
IDSAs Occasional Paper No. 28

THE EXISTING BIOLOGICAL
THREAT: EVALUATING THE
SEVENTH REVIEW CONFERENCE
OF THE BTWC

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INSTITUTE FOR DEFENCE
STUDIES & ANALYSES

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ISBN: 978-81-7095-126-7

First Published: September 2012

Price: 225.00



Published by: LANCERS BOOKS
P O Box 4236, New Delhi-110048
Tel No. 011-26241617, Mob No. 9990671022
E-mail: lancersbooks@hotmail.com

In Association with: Institute for Defence Studies and Analyses
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Cover & Layout: Anil Kumar

The challenges in front of the global community post World War II and after the secession of Cold War have not been elucidated; rather they have taken different shapes and forms. Modern day societies are trying to respond differently by various means to the new set of problems. States have evolved various transnational policies to address such issues.

During the Cold War and post Cold War era much attention was paid universally towards the proliferation of nuclear, chemical and biological weapons (commonly known as Weapons of Mass Destruction, WMD), related technologies, materials, and expertise. In the post Cold War and post 9/11 era particularly, increasing attention has been given to the threat of WMD terrorism.

Landmark international treaties to prevent the spread of these weapons and weapons technology have been formulated by the United Nations. They aim to achieve a world free of these weapons and to attain this they have established various disarmament, monitoring and verification mechanisms. One such mechanism is the Convention on the Bacteriological/Biological and Toxin Weapons, commonly known as the Biological Weapons Convention (BWC) or Biological and Toxin Weapons Convention (BTWC). It was opened for signature in 1972 and was enforced in 1975. This is the first multilateral disarmament treaty banning an entire category of weapons. It effectively prohibits the development, production, acquisition,

* The authors were a part of the IDSA Working Group on the BTWC Seventh Review Conference. The Group met between September – November 2011. The group submitted their report to the Ministry of External Affairs (not published), Government of India. The authors have benefitted from these deliberations.

transfer, retention, stockpiling and use of biological and toxin weapons and is a key element in the international community's efforts to address the proliferation of weapons of mass destruction.¹

The Review Conference of the States Parties to the Biological Weapons Convention is held every five years. Such conferences are held to review the operation of the Convention and to take stock of the preceding five years' work programme. They are also expected to address the recent geopolitical and technological developments in the arena under debate. The Seventh Review Conference of the BTWC was concluded during December 2011. This paper offers certain reflections on this conference. Since limited discussions are available on issues related to bioweapons in general, this paper also attempts to offer some basic analysis on the subject based on existing literature.

The paper organises the presentation in four parts. First, the paper discusses the evolution in the general understanding of bio-threats. Second, a brief analysis of the earlier held Review Conferences has been provided. Third, the outcome of the Seventh Review Conference has been discussed. This is based on the author's own assessment as well as on the opinions expressed by a few experts in the field. The last section offers an overall assessment and makes some suggestions for the way forward.

¹ [http://www.unog.ch/80256EE600585943/\(httpPages\)/04FBBDD6315AC720C1257180004B1B2F?OpenDocument](http://www.unog.ch/80256EE600585943/(httpPages)/04FBBDD6315AC720C1257180004B1B2F?OpenDocument), accessed on Mar 20, 2012 .

Nature of 'Existential' Biological Threat

For the last one to two decades the subject of Biology has been receiving an increasing amount of attention mainly because of the rapid growth being made in the field of biotechnology. The United Nations had declared 2010 to be the International Year of Biodiversity and a very rigorous international campaign was undertaken to safeguard the variety of life on earth. With the 'global spread' of recombinant DNA (Deoxyribonucleic Acid) technology particularly, the potential of Biotechnology has increased manifold. Overall, various recent developments in life sciences promise huge benefits for the society but at the same time the possibility of doing harm from deliberate misuse of this knowledge also exists.

Apart from the deliberate use of any bio agents for the purpose of war/terrorism there are chances that even a naturally occurring pandemic could erupt at anytime causing a staggering blow to human health and the world economy. It may not be possible to predict when the next pandemic will occur and how severe it will be.² Modern biotechnology plays an important role in medical protection too and would play a major role in addressing the issues of pandemics. In general, Biology/ Biotechnology could be viewed as a source of both, offensive weapons as well as defensive weapons. Because of the shift from the classical approaches in biology to the current genomic and proteomic approaches, the role of biotechnology is expanding further. It is proving useful for the militaries in areas like improving material and enhancing warrior performance.³ However, the purpose of this paper is to primarily understand

² Michael T. Osterholm, "Unprepared for a Pandemic", *Foreign Affairs*, Vol 86, No.2, Mar/Apr 2007, pp.47-48

³ Robert E. Armstrong and Jerry B. Warner, "Biology and the Battlefield", *Defense Horizons*, March 2003, pp.1-8.

the benefits and limitations of disarmament measures to address any eventual biological threat. Hence friendly aspects of biotechnology for defensive and military use have not been debated.

Biological threats are not new. References are found with regard to the use of smallpox blankets against native peoples during Pontiac's Rebellion during the French war (1763). Over centuries the threat created by biological agents has gained recognition as one of the most challenging threats to security. Since, no major biological threat has been experienced so far by any state there has been an ongoing debate with regard to the probability of this threat becoming a reality. At the same time, it is also important to appreciate that absence of a threat till date does not guarantee zero probability. In the post 9/11 era, particularly, the character of this threat has assumed a supplementary form and the threat is now being perceived more in the realm of Bio terrorism.

Bio terrorism is emerging more as a possibility in the 21st century not only because of the changing nature of terrorism but also because of rapid growth in life sciences. Never before in history has an aspect of science offered as much potential for novel insight and predictive understanding of the world, as well as opportunities for enhancing the human condition, as life sciences are offering today. Genomics, microbial metabolic re-engineering, stem cell biology and molecular immunology provide ready examples of newfound understanding and revolutionary advances in capability. In the past decade, scientists have learned to read and interpret microbial genomes and have a clear understanding of how to re-programme the differentiation patterns of human cells.⁴ All such significant

⁴ David A. Relman, "The biological century: coming to terms with risk in the life sciences" *Nature Immunology*, volume 11 number 4 April 2010, p. 275.

advancements made in the field of biotechnology, easy availability and accessibility to these and other relevant technologies have increased the danger of technology reaching the wrong hands. The potential for the misuse of work in molecular biology, immunology and a variety of other emerging areas of research exists.⁵ Various clinical and diagnostic laboratories in different parts of the world could provide easy access to pathogens. Also, there exists a possibility that the recent developments in biotechnology and synthetic biology make it possible to create new strains capable of making existing vaccination and medical measures ineffective. Due to all such possibilities leading to the misuse of the knowledge of Biology, questions are being raised about the efficacy of existing legal and normative safeguards to address the issues related to biological weapons.

