and prohibits the use of BW.
- A statement of deliberations and agreements. It was suggested that these topics would either fall under particular articles of the Convention or under 'cross-cutting' categories. It was noted that the inclusion of cross-cutting issues was not intended to duplicate features of the articles but to examine what issues needed more work, such as CBMs, implementation support and the intersessional process.

Future Intersessional Meetings

It was noted that the BWC is a 'weaker relative' of the CWC and NPT, having only 155 state parties and no permanent structure or verification protocol. It was argued that a robust review process was therefore more important, and that an intersessional program of work would help to compensate these weaknesses. It was suggested that the Sixth Review Conference should establish guidelines and set schedules for future intersessional meetings.

Possible topics for the intersessional meetings were suggested, including:

- Confidence-building measures (CBMs)
- New scientific and technological developments relevant to the Convention
- Scientific and technological cooperation and exchanges
- Bioterrorism
- Compliance and verification
- Coordination with other organisations and activities
- Education

Moving onto the workshop's main agenda topic of the BWC Sixth Review Conference, this section was divided into the following key categories:

The Outcome of the Preparatory Committee - Article by Article Review

This session began by highlighting the fact that the Sixth Review Conference provided the first opportunity for a comprehensive review of the BWC since the Fourth Review Conference in 1996. It was stressed that this was an opportunity to both reaffirm the norm against BW and to strengthen the effectiveness of the Convention by agreeing appropriate measures.

In light of the developments of the 2003-2005 intersessional meetings and the UNSCR1540, it was suggested that the Sixth Review Conference should endorse and incorporate some of the substance of the language used. For example, it was argued that since the outcomes of the various annual Meetings of State Parties relate to various Articles of the Convention, the consideration of relevant articles during the Review Conference's Article by Article review could endorse and include the conclusions reached at the annual meetings in the Final Declaration of the Review Conference. It was also argued that the language relating to outreach and implementation in the eighth operative paragraph of UNSCR1540 could be usefully incorporated in the Final Declaration.

The Intersessional Meetings 2003 to 2005 - Effective action to be taken?

This section examined the Intersessional meetings of 2003 to 2005 with a focus on plans for the future. It was argued that a 'plan of action' or program is necessary in order to improve universality and national implementation. The need to improve mechanisms for confidence building measures was also addressed.

It was argued that a flexible approach should be taken to programs and agendas for future intersessional meetings. Some possible themes were suggested as follows:

- Consultation and transparency. It was suggested that the Article V consultation mechanism should be developed to include a clarification mechanism in case of potential inconsistencies in CBM returns. It was also suggested that further consideration should be given to codes of conduct for scientists and the possibility of developing guidelines establishing national oversight authorities.
- Assistance and Cooperation. It was suggested that information should be exchanged on potential preparedness and assistance measures; biosecurity and biosafety measures; measures for detecting illicit trade; and measures for preventing proliferation, including redirecting former weapons scientists.
- Programs/plans for national implementation and universality. The development of programs/plans for achieving universal membership of the BWC and for promoting national implementation was suggested.
- Measures for alleged use. It was suggested that technical requirements for the establishment of an appropriate procedure for investigation into suspicious outbreaks or alleged use should be considered.
- Advisory panels. It was suggested that criteria and functions for a scientific advisory committee for the BWC could be developed, with the annual task of reviewing science and technology relevant to the BWC.

It was stressed that the BWC should ensure that a mechanism is put in place that allows BWC state parties to meet annually to discuss and address these themes.

Key Elements of the Sixth Review Conference

Overview of the Governance Regime: This section began with a presentation providing an overview of the governance regime for biological and chemical weapons. It was argued that the norm against the use of disease weapons, which underpins this regime, was facing a number of challenges such as the perception of new utility for CBW and the proliferation of CBW relevant technology.

In order to address these challenges it was argued that, firstly, the norm should not be weakened by fragmenting the taboo against disease weapons. Furthermore, to strengthen the norm, it was suggested that responsibility for the norm should be entrenched in the bureaucracy of states, highlighting the importance of national implementation measures. It was also argued that machinery for better enforcement of the norm should be in place. Sanctions at individual, not simply state level, were suggested, including codes of conduct for scientists and proposals for criminalisation under international criminal law.

On the issue of criminalisation, the objection was raised that the jurisdiction of individuals was encompassed by the BWC and UNSCR1540. It was argued, however, that this was not sufficient because:

- Technical problems exist, such as courts' lack of jurisdiction on non-nationals.
- Definitional problems exist, such as lack of harmonisation between states
- Moral prohibition would be higher under international criminal law
- No mechanism exists for addressing actions of state officials or members of the armed forces.

Advances in Science and Technology: The next presentation explored the 'dual use' character of developments in science and technology. It was noted that the positive, beneficial aspects of these advances should be stressed, not simply their potential for misuse, and it was argued that the threat should not be exaggerated.

