The Eighth Review Conference of the Biological Weapons Convention

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Summary

The recent BWC Review Conference faced various challenges emanating from a range of developments that took place during the last five years, alongside with lingering issues already existing for a long period of time. The related contents and interfaces are here presented and assessed briefly.

Within the intensive scientific era of the 21 century, 5 years - representing the intervals between the BWC Review Conferences - constitute a period with a vast potential, in terms of life science dynamics. Among other things, it often materializes in the form of natural proliferation of untreatable, at times formidable pathogens, alongside with a variety of ongoing biotechnological breakthroughs, of which many relate to pathogens. The recent five years since the 7th BWC Review Conference indeed posed, for instance, potent and outstanding viruses such as Ebola[1] and Zika[2], the latter being a hitherto relatively unfamiliar virus, which lately gained an overwhelming impact, while the former exhibiting exceptional lethality and persistence, disturbingly.

Parallel to those purely natural events, scientific disciplines dealing with pathogens currently make their own progress, in a notable manner;[3] and the duality formed thereby concerning the applicability of pathogens (plus toxins) as warfare agents is inevitably increasing. Thus, five years ago, a remarkable debate arose on a global scale, about bioethics, biohazard, bioweaponry and bioterrorism issues related to scientific research concerning the induced transition of the highly lethal H5N1 avian flu virus from a non-pandemic to a tentatively pandemic strain, which might fall into malevolent hands.[4] On top of all those events, the recent five years gave rise to ISIS, represented by an extremely radical terror organization, which often employed chemical weapons, and evidently attempted - if not still attempts - to practically procure usable BW. The recent BWC Review Conference held in November 2016 in Geneva had to take into account, if not address, such - and various additional - complex challenges.

To a large extent, it did, apparently, endeavoring to coherently follow the delicate interface between the spheres of legitimate and illegitimate activities pertaining to pathogens and toxins. Thus, the Conference yielded valuable and consequential contents consisting of a range of substantial categories,[5] hence it would be appropriate to present them, partially, in details, as follows.

General Statements were given by the Secretary-General Ban Ki-moons, by Under Secretary-General and High Representative for Disarmament Affairs Kim Won-Soo, by 81 states, and by 3 International Organizations (the European Union, International Committee of the Red Cross, and Organization for the Prohibition of Chemical Weapons).

Official Documents (11) were presented as Background Information by the Implementation Support Unit, plus 48 Official Documents submitted by various states.

Besides, National Inputs by most of the participants to background information documents referred to: Compliance by States Parties with all their obligations under the Convention; The implementation of Article VII; and The implementation of Article X.

A diversity of substantial issues were addressed during Side Events by the participants, and included:

Germany: Confidence in Compliance - Peer Review Visits as a Useful Tool for Increased Transparency.

King's College London, UK Ministry of Defence and UK Foreign & Commonwealth Office: Film Screening of "Inside Porton Down".

University of Pittsburgh: Safety and Security of Synthetic Biology.

Hamburg Research Group for Biological Weapons Arms Control: Open Source Information for Transparency Building - Launch of an Online Information Tool: The BWPP BioWeapons Monitor.

International Office for Innovation in Reducing Crime (IOIRC): The OPBW- Is it Time?

Russian Federation: Operationalizing mobile biomedical units to deliver protection against biological weapons, investigate their alleged use and contribute to the suppression of epidemics of various origin: Presentation of draft decision.

King's College London, University College London, Sussex University and Switzerland: "Book launch of 'Biological Threats in the 21st Century' and project presentation of 'Understanding Biological Disarmament'".

Switzerland: Update on Two Workshops at Spiez Laboratory: Building a Network of Analytical Biological Laboratories and Examining Science and Technological Developments in the Area of the Convergence of Biology and Chemistry.

Canada: Global Health Security Agenda Biosafety and Biosecurity Action Package: Lessons learned and next steps for the implementation of the Action Package.

UNICRI: Identifying Needs and Providing Tailored Solutions: The Experience of the National CBRN Action Plan.