Post 9/11, during October 2001 the US witnessed an attack which killed five people, using spores of Anthrax sent in postal envelopes. These attacks were initially thought to be the handiwork of terrorist organisations. However, after carrying out one of the largest and most complex investigations it has been concluded by the US authorities that a scientist was responsible for these attacks. In the earlier two (probably the only known cases) most quoted cases in literature on the usage of biological agents indicates the involvement of religious cults in such activities. The most prominent case of the successful use of a biological weapon was by the Rajneesh (Osho) cult in the US state of Oregon. The cult had used Salmonella Typhimurium to contaminate salad bars in a particular locality (1984) with a purpose not to kill but to incapacitate a group of people by making them ill for a few days and thus stop them from voting

⁵ Christopher F. Chyba, "Biotechnology and the Challenges to Arms Control", *Arms Control Today*, Oct 2006, p.11.

in local elections. Another instance of a radical group employing weapons of mass destruction was by the Aum Shinrikyo, which released Sarin gas in the Tokyo subway in 1995. This cult had made significant investments in biological weapons as well and had probably experimented with them though without much success.

The most recent case, which highlights the interest of a non-state actor in investing in biological weapons was found in Norway. In a horrific incident Anders Behring Breivik killed 77 Norwegians on July 22, 2011. Breivik's act was of intolerance that stemmed from the migration of Muslims to Europe. He had outlined his ideology in a 1,518-page online manifesto 2083 – A European Declaration of Independence. In this manifesto, Breivik reveals his views on politics, culture, history, Marxism, Islam, and so on. He discusses various 'revolutionary' concepts and expresses his views on the use of WMDs to bring about a change in the system and society. His manifesto deals with issues related to conventional as well as chemical, biological and nuclear weapons. The word Anthrax appears more than 50 times in his manifesto. He discusses the success of Anthrax attacks in the United States post 9/11. He is of the opinion that it should not be difficult to acquire Anthrax spores from the black market. He has also published a photograph of a man (most likely of himself) in a protective suit with a respirator, and a vial and a syringe in his hands. He speculates that any large scale Anthrax attack could kill 200,000 people and feels that this weapon has excellent shock value.⁶

⁶ Gunjan Singh and Ajey Lele, "Breivik's Interest in Anthrax and Religious Extremism", http://www.idsa.in/idsacomments/BreiviksInterestinAnthraxandReligiousExtremism_alele_020811, August 2, 2011, accessed on Mar 18, 2012.

Various above mentioned instances highlight the need to expand the debate on biological weapons and bioterrorism beyond the state actor or terrorist organisations. Any future act of using biological weapons could also involve a disgruntled scientific community, religious groups, radically motivated groups and 'religious' cults too. It is important to take into consideration situations like the possibility of unsafe and insecure handling of dangerous pathogens. This could primarily happen because of the rapid growth in bio-industries in various parts of the world including developing countries. Issues related to the oversight of dual-use research needs special attention. The biggest challenge in this field appears because of the limitations in the field of routine monitoring of the biotech industry. Such verifications are technically difficult, and more importantly, there is no willingness either from the states or from the biotech industry to adopt such measures. Another aspect which needs to be factored in for any future analyses is the rapid increase in the geographical spread of biotechnology. Also, various developmental activities undertaken in the field of biotechnology may not require very high technology, state-of-art instrumentation and financial support. Overall, because of the rapid growth in biotechnology, lack of verification mechanisms, dual-use dilemma, and wide availability of knowledge due to the spread of internet (which could be used for heinous purposes) it has become highly difficult to address the concern of proliferation emanating from advances in the life sciences.

The restrictions on any debate on biological weapons arise due to the limitations in undertaking empirical research on this subject. Such research is usually carried out based on the evidence from the collection of empirical data. This happens because the past is considered as the basis for future predictions. But, in the case of biological weapons this is not possible

because very few actual attempts of usage of this weapon have happened in the past.

Traditionally, threat assessments have been overly simplistic. They have tended to focus on only a single factor, such as the agent that might be used or the motivations for the state or terrorist who might use them. In addition, threat assessments have emphasised vulnerabilities rather than risks, which are a combination of vulnerabilities and likelihood.⁷ To further elaborate on this, one can quote David Strachan-Morris. As per him, “‘threat’ is a function of the enemy’s capability and intent to conduct attacks, whereas ‘risk’ is a function of the probability that your organisation will be involved in an attack”.⁸ Any terrorist group is also expected to undertake some assessment for the selection of the target. The attractiveness of the facility would be a consideration and so would be the potential of the adversary to react to such acts. Probably, the terror group would decide the method of attack based on this and a few other factors.

In general, the probability of terrorist attacks cannot be quantified statistically since terrorism is, by its very nature, random. Hence, when considering terrorist threats, the concept of developing credible threat assessment mechanisms should be given due importance. Once the credible threats are identified, an assessment of vulnerability becomes critical. The most important aspect getting discussed today is the possible misuse

⁷ Testimony of Mr Michael Moodie, President Chemical and Biological Arms Control Institute to the Subcommittee on International Security, Proliferation and Federal Services Committee on Governmental Affairs, Nov 7, 2001, <http://bioterrorism.slu.edu/bt/official/congress/moodie110701.pdf>, accessed on Feb 10, 2012

⁸ David Strachan-Morris, “Threat and Risk: What is the Difference”, Pilgrims Group, April 27, 2010 at <http://www.pilgrimgroup.com/news.php?id=94> accessed on July 19, 2012

of life sciences by terrorist groups mainly because we are living in a Biological Century where rapid and significant developments are taking place in the arena of life sciences. It is important to explore the nature of the risk that the life sciences pose and expect that the BTWC regime will develop strategies to minimise these risks.