Advances in genomics, creating and manipulating microorganisms, immune system manipulation and combinatorial chemistry - and the challenges these advances could pose to the BWC - were the key areas explored.

In highlighting the potential for misuse, it was recommended that the States Parties of the Sixth Review Conference should:

- Reaffirm Article 1, ensuring that it covers all new developments.
- Consider a mechanism for more frequent reviews of advances in science and technology.
- Seek measures to raise awareness among life scientists of the dual-use nature of their research. Licensing and greater project leader responsibility was one suggestion.

National Implementation: The first presentation in this section addressed biosecurity strategies and demonstrated that different paradigms exist within the USA, where a security model has been adopted, and in Germany, where a biosafety regulatory model has been adopted. While the USA has a targeted list of pathogens and toxins that could be used as weapons, German regulation has framed the risk of bioterrorism in public health terms as a subset of the broader challenge of infectious disease.

It was argued that these differing paradigms also translate to the regulation of the publication of dual-use research. In the USA, under the Bush administration, the National Science Advisory Board for Biosecurity (NSABB) was established as a mechanism for reviewing security-sensitive dual-use science research and suggesting possible restrictions on publication. Such an approach has been rejected in Germany, however, where a strong belief exists that scientific knowledge should remain free and unrestricted.

In order to achieve middle ground in the approach to biosecurity between, on the one hand in Germany, an almost institutionalised complacency to the threat and, on the other hand in the USA, over-awareness to the point of hysteria, it was suggested that a system of self-governance in which the dual-use potential of research is assessed by peer-review at the pre-funding stage could be implemented. Furthermore, it was suggested that awareness of dual-use possibilities needs to be raised and that implementation support should be encouraged to assist other states parties in preparing and implementing domestic biosecurity measures.

Another paper presented in this section examined the importance of national implementation with respect to compliance. It was noted that in the absence of a verification mechanism within the BWC, national implementation was the only instrument for compliance. Several issues were raised:

- Standards, guidelines and models of key points for national implementation should be agreed.
- The BWC should work more collaboratively with certain IGOs to, for example, produce models on criminalizing certain activities and to provide for authority, licensing, national inspection, investigation and training.
- The issue of necessary national measures should be highlighted in accordance with the language of UNSCR1540.
- The issue of national implementation, access and transmitting information should be addressed in the intersessional process.
- More synergy between assistance providers and IGOs should be encouraged.
- Evaluation, adoption and implementation depends upon understanding so awareness-raising and training must be increased.

Education and Outreach: The next presentation focused on the issues of education and outreach. It was argued that academics involved in CBW arms control and life scientists existed in 'parallel worlds'. The importance of education and outreach in regard to the prohibitions of the Convention was emphasised. In order to improve education and outreach in the life sciences, it was stressed that action, not simply discussion, was necessary.

In order to investigate the problem of education and outreach, 25 interactive seminars were conducted with life scientists in the UK, followed by a series of comparative seminars in other European countries and in the US. It was found that there was a general lack of awareness of the prohibitions of the BWC and the possible dual-use implications of life science research. While these seminars were found to be an effective means of raising awareness, they were not an efficient long-term method. However, the seminars did demonstrate that it was possible to engage life scientists in BW-related issues and helped to formulate further possible mechanisms for engaging life scientists with the use of educational modules, including the use of multi-media webcasts and role-play exercise that could be used as part of a regular course for life scientists.

It was argued that in depth implementation of the BWC within states parties would require a significant effort on education and outreach in order for implementation to be effective and that concerted action - not simply a reaffirmation of the importance of education - was necessary.

Codes of Conduct: The next presentation addressed the issue of Codes of Conduct for scientists. It highlighted the need for awareness raising of BWC issues (such as international obligations, related domestic laws and regulations, dual-use research and possible inadvertent assistance to BW-proliferation) and for facilitating a culture of responsibility in the scientific community.

It was suggested that Codes of Conduct comprise a series of complementary and mutually reinforcing 'layers', including:

- Guiding principles (a universal code, such as the Hippocratic Oath)

- Scientific society codes (codes of ethics/conduct)
- Institutional or workplace codes (codes of conduct/practice)

It was argued that BW codes of conduct should be incorporated into this existing structure rather than being developed as an entirely separate set. Possible approaches to relating BW codes to the teaching of biological sciences were suggested, including:

- Teaching BW issues at first year undergraduate level as part of a scientist responsibility/ethics course.
- A refreshers course at the beginning of a postgraduate program.
- Short courses offered by academia/societies and government outreach to workplaces.

The need to make scientists aware of their domestic and international legal obligations was emphasised. Furthermore, the need for international cooperation was stressed in order to implement effective regulation in all states to avoid the possibility of creating 'safe haven' states or territories.