GCSP, GET, VERTIC and UK Foreign and Commonwealth Office: Addressing the Biosecurity Governance Challenges Posed by the Ebola Epidemic.

GCSP - Global Biosecurity Presentation.

Vertic - Regulatory Framework in Ebola affected Countries Presentation.

WHO and USA: The New Health Emergencies Program and Emergency Medical Teams Initiative --

Emergency Medical Team Presentation.

EU: EU Council Decision 2016/51/CFSP in Support of the BWC Implemented by UNODA: State of Play.

UNIDIR and Ministry of Foreign Affairs of France: BTWC - Enhancing National Implementation.

EBRF and Denmark: Immaterial Technology with Dual-Use Potential.

UNICRI and FBI: Understanding and Mitigating Emerging and Future Risks in the Life Sciences: The International Network on Biotechnology.

US National Academy of Sciences: Science Advising Relevant to the BWC: Initiatives from Inter-Academy Partnership and its Members.

VERTIC: BWC Implementing Legislation Analysis and Online Legislative Assistance Tool.

Produced as well by the Conference were NGO Statements, Plenary Presentations, Closing Statements, and Posters.

The NGO Statements were delivered by:

University of Bradford

University of London

Biosecure Ltd

Verification Research, Training and Information Centre

Pax Christi International

International Network of Engineers and Scientists

Biosecurity Working Group of the InterAcademy Partnership

Research Group for Biological Arms Control, Hamburg University

University of Sussex

International Office for Innovation in Reducing Crime

International Federation of Biosafety Associations and Bradford Disarmament Research Centre

UPMC Center for Health Security

Parliamentarians for Global Action

Center for Nonproliferation Studies - Middle East Next Generation of Arms Control Specialists

Pugwash Conferences on Science and World Affairs

Global Emerging Pathogens Treatment Consortium

Green Cross International

Plenary Presentations of special interest included the following:

BWC Assistance and Cooperation Database and Sponsorship Programme.

Article VII Background Information Document.

Confidence-Building Measures Background Information Document.

Report of the ISU on 2012-2016 Activities.

Illustrative financial information based on "Non-paper: Elements for a draft final document.

Posters of special interest included the following:

University of Bradford - Effective Biosecurity Education for High School Students: The Value of Team-Based Learning.

University of Hamburg - Open Source Tools for the Assessment of Compliance with the BWC.

OPCW- Biological Toxins and their Relative Toxicity.

OPCW - Physicochemical Properties and Relative Toxicity of Chemical Warfare Agents.

OPCW - Toxins and the Neuromuscular System.

OPCW - Neurochemistry of Toxins.

UPMC - Additive Manufacturing and Biological Weapons: How 3D Printing may Give Rise to Unforeseen Biosecurity Threats.

The Posters underscored desirable overlapping between the OPCW and OPBW in the area of toxins, by all means a category of important warfare agents, which indeed deserves meticulous attention by both conventions.

Irrespective of Russia (with an appreciable input), and regardless of 'General Statements' and 'Closing Statements', the Asian states having their own contributions to the Conference included China, India, Iran, Iraq, Japan and Qatar.

Additionally, documents co-sponsored by Asian states merely, included but two working papers, both contributed jointly by Pakistan and China, namely:

BWC/CONF.VIII/WP.30 - "Proposal for the Development of a Model Code of Conduct for Biological Scientists under the Biological Weapons Convention".

BWC/CONF.VIII/WP.31 - "Establishing a Non-Proliferation Export Control and International Cooperation Regime under the Framework of the Biological Weapons Convention".

China's own contributions (in Chinese) referred, in general, to the areas of Compliance by States Parties with all their obligations under the Convention; and of The implementation of Article X.

India's own contributions included the following topics:

BWC/CONF.VIII/WP.7 - "Report on Implementation of Article X of the Convention".

"Compliance by States Parties with all their obligations under the Convention".

"Implementation of Article VII of the Convention".

"Implementation of Article X of the Convention".