It is important to appreciate that the Seventh Review Conference of the BTWC⁹ was convened taking the above discussed as the backdrop. It is understood that reducing the biological risks and threats requires development of trust amongst the 'life sciences' and 'security' communities. It involves efforts to safeguard the interests of the scientific as well as the business community and to bring about modifications in the existing frameworks. The world has looked up to this conference as a means to strengthen the current range of international initiatives to provide scientific, technological, and policy based solutions.

Brief history of BTWC Review Conferences

The arms control and disarmament debate mostly focuses on the external threats to states. However, with the rapidly globalising world in the 21st century, the multiplicities of threats to security are found expanding from the state centric to the non-state centric. The developments in technology, their easy availability and the dual-use nature of technology are increasingly adding to these threats. Also, the geographical reach and the frequency of occurrence of various natural calamities is found increasing. Various multilateral arms control

⁹ The final document of the 7th Review Conference is available at [http://www.unog.ch/80256EDD006B8954/\(httpAssets\)/570C9E76CAAB510AC1257972005A6725/\\$file/ADVACNCE-BWC+7RC+Final_Document.pdf](http://www.unog.ch/80256EDD006B8954/(httpAssets)/570C9E76CAAB510AC1257972005A6725/$file/ADVACNCE-BWC+7RC+Final_Document.pdf)

and disarmament efforts have to match such rapidly changing 'landscape'. There is a need to contextualize the requirements arising out of this changing 'landscape'. Multilateral efforts are not framed with the aim to handle natural calamities, however with the changing dynamics there is need for 'out of the box' thinking to be applied to the existing institutions and frameworks.

Four to five decades back, the Vietnam War could have been the compelling reason for the UN to table a treaty on Biological weapons. In the late 1960s, the US had extensively used anti-personal and anti-plant chemical/biological weapons in Vietnam violating the 1925 Geneva protocol. In the UN, criticism of the US policy came from the Soviet Union, the Eastern block and from prominent non-aligned and non-western countries. Also, it was feared that some states could decide that this type of activity is cheaper (using chemical and biological weapons) and that it is an easier alternative to have WMDs than to acquire nuclear weapons. The US and the UK authorities were of the view that Egypt had used poison gas in Yemen in 1967.¹⁰ Under this backdrop the UK had put up a working paper in the UN to propose banning Biological Weapons. In those days BTWC was hailed as the first global level disarmament agreement designed to get rid of this class of weaponry.¹¹

The BTWC Review Conferences occur every five years. Before debating the happenings in the Seventh BTWC Review Conference, it is important, to comprehend what all had happened during the earlier review conferences so as to

¹⁰ Susan Wright, *Biological Warfare and Disarmament*, Rowman & Littlefield Publishers, Oxford, 2002, pp. 314-319

¹¹ Dando Malcolm, *Biological warfare in the 21st Century*, Brassey's, London, 1994, p.68

appreciate how the successive review conferences had reacted to the various challenges.

The time line for these conferences before the Seventh Review Conference is as follows:

First Review Conference: March 2 to 21, 1980.

Second Review Conference: September 8 to 28, 1986.

Third Review Conference: September 9 to 27, 1991.

Fourth Review Conference: November 25 to December 6, 1996.

Fifth Review Conference: November 19 to December 7, 2001. The resumed session of the Conference was held from November 11 to 22, 2002.

Sixth Review Conference: November 20 to December 8, 2006.

The most prominent argument/theme which has been recurrent during most of these Review Conferences has been that of Confidence Building Measures (CBMs). The State Parties have been discussing various methods by which they could be made more relevant as well as binding. The importance of CBMs has been regularly emphasised as an important tool to make the treaty more effective. The discussions related to CBMs gained momentum after the Second Review Conference. It has been observed that even though CBMs have been regarded as an important part of the treaty mechanism, state parties have not been very forthcoming in submitting their reports. An important reason for this could be that submissions of the CBMs are not legally binding.¹² It has been observed that less than half of the

¹² Berlin Seminar on Outlook and Perspectives for the Seventh Review Conference, BTWC: CHAIR'S SUMMARY at [http://www.unog.ch/80256EE600585943/\(httpPages\)/4E2CFF614B905C6AC12578B700504D5A?OpenDocument](http://www.unog.ch/80256EE600585943/(httpPages)/4E2CFF614B905C6AC12578B700504D5A?OpenDocument) accessed on March 29, 2012

members of the treaty submit the reports. Only eight countries submitted CBM returns every single year between 1987 and 2005: Canada, Finland, Germany, the Netherlands, Norway, Russia, Spain and the United States. In fact, more than 40 per cent of BTWC member states had never submitted any information until 2005. The countries which had never submitted a report till the year 2005 are Algeria, Bosnia and Herzegovina, Ethiopia, Ghana, Indonesia, Kenya, Lebanon, Malaysia, Nigeria, Oman, Pakistan, Singapore, Sudan, Uruguay, Venezuela, Vietnam, Yemen and Zimbabwe.¹³ BTWC had discussed and updated the format way back in 1991. Subsequently no updating was undertaken. The Third Review Conference worked towards establishing and strengthening new CBMs. The Conference decided to have CBMs under which the state parties were required to exchange information regarding offensive as well as defensive biological research programmes and discussed the issues of vaccine developments.¹⁴

Another important point for discussion during various earlier review conferences has been to address issues arising from the impact of the developments in the field of Science and Technology (S&T) with regard to the treaty mechanism. The state parties are of the opinion that the treaty needs to work towards keeping itself abreast with the developments in the S&T. With newer technologies being developed in this arena the state parties need to share their knowledge and also inform other members about the degree of knowhow they possess. This

¹³ "Confidence-building needs transparency: an analysis of the BTWC's confidence-building measures" By Iris Hunger and Nicolas Isla at <http://www.unidir.org/pdf/articles/pdf-art2511.pdf> accessed on March 29, 2012

¹⁴ "The Biological Weapons Convention" at <http://www.un.org/disarmament/WMD/Bio/> accessed on March 27, 2012

will also help in making the treaty more relevant. The pace of development in the fields of biotechnology, pharmaceuticals, and vaccines etc. (which are covered under the Article X of the convention) has always been a major cause of concern for state parties in the last few years.

In comparison with the other WMD treaties like the Non-Proliferation Treaty (NPT) and Chemical Weapons Convention (CWC), the major limitation of the BTWC has been the lack of a verification mechanism. Being aware of this drawback, the discussion on the issue of verification has been at the forefront for various review conferences. This issue has remained unresolved for all these years for want of acceptability amongst all state parties. The US particularly, has been found opposing the formulation of any verification mechanism. However, appreciating the importance of having such a mechanism, various state parties are now following a roundabout route to bring in at least some measures, which could cater to the need of direct verification.

The Third Review Conference (September 1991) debated over the idea of verification. The 1991 Gulf War and Saddam Hussein's declaration of his desire to use Biological Weapons probably had played an important catalyst in this process.¹⁵ This conference established an ad hoc group of government experts to study the feasibility of verification measures for the BTWC. This group, which is also known as the verification experts group, or VEREX, was instructed to identify means that might determine

- whether a State Party is developing, producing, stockpiling, acquiring or retaining microbial or other biological agents or toxins, of types and in quantities that

¹⁵ "Biological Weapons Convention Overview" at <http://www.cdi.org/issues/cbw/bwc.html> accessed on March 27, 2012

have no justification for prophylactic, protective, or other peaceful purpose

- whether a State Party is developing, producing, stockpiling, acquiring or retaining weapons, equipment, or means of delivery designed to use such agents or toxins for hostile purposes or in armed conflict.¹⁶

In September 1993 VEREX, which had been established to assess the feasibility of verifying the BTWC, issued its final report. It was concluded that a combination of declarations and inspections to increase the transparency of dually capable biological facilities, such as bio-defence labs and biotechnology plants, could enhance confidence in BTWC compliance and deter violations.¹⁷

Following a special conference on all special states (states parties) in 1994, it was decided to establish an Ad Hoc Group (AGH) open for all parties to negotiate a legally binding protocol for the convention to, *inter alias*, introduce effective compliance provisions. Prior to this, in 1992, three depository states had agreed to the following procedure to clarify their status on their own BW programme: “visits to any non-military biological site at any time in order to remove ambiguities, subject to the need to respect proprietary information on the basis of agreed principles. Such visits would include unrestricted access, sampling, interviews with personnel, and audio and video taping.”¹⁸

¹⁶ Alan P. Zelicoff, “The Biological Weapons Convention: What Is the Role of Sample Collection in a Legally-Binding Regime?”, *Politics and the Life Sciences*, Vol. 14, No. 1 (Feb., 1995), pp. 79-84

¹⁷ Tucker JB, In the Shadow of Anthrax: Strengthening the Biological Disarmament Regime, *The Nonproliferation Review*/Spring 2002, p 133

¹⁸ Susan Wright, *Biological Warfare and Disarmament*, Rowman & Littlefield Publishers, Oxford, 2002, pp 343-344

The treaty's limitations to prevent proliferation were visible in 1995 when a UN inspection team discovered Iraq's modest stockpile of agents and munitions. This led to a start of negotiations in 1995 for an addendum to the treaty- a protocol that would establish legally binding measures to promote compliance.¹⁹ In spite of such efforts at various levels the world community as a whole has failed to devise concrete steps to stop proliferation of bioweapons. Problems arose when AGH actually began to negotiate the draft protocol, or "rolling text," in July 1997. The key challenge facing protocol negotiators was to design an on-site inspection system that was intrusive enough to give member states a reasonable level of confidence in compliance, while protecting the legitimate national security information, and the trade secrets of pharmaceutical companies and their biotechnology.²⁰

The AGH had a number of discussions from 1995-2002. However, in spite of the tremendous hard work put in by the AGH no agreement was reached. Before, the 23rd AGH meeting (April 23 to May 11, 2001), chief negotiators had arrived at a 250-page draft document, known as "Rolling Text". Subsequently, the Chair of the AGH tabled a 210-page compromise proposal for the protocol known as the "Composite Text". During the 24th AGH meeting (July 23 to August 17, 2001) the US announced that they could not support the draft protocol. As per the US authorities the current approach to a protocol for BTWC was not capable of strengthening the confidence of state parties. The US gave three reasons:

1. The protocol was inadequate to detect secret bioweapons proliferation.

¹⁹ Wheels Mark & Dando Malcolm, Back to Bioweapons? Bulletin of the Atomic Scientists, Jan/Feb 2003, p 42.

²⁰ www.bradford.ac.uk/acad/sbtwc/revconf/1final2.htm

2. It would unacceptably jeopardize commercial proprietary secrets.
3. It would endanger its bio defence programme.²¹

In general, neither the US nor Russia as depository states to BTWC had played a constructive role in the AGH negotiations. For very different reasons, both countries wanted to avoid on site activities on their respective territory: the US because it wanted to protect the interests of its civilian industry and its military; Russia because it had inherited an offensive BW programme and wanted to make sure that visits to facilities that were part of the former offensive BW programme would not prove to be embarrassing.²²

Ad Hoc Group faced a number of problems. Iran took a peculiar stand and demanded a total abolition of all existing export-control regimes. India, Pakistan, China and Cuba allied with Iran.²³ Russian insistence was on having a comprehensive quantitative list of agents which states could use and retain. Most of the other countries were opposing this. The US stance resulted in completely stalling the negotiations when the Bush administration announced that they rejected the Ad Hoc Group Chairman's proposals.²⁴ The primary reason regarded to be behind this step was the interests of the US pharmaceutical industry.²⁵

²¹ www.fas.org/bwc/protocol.htm and Susan Wright, *Biological Warfare and Disarmament*, Rowman & Littlefield Publishers, Oxford, 2002, pp 43-44

²² Susan Wright, *Biological Warfare and Disarmament*, Rowman & Littlefield Publishers, Oxford, 2002, p 363

²³ "The Problem of Biological Weapons" by Milton Leitenberg, *The Swedish National Defence College*, 2004, p. 71

²⁴ "The Problem of Biological Weapons" by Milton Leitenberg, *The Swedish National Defence College*, 2004, p. 71

²⁵ "Challenges to the BTWC, and Some Reasons for Optimism" by Nicolas Isla at <http://inesap.org/node/105> accessed on March 29, 2012

No change in the attitude of the US was observed post 9/11 and the subsequent Anthrax Mail attacks. No decision was reached during the Fifth Review Conference held from November 19 – December 7, 2001. Efforts to strengthen the implementation of the Convention failed and the results of seven years of negotiations on a legally binding instrument could not be finalised. The Review Conference was adjourned for one year. The resumed session of the Fifth Review Conference in November 2002 could not provide a substitute to the negotiations on the legally binding Protocol. It agreed on a programme of work to develop means for strengthening the BTWC compliance. The programme involved meeting twice each year (one Meeting of Experts and one Meeting of States Parties) for the next three years (2003-2005) leading up to the Sixth Review Conference. In 2003 and 2004, these meetings focused on developing national measures and international capabilities. In 2005, the meetings focused on developing voluntary codes of conduct for scientists. At the Sixth Review Conference (November 20 to December 8, 2006) the States Parties agreed to continue the inter-session work programme and to create an Implementation Support Unit (ISU). The purpose of the ISU was to facilitate CBM implementation and to provide administrative support to the States Parties preparing CBMs. The ISU was launched at the 2007 Meeting of Experts and since then submits a report on its activities to the Meeting of States Parties each year.²⁶

States like India have always taken a proactive position in all these years to resolve the impasse. Ambassador Hamid Ali Rao, at the Experts' Meeting in Geneva in October 2010 laid out

²⁶ [http://www.unog.ch/80256EDD006B8954/\(httpAssets\)/699B3CA8C061D490C1257188003B9FEE/\\$file/BWC-Background_Inf.pdf](http://www.unog.ch/80256EDD006B8954/(httpAssets)/699B3CA8C061D490C1257188003B9FEE/$file/BWC-Background_Inf.pdf), accessed on Apr 3, 2011

India's position on the BTWC.²⁷ India's position has been pro-verification mechanism. It has also shown commitment towards implementing its obligations under the BTWC. New Delhi has stated that it is in favour of further strengthening of the BTWC verification, universalisation, CBMs, export controls and international cooperation. It has further argued that it favours the fullest implementation of Article X of the convention.²⁸

Deciphering the Seventh Review Conference

Over the last few decades, the advancements made in biology are of major concern for the BWC regime. Also, particularly post 9/11 the concerns about bioterrorism have swelled considerably. It has been witnessed that the advancements made in the field of biology provide the terrorists and other non-state actors with novel and wider options. As biology progresses it also makes for newer options which can be used to harm people. Such issues are found surpassing the legal and normative safeguards designed by the BWC regime. Hence, a need to introduce a mechanism to dissuade the proliferators and terrorists from using the science of biology for unlawful purposes is felt. Overall, there are a range of diverse bio risks which need concrete solutions. Naturally, to address a variety of such issues during the Seventh Review Conference it was important not to leave matters to chance and to prepare well for the conference.

²⁷ Statement by Ambassador Hamid Ali Rao: Permanent Representative of India to the Conference on Disarmament, available at <http://mea.gov.in/mystart.php?id=500416511> accessed on March 31, 2012

²⁸ Arvind Gupta, "Issues Before the 7th Biological Weapons Review Conference", August 30, 2011, http://www.idsa.in/idsacomments/IssuesBeforethe7thBiologicalWeaponsReviewConference_agupta_300811, accessed on Jan 24, 2012.

Were the preparations for the Seventh Review Conference perfect? The answer could be, to a large extent, affirmative. Post the Sixth Review Conference, all the mandatory *Meeting of States Parties* were held every year from 2007 to 2010. Various issues of importance were discussed and debated in these meetings. A detailed report of the Preparatory Committee (Geneva, April 13–15, 2011) was finalised highlighting the agenda for the Seventh Review Conference. It was decided that the key focus of the Seventh Review Conference was to discuss:

- (a) new scientific and technological developments relevant to the Convention
- (b) the progress made by States Parties on the implementation of the obligations under the Convention
- (c) progress of the implementation of the decisions and recommendations agreed upon at the Sixth Review Conference

At the NGO level too, a good amount of discussion was carried out post the Sixth Review Conference. Various academic organisations, universities and think tanks were constantly involved in debates and significant literature was published covering a range of facets of biological weapons including disarmament.

Over the years, efforts were made to strengthen the BTWC by negotiating a legally binding protocol for the treaty, which would have provided mandatory declaration and on-site inspection of relevant facilities. (As has been discussed earlier in the paper more than 40 per cent of the states have never submitted CBMs). With an aim to correct this drawback a draft protocol was prepared and circulated in 2001 with the hope that a legally binding protocol would work better than the existing compliance mechanisms. The protocol was negotiated for six years but the United States rejected the draft and withdrew from

the negotiations in 2001. This posed a major challenge to the BTWC. Even today, the US is not keen to have its biotechnology industry subjected to any verification measures under the treaty. Instead, it advocates national measures. No solution to the verification conundrum has been found as yet.²⁹ The Seventh Review Conference took place at Geneva from December 5 to 22, 2011.

Largely, it could be argued that debates undertaken since 2007 until the beginning of the Seventh Review Conference at various governmental and non-governmental foray eventually succeed in identifying a bit ambitious (but bound with realism) agenda for the Seventh Review Conference. However, the issue of verification protocol which actually is the cornerstone of this regime was not on the Review Conference agenda. It was obvious that the states were not keen to rake the issue of verification knowing the opposition of a few powerful states. Over the last few years, the general approach has been to reach a consensus by showing flexibility and by working on mutually agreeable common ideas. Placing a premium on arms control, non-proliferation and multilateral engagement has mostly been the part of the state strategy for many US administrations and so is the case with the present US administration.³⁰ It appreciates that the BTWC is one of the three pillars of the global WMD regime and hence is keen to participate in the deliberations on the BTWC. The secretary of state Ms Hillary Clinton addressed the Seventh Review Conference on December 7, 2011. She

²⁹ Arvind Gupta, "Issues Before the 7th Biological Weapons Review Conference", August 30, 2011, http://www.idsa.in/idsacomments/IssuesBeforethe7thBiologicalWeaponsReviewConference_agupta_300811, accessed on Jan 24, 2012.

³⁰ State Dept. on Biological Weapons Convention Review Conference, Dec 7, 2011, <http://iipdigital.usembassy.gov/st/english/texttrans/2011/12/20111207110744su0.9473187.html#ixzz1qDYsXctb> accessed on Jan 26, 2012

highlighted that she sees Biological Weapons (BW) as a growing risk that may be used by terrorists, rather than nation states and feels that any terrorist group can carry out a major attack. At this point it is important to appreciate that the BW Convention may have come into force to address the threat from the state actors. However, now it should become adaptable to the 21st century challenges. With the new advancements in the field of biotechnology and biosciences there is an urgent need that the BTWC undertakes and adopts mechanisms which makes it more affective in dealing with the newer threats.

The key focus of Clinton's speech was to emphasise the need for increase in transparency in the life sciences sector and the need to explore revisions in voluntary reporting about biological materials. She has indentified three areas which demand attention:

- (a) The interface of health and security—need to adopt measures that could enhance the surveillance and response capability of all nations
- (b) A proposal on national implementation—to ensure that the states report more regularly more useful information about their compliance with the Convention in a way that promotes transparency and builds confidence among state's party and that the Convention is respected
- (c) Science and technology—to have a discussion about the measures the scientific community needs to take to build the consciousness of the risks of bio-science research.

Clinton's speech demonstrated that the US administration is keen to engage on issues related to the BTWC on their terms. The US has its own views with regard to the area of verification and it keeps the interests of industry supreme. In addition, it is felt that it is not possible to design a verification mechanism that would work in the way that the IAEA (International Atomic

Energy Agency) works in the nuclear field. The US and a few other states are of the opinion that the science of biology offers very few options to undertake verification for intrusive inspections, as it is possible with respect to verification of chemical and nuclear weapons.

Apart from the issue of verification, there are certain differences with regard to Article 10 of the Convention. This Article requires states to exchange information and technology. Here they are some differences in perceptions amongst the developed states and states belonging to the non-aligned movement block.³¹

One of the important issues raised by Clinton during her speech was the need to strengthen each country's ability to detect and respond to outbreaks, and improve international coordination. This issue is significant particularly when emerging diseases and their pandemic potential, pose perhaps an even greater national security threat, particularly in this era of globalisation, when diseases can spread more rapidly than in previous eras.³² The secretary of state highlighted the requirement to develop and build 'core capabilities' in disease surveillance and treatment.

Overall, it has been observed that the expectations for the BTWC regime are on an increase during the last few years and there

³¹ State Dept. on Biological Weapons Convention Review Conference, Dec 7, 2011, <http://iipdigital.usembassy.gov/st/english/texttrans/2011/12/20111207110744su0.9473187.html#ixzz1qDYSxctb> accessed on Jan 26, 2012 and Elaine M. Grossman, "Clinton Urges More Reporting, Transparency on Biological Materials", Dec 7, 2011, <http://www.nti.org/gsn/article/clinton-urges-more-reporting-transparency-biological-materials/>, accessed on Jan 30, 2012

³² Thirty four per cent of all deaths worldwide are now attributable to infectious disease, while war only accounts for 0.64 per cent of those deaths. Please refer Jane Evans, "Pandemics and National Security", *Global Security Studies*, Spring 2010, Volume 1, Issue 1, p.100

is an attempt to work around the differences. Also, the need for global cooperation in this area appears to be felt more in the 21st century. Totally 103 states that are party to the convention, participated in the conference. Five states that had signed the convention but were yet to ratify it, also participated in the conference. Additionally, neither parties nor signatories to the convention were granted observer status. 47 NGOs and research institutes also attended the conference. The conference basically, reviewed the provisions of the BWC, article by article. The final document of the Seventh Review Conference published on January 13, 2012 provides relevant details about the outcome of this conference.

Before undertaking any detailed appraisal about the outcome of the Seventh Review Conference it is important to appreciate that the debating verification mechanism was not on the agenda of the review conference and neither did any last moment discussion take place on this issue. Hence, in spite of realising the importance of the verification mechanism to make the BTWC a success, it would be improper to judge the success of this conference based on this issue.

The main agenda before the Seventh Review Conference was to debate and fine-tune the Confidence Building Measures (CBMs), interpret the implementation of Article X in the backdrop of recent scientific and technological developments in the field of biotechnology, promote universalisation of the treaty mechanism and contextualise the issues related to bioterrorism under the treaty mandate. Strengthening of Implementation Support Unit (ISU) mechanism was also a part of the discussion during the conference.

Was the Seventh Review Conference a success? The answer would be that it was definitely not a failure! Interestingly, after the Sixth Review Conference, significant number of debates and

discussions had taken place on various issues related to the BTWC regime and it could be said that the preparation level for this conference was adequate. There was much clarity before the conference about agenda settings. However, the conference outcome appears to be very limited.

While offering the concluding remarks at the end of the Seventh Review Conference, Algeria's representative correctly highlighted the outcome of the conference. He mentioned that "there could have been more stringent and bold measures in the Final Declaration on security cooperation and socio-economic cooperation on biological weapons, a verification scheme and strengthening the Implementation Support Unit. However, he noted that the political situation was not yet right to shoulder such initiatives due to the differences among the countries of the North and the South."³³

Broadly, it has been observed that mainly non-committal exchanges of views took place during the conference. In the last few years, there was a call from the state parties to be given decision-making powers when there is a clear consensus at annual meetings in order to address immediate safety concerns, new technologies, or materials security. The conference made clear that no decisions can be taken before the Eighth Review Conference in 2016. With regard to various other issues too, no significant progress was witnessed. Largely the deliberations remained at a superficial level and various regional proposals either came for discussion during the fag end of the conference or were not debated strongly. Probably, the conference carrying

³³ "Seventh Review Conference of Biological Weapons Convention Adopts Final Document and Concludes Session", Dec 22, 2011, [http://www.unog.ch/80256EDD006B9C2E/\(httpNewsByYear_en\)/925929F5F28485EAC125796E0064AD82?OpenDocument](http://www.unog.ch/80256EDD006B9C2E/(httpNewsByYear_en)/925929F5F28485EAC125796E0064AD82?OpenDocument), accessed on Feb 2, 2012

the 'old baggage' of the Fifth Review Conference and the general mood was to finish the conference without any controversies than to actually work towards taking difficult but important decisions. It appears that the 'aim of the exercise' was to demonstrate the expression of faith in the treaty mechanism in particular and disarmament in general.

Over the years, the CBMs have been viewed as a limited alternative to the mechanism of verification. It is generally perceived that information itself would help to bring in some transparency in the system. The process of exchange of data would provide information with regard to the level of technological growth, the equipment used, facilities available, the bioresearch and development programme, the outbreaks of infectious diseases etc. This could indirectly help to make judgements about compliance with the BTWC's mandate. However, the process of data-exchange measures remains the same since 1991 (the Third Review Conference). Unfortunately, in the Seventh Review Conference other than making some technical changes no attempt was made to make the process more inclusive. It was particularly essential because of the rapid growth in life sciences during the last few years. This conference decided to adopt the revised reporting forms as the basis for all the CBM submissions from States Parties. The conference has put the onus to devise a mechanism to enable fuller participation in CBMs on the 2011-15 inter-sessional programmes. It expects the ISU to examine and develop options for electronic means of submission of the CBMs in cooperation with state parties. It has been proposed to undertake the development of a database system "to facilitate requests for and offers of exchange of assistance and cooperation". This decision is a welcome change. However, the conference was not able to endorse the results of the mandatory meeting of state parties (2007-10).

Probably, a few important areas³⁴ could be identified as areas of significance, which could have been incorporated to improve the CBM process. First, the BTWC states parties are required to provide information on bio defence work in the CBM form for the last couple of years. However, understanding the importance of such measures in the 21st century, the current CBM policy needs a major overhaul. Secondly, the current CBM format does not specifically cover the work with live smallpox virus. This being an extremely important and delicate issue, certain amount of clarity is expected. Third, the issue of 'aerosols' is also not covered by the current CBM mechanism and since aerosols is the most efficient way to distribute biological weapon agents in a mass casualty attack, it is important for a state to provide information on the generation and testing of aerosols indoors and outdoors. Fourth, it is important to have knowledge about the details of BSL-3/BSL-4 facilities which could indirectly provide a clue with regard to research, development and investments in life science research. Fifth, other types of mass production and processing capabilities—mass production of veterinary vaccines; large-scale manufacture of plant inoculants; major food, beverage, and animal feed production facilities; and bio-fuel manufacturing—are also relevant and should be declared. Regrettably, the Seventh Review Conference failed to take notice of such issues.

The major limitation of this conference emerges from the fact that there will be no continuing effort to develop or improve confidence-building measures. Apart from bringing improvement in the submission forms, no further work on confidence-building measures will take place until 2016.

³⁴ Iris Hunger and Anna Zmorzynska, "Verifying and Demonstrating Compliance with the BTWC", *Non-Proliferation Papers*, No. 5, December 2011, pp.1-14

Unfortunately, this situation has emerged in spite of the great deal of work that has been done in recent years on how confidence-building measures could increase the transparency of states' biological activities.³⁵

Experts like Ms Angela Woodward from the *Verification Research, Training and Information Centre* (VERTIC), in an interview with the authors, mentioned, "...the new inter-sessional process is a success of this conference and which helpfully has three standing agenda topics on cooperation and assistance (Article X); review of developments in science and technology; and strengthening national implementation. The intersessional process will also consider how to 'enable fuller participation in the CBMs', but no substantive changes to the existing CBM mechanism was agreed, despite the Germany-Norway-Switzerland-Geneva Forum process which developed many proposals and had many discussion meetings before the Review Conference in order to help build consensus on improving the CBMs, which was extremely disappointing and a wasted opportunity for strengthening the Convention".

Apart from the CBMs, another area where the Seventh Review Conference was not able to improve on the existing structures is the ISU. It was argued that to provide better backing for the convention it is essential to renew the mandate of the ISU. The requirement was to declare the ISU as a permanent part of the treaty system. The Seventh Review Conference succeeded in recommending the continuation with the ISU policy for the period between 2012 and 2016. However, neither has any major change in its mandate been recommended nor has any additional budget been earmarked which could have allowed

³⁵ Malcolm Dando, "Biological indecision" *Bulletin of the Atomic Scientists*, Jan 2012

hiring of additional work force for the functioning of the ISU. The current strength of the ISU is three persons and without the increase in staff the unit will face limitations for undertaking various important activities. In general, the conference itself failed to take on any additional mandate, thus there is very little that the ISU could mandate. Any increase in the strength of the ISU could have allowed them to increase interaction with other agencies such as the WHO, OIE, OPCW and the Australia Group. It is important for the BTWC not to work in isolation but to engage various relevant agencies developing a BTWC regime to make the treaty mechanism more broad based.

At a global level, there could be a difference of opinion on whether the BTWC is the correct forum to discuss bioterrorism. However, it needs to be appreciated that in the absence of any other specific multilateral forum it is important for the BTWC to address this issue. Ms Angela Woodward is of the opinion that "one way to address Bioterrorism is by focusing on strengthening national implementation (so that States have appropriate measures, training and education/awareness-raising to effectively prohibit and prevent all acts that would constitute a BWC violation, including terrorism) and providing cooperation and assistance, including through Article X (to also help strengthen national implementation and preparedness). It may not be helpful to consider 'terrorism' as a discrete issue with respect to the BWC, as we still have the very real threat of State-sponsored BW programmes, which would also be a violation of the BWC". When interviewed by the authors, Cindy Vestergaard from *Danish Institute for International Studies* mentioned, "... my concern is still state programmes, not non-state programmes. The BWC has been violated again and again (South Africa, Iraq, Soviet Union/Russia) by states parties and this is its main deficiency". It appears that the concern of bioterrorism is more for terror victim states like the US and

India. The final declaration of the conference mentions that from the point of view of curbing terrorism there is a need to ensure full and effective implementation of the UNSC Resolution 1540, the UNGA Resolution 60/288 and other relevant UN Resolutions.

The BTWC is an important treaty of the global agenda of the WMD disarmament and arms control regime. This treaty is about biological weapons and connected security concerns. However, the nature of threat arising out of issues related to biological weapons may not be similar for all states. Biology is more of a science that is about helping in the development of mankind than about making weapons. Hence, the BTWC has not ignored the developmental aspect. Article X of the BTWC states the following:

- (1) The States Parties to this Convention undertake to *facilitate, and have the right to participate in, the fullest possible exchange of equipment, materials and scientific and technological information for the use of bacteriological (biological) agents and toxins for peaceful purposes*. Parties to the Convention in a position to do so shall also cooperate in contributing individually or together with other States or international organizations to the *further development and application of scientific discoveries in the field of bacteriology (biology) for prevention of disease, or for other peaceful purposes*.
- (2) This Convention shall be implemented in a manner designed to *avoid hampering the economic or technological development of States Parties to the Convention or international cooperation in the field of peaceful bacteriological (biological) activities, including the international exchange of bacteriological (biological) and toxins and equipment for the processing, use or production of bacteriological (biological) agents and*

toxins for peaceful purposes in accordance with the provisions of the Convention.

Article X offers an incentive for countries whose levels of scientific and technological development are low, and whose disease burden is high, to participate in the Convention.³⁶ This article essentially provides the balance between control and development in the Convention. The strengthening of this article will further assist mechanisms for disease surveillance, detection, diagnosis and the combating of infectious diseases affecting humans, animals and plants.³⁷

Over the years there has been much debate inside and outside the BTWC review conferences for strengthening of the BTWC. Two of the most prominent efforts in this regard are the WHO guidelines on bio-safety³⁸ and the IATA guidelines.³⁹ For this purpose, discussions have been undertaken and a few decisions for the harmonisation of regional, national and international safety rules for the handling, storage and transfer of pathogens and toxic materials have been taken. However, there are some differences of opinions broadly amongst the NAM group and Western nations. Various views are being expressed by interlinking other articles like Article III and VII with Article X. Important issues like compliance, technology cooperation, export controls etc are being viewed differently by a few states. Article X often clashes with Article III, which prohibits transfer of such technologies.

³⁶ Chandré Gould, "How can Article X be implemented successfully?", <http://www.bwpp.org/revcon-articlex.html>, accessed on Dec 27, 2011

³⁷ http://www.regjeringen.no/upload/UD/Vedlegg/helse/bwc_naidoo.pdf, accessed on Mar 12, 2012

³⁸ For full details please check: http://whqlibdoc.who.int/publications/2004/9241546506_partI.pdf

³⁹ For full details please check: https://www.iata.org/whatwedo/safety_security/safety/health/Pages/index.aspx

A view expressed by one the European expert (who wishes to remain anonymous) on the Seventh Review Conference is that “it has been mostly observed under the review conference setup that Article X discussions have mostly been general, non-practical and nebulous. Almost nothing about Article X is agreed, or even discussed in detail—its place and importance for the BTWC, how to implement the promontory aspect, how to promote the regulatory aspect, how to relate to activities in other international fora on a bilateral basis. Neither NAM nor Western countries have ever taken this discussion seriously. It is used exclusively to block things, make things difficult or kill proposals that a state does not like”.

The Seventh Review Conference has recognised the need to adopt positive measures to promote technology transfer and international cooperation. It has been also noted that there would be challenges in developing international cooperation, assistance and exchanges in this area. However, very little has been done to offer solutions in order to address these challenges. On the positive side, the important decision taken during this conference towards strengthening international cooperation and assistance and the implementation of Article X, is that the ISU has been authorised to institute a database mechanism to help match offers and requests for assistance.

Issues related to developments in science and technologies have always been the key focus for any review conference. In this review conference it was decided that these issues would now be addressed through an inter-sessional process each year. In the conference, it was agreed upon that a Standing Agenda Item to conduct an annual review of developments in the field of science and technology related to the convention. The mandate for the Standing Agenda Item, which would form a key part of the third BWC intersessional process, includes seven recurring sub-items for discussion. They involve issues like disease

surveillance, diagnosis and mitigation; strengthening national biological risk management, voluntary codes of conduct, education and raising awareness about risks and benefits etc. The idea of identifying specific sub-topics for discussion each year is a particularly welcome development. This would allow a focused discussion and would create a specific set of recommendations for the Eighth Review Conference. State Parties have agreed to discuss four specific scientific subjects,⁴⁰ one to be dealt with each year:

- (a) advances in enabling technologies, including high-throughput systems for sequencing, synthesising and analysing DNA; bioinformatics and computational tools; and systems biology (to be considered in 2012)
- (b) advances in technologies for surveillance, detection, diagnosis and mitigation of infectious diseases, and similar occurrences caused by toxins in humans, animals and plants (to be considered in 2013)
- (c) advances in the understanding of pathogenicity, virulence, toxicology, immunology and related issues (to be considered in 2014)
- (d) advances in production, dispersal and delivery technologies of biological agents and toxins (to be considered in 2015)

The above list indicates that the discussions would be undertaken not only on the issues of bioscience in isolation but also on technologies which could be used as the delivery mechanism for the purposes of delivering a bio agent on the target. There would be a need to conduct regional meetings and

⁴⁰ "S&T adopted as a Standing Agenda Item at the BWC Review Conference", <http://hsp.sussex.ac.uk/sandtreviews/news/article/4f0c4977dae01>, Dec 18, 2011, accessed on Apr 2, 2012

discussions to provide inputs for the intersessional meetings. Unfortunately, since no permanent working groups have been established, there exists a possibility that the concept of Standing Agenda Item may not work as envisaged.

Universality is another issue which being the key focus of the convention was under discussion. However, despite the promotion of universality in the final document, it does not include any significant new mechanism such as an action plan with a data-driven target to improve the low level of adherence to the convention.⁴¹ Presently, 165 state parties are members of the convention. Hence, efforts that are more concentrated are required to promote universalisation. However, the conference has not provided any concrete action plan to enhance the process of universalisation.

An Appraisal

It is important to appreciate that a review conference is a part of an ongoing process and not a forum to fulfil the global wish list. Finding solutions to the problem by taking every state party's view in consideration and reaching a commonly acceptable agenda is a difficult task. At the same time it is important to note that history has mostly been disappointing with regard to various earlier BTWC Review Conferences.

During the Seventh Review Conference, detailed deliberations took place on various issues related to biological weapons. The conference aimed at strengthening this international mechanism against biological weapons. Surprisingly, during this conference

⁴¹ Malcolm Dando, "Biological indecision" *Bulletin of the Atomic Scientists*, Jan 2012

the involvement of civil society in the plenary sessions was witnessed. This is a welcome change and would go a long way in building the bridges between the NGO community and the official state groupings. This would also help in bringing more transparency in the system. The conference could be viewed as a mix bag of success. It was decided to retain the previous structures of annual meetings of state parties preceded by the annual meetings of experts. Two significant decisions taken during the conference were to adopt revised reporting forms for all CBM submissions and renew the mandate of the ISU. The final document issued at the end of the conference provides a balanced approach mostly incorporating various opinions of the state parties and catering for some of the suggestions provided by various other organisations before the start of the review conference.

The conference has successfully refrained from falling into any trap of confrontation. It has succeeded in pushing certain directives to improve on the convention by successfully engaging various state parties. Now, the question is 'should the limited mandate be viewed as a reason for the success or it actually has made the outcome