International Legal Restraints: This session examined the importance of international legal restraints on the use of BW through a case study of the 1932-1945 Japanese biological warfare program. It was argued that this case represented a failure to restrain BW, not simply because customary law was insufficient to prevent the Japanese use of BW, but also because the 1946-1948 International Military Tribunal of the Far East (IMTFE) in Tokyo failed to establish an important legal precedent by identifying biological warfare programs and the use of such weapons as war crimes.

Since the IMTFE, with Richard Nixon's 1969 renunciation of BW and the entry into force of the BWC, it was argued that the norms against BW have strengthened. However, it was argued that the failure of the IMTFE has left the current regime with a deficit of legal restraints. The lack of a treaty criminalizing violations of the BWC and CWC is one such deficit and it has hindered the universal recognition of such crimes and legitimate means of dealing with them.

It was noted that, as biotechnology continues to advance at such a rate, the need for a legal framework to prevent its hostile exploitation and to bring the criminals involved to justice becomes evermore pressing. It was argued that international measures to strengthen adherence to the BWC were necessary to challenge the BW threat.

CBMs and Transparency Measures: This presentation examined confidence building measures (CBMs) and recommendations for improvements. The presentation began by noting that CBMs are the only transparency building mechanism of the BWC agreed by all states parties. However, it was noted that CBMs had done little to increase transparency since their inception 19 years ago and few states parties had consistently participated, while many of those that had participated sporadically had provided inadequate information. Several recommendations for improving participation and effectiveness of CBMs were made at the level of both process and analysis:

- Simplification of forms and removal of ambiguity.
- Focus on only the most relevant information, covering only maximum containment facilities.
- Digitalisation of distribution and submission of forms.
- Encouragement of translations in multiple languages.

- Construction of annual participation lists to illustrate which countries have participated.
- Comparison of CBMs with open source data to assess accuracy and completeness of CBM submissions.
- Use of confidence-building activities, such as informal discussion platforms or on-site CBM validation visits.
- Creation of a Permanent Secretariat unit for the BWC.
- Provision of assistance with completion of CBM data.
- Awareness raising through the use of workshops, etc.

It was argued that CBMs were an important issue for the Sixth Review Conference and that the intersessional process would provide a useful forum for further discussion and action towards implementation to improve the effectiveness of CBMs.

Biodefence Industry: The next presentation examined the emerging biodefence industry through an investigation of the scale and kinds of biodefence projects that are being awarded to US-based private firms. It was suggested that, while large investment focused on biodefence was evidently taking place in private firms, it was unclear whether this represented the emergence of a sustainable industry or whether it was more symptomatic of small, money-burning biotech firms finding alternative, short-term sources of funding.

International Cooperation and Development: The first presentation in this session examined the emergence of non-states actors and the changing nature of international diplomacy, and how this has impacted the global governance framework for biosecurity.

It was noted that during the Intersessional Process of 2003-2003, meetings were attended by international organisations such as the WHO, FAO, OIE, UNESCO and the OECD. Furthermore, the Intersessional Process fostered greater inclusion more generally in terms of the involvement of officials from ministries (such as health and environment) and agencies (such as health and safety and law enforcement), breaking with the traditionally limited and insular participation to BWC meetings.

It was noted that while increased involvement did not necessarily equate with increased participation, a shift had occurred away from the traditional 'national security' approach towards a more inclusive, multistakeholder agenda, appropriate to the challenges posed by advance in the life sciences. It was argued that this shift would only be significant if it was maintained, but optimism was expressed over the inclusive approach being adopted for the Sixth Review Conference.

The next presentation in this section examined biosecurity guidance issues for valuable biological materials (VBM). It was stressed that the concept of security encompassed war, terrorism and public health, and that a diversity of international organisations play a role in public health issues, including WHO, FAO, OIE, etc.

It was argued that biosecurity issues went beyond problems of deliberate misuse of dangerous pathogens and included safety issues in the laboratory environment. It was noted that the bioscience community was not uniformly accustomed to security issues and that no global mechanism existed for the control of certain biological material. In this respect, it was argued that national implementation measures were crucial in improving protection, control and accountability for VBM.

It was noted that awareness raising was a major issue, but it was also noted that many laboratories lacked the resources or an adequate infrastructure to deal with the biosecurity challenge. This was seen as a particular problem in developing countries. The following standards were suggested:

- Consensus standards
- Protection from theft
- Transfer/export mechanism
- Record of facilities
- Uniform procedure for threat/risk assessments

Universality: The next presentation examined the problem of universalisation of the BWC. While 155 states are party to the Convention, it was observed that 40 states had still yet to sign and ratify. The principle reasons for this are summarised below:

- Ignorance of the treaty's existence. It was observed that no international organisation existed to undertake outreach activities.
- No acute BW-related threat perceptions. However, it was observed that concerns existed over the cross-border spread of disease, import/export control, transshipment issues, and the nexus between criminal networks and terrorism.
- Limited resources. It was noted that some countries might be of small size in terms of territory and population, thereby having small bureaucracies and limited resources. Furthermore, policy priorities may lie elsewhere.
- Lack of fundamental knowledge about key issues. It was noted that the technical and scientific understanding of issues involved might be limited since many states not party to the BWC had no developed base in the life sciences and limited knowledge of biotechnology activity undertaken by foreign companies on their territory.
- No stakeholdership. It was noted that BW prohibition was often left off the agenda and that ministries often had difficulty in expanding to encompass BW issues.
- Civil society. It was noted that there is a general lack of knowledge regarding BW issues in civil society and that concerns primarily rest elsewhere.
- Wariness. It was noted that pressure by larger states to join the BWC meets with a degree of wariness by smaller states as a consequence of similar moves relating to other security issues.
- Lack of sense of ownership. It was noted that lack of resources or support to participate in relevant meetings and therefore be a part of the security community created a lack of ownership.

It was argued that awareness raising, capacity building and outreach activities were essential requirements to support universalisation.

Withdrawal. The presentation in this section examined the issue of withdrawal from the BWC. It was argued that the need to discourage withdrawal from the convention is essential if universality is to be accomplished, and the following measures were proposed:

- Withdrawal from the Convention should not be cost-free.
- Three months notice should be demanded in advance of withdrawal as per Article XVI.
- A deliberate narrowing of when withdrawal is permissible should be made.
- New procedures for withdrawal should be considered. Particularly, the withdrawal clause within the Convention should be re-examined - it was noted that signalling the

possibility of withdrawal and building the possibility into the treaty was of questionable logic if universality is to be achieved.

- Article XVI, paragraph 3, should be re-emphasised to remind states that they are still bound by relevant rules even if they withdraw.

Future Work

The workshop concluded with remarks that the limiting factor in all cases of possible BW use is intent. It was suggested that this would be an important topic to investigate in a future workshop. Issues of what factors encourage and what factors deter BW use could be explored. Future work would also depend to an extent, it was generally agreed, on the outcome of the Sixth BWC Review Conference, the results of which Pugwash should study carefully as soon as might be possible.

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List of Papers

18-19 November 2006

DISCUSSION PAPERS

Sergey Batsanov, Approaching the 10th Anniversary of the Chemical Weapons Convention: A Plan for Future Progress

Daniel Feakes and Caitriona McLeish, Biosecurity, Stakeholders and Networks

Jeanne Guillemin, The Importance of International Legal Restraints on Biological Weapons

Nicolas Isla, Strengthening the Confidence Building Measure Regime: A Catalogue of Recommendations

Filippa Lentzos, The Political Economy of Fear: Mapping the Emerging Biodefence Industry

Bob Mathews, Contribution to discussion of Codes of Contact issues

Jiri Matousek, Chemical Weapons Convention: Status and Actual Problems of Implementation

Jiri Matousek and Otakar Mika, National Implementation of the Biological & Toxin Weapons Convention: Approach of the Czech Republic

Kathryn Nixdorff, Scientific and Technological Challenges to the BTWC

Graham S. Pearson, An Integrated and Comprehensive Approach to the Article by Article Review

J P Perry Robinson, The Governance Regime for Biological and Chemical Weapons, and the Review Conferences of 2006 and 2008

Roger Roffey, Key Issues, National Implementation, CBMS and Annual Meetings for the Sixth Review Conference

Nicholas A Sims, Precautionary measures to discourage withdrawal from the Biological Weapons Convention: Proposals for strengthening the Article XIII section of the 2006 Final Declaration

Jonathan B Tucker, Biosecurity Strategies to Prevent Bioterrorism: A comparison of Policies in the United States and Germany

Jean Pascal Zanders, Universalisation of the BTWC: Experiences from the field

BACKGROUND PAPERS

Erhard Geißler, Biowaffen für die Bundeswehr? Dr Petras und "die Entlarvung der westdeutschen B-Waffen Rüstung" durch das MfS

Erhard Geißler, Die Rolle deutscher Biowaffenexperten in die Zeit nach dem Zweiten Weltkrieg

Kathryn McLaughlin, Concept Paper on the Establishment of a Sponsorship Programme to Promote BWC Universalisation and Implementation

Graham S. Pearson, The BTWC Sixth Review Conference in 2006

Katie Smallwood, Report on the 24th Workshop of the Study Group of Implementation of the Chemical and Biological Weapons Conventions: Achieving a Successful Outcome of the Second CWC Review

M.S Swaminathan, Paolo Cotta-Ramusino, Jeffrey Boutwell, 56th Pugwash Conference on Science and World Affairs: A Region in Transition: Peace and Reform in the Middle East