Iran's own contributions included the two following working papers:

BWC/CONF.VIII/WP.12 - "The BTWC Review Process of Science and Technology"

BWC/CONF.VIII/WP.13 - "A Proposal for Amending the Convention to Incorporate Therein the Explicit "Prohibition of the Use of Biological Weapons".

Iraq contributed the two following National Inputs to background information documents:

"National measures adopted by the Republic of Iraq to implement the Biological Weapons Convention"

"Cooperation and Assistance under Article X of the Biological Weapons Convention".

Japan's own contributions included the following topics:

"Background Information on Japan's compliance with the principal provisions of the BWC-2016".

"International Cooperation and Assistance of Japan related to Article X of the BTWC-2106".

Qatar's own contributions included the following topics:

"Compliance by States Parties with all their obligations under the Convention".

"Implementation of Article VII of the Convention".

"Implementation of Article X of the Convention".

Beyond, out of a considerably wide spectrum of different, essential matters and topics included in the Conference, the following working papers, although representing but a miniature probe, may be of particular significance:

BWC/CONF.VIII/WP.2 - "Code of Professional Ethics for Science Workers in Cuba" (by Cuba).

BWC/CONF.VIII/WP.9 - "Proposal to enhance the format of confidence-building measures under the Biological Weapons Convention" (by the Russia).

BWC/CONF.VIII/WP.11 - "Confidence in Compliance - Peer Review Visit Exercise at the Bundeswehr Institute of Microbiology in Munich, Germany" (by Germany).

BWC/CONF.VIII/WP.19 - "Acquisition and Use of Biological and Toxin Weapons: Addressing the Threat" (by the USA).

BWC/CONF.VIII/WP.20 - "Technological Developments for the Decoding on new, old and ancient infectious disease outbreaks and incidents ' lessons for the BTWC" (by Sweden).

BWC/CONF.VIII/WP.33 - "Ghana's Report on the BWC Implementation Review Exercise held in Accra, 19-20 October 2016" (by Ghana).

The entire list of working papers, which is much larger, covers all continents, and reflects both lingering issues still awaiting being untangled, alongside with novel avenues intended to cope with currently developing menaces. The prospects within those contexts are at times discouraging, nevertheless. In that connection, the duality marking modifying and engineering of pathogens and toxins appears to constitute an issue of utmost concern, presently.

Taking a broader perspective, though, the very fact that since the anthrax envelope bio-sabotage of 2001 - uncertainly claimed to have had been conducted by an American scientist[6,7] - no major incident of biological terrorism or warfare took place, worldwide, might signify that actual competence to carry out such or similar bio-sabotage operation actually did not come into being within a terror organization, encouragingly. The Eighth Review Conference indeed appears

to firmly pursue and tentatively ascertain the continuity of such highly desirable situation. At the same time, there are states - both parties and non-parties to the BWC - that do run offensive BW programs, either in the form of an existing arsenal, or in the form of an alignment specifically destined to instantly ready an arsenal.

It is innately the essence of the BW domain to persist in a way that can and in all likelihood will always enable to, circumvent some of the BWC articles or related regulations. This endless interplay is apt to remain for long, and seems to be the most difficult one to cope with, as compared to all other types of WMD. The recent BWC Review Conference did face the relevant challenges in a proper, perhaps optimal manner, aiming to minimize the potential circumvention space. Tangentially, it also covered a variety of important issues that concern vital aspects like biosafety, biosecurity, pathogen and toxin engineering, natural biohazards, epidemic emergencies, preparedness, and consequential needs for aid and collaboration. In that connection, yet, may be incorporated the cardinal concept of 'One Health' - the collaborative effort of multiple disciplines working locally, nationally, and globally, to attain optimal health for people, animals and the environment.[8] Such incorporation would be in coherence with the multiplicity of International Organizations and NGOs participation in the conference, which is indicative of desirable integration.

Endnotes:

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3. MacIntyre C Raina, Biopreparedness in the Age of Genetically Engineered Pathogens and Open Access Science: An Urgent Need for a Paradigm Shift, Mil Med 2015 Sep;180(9):943-9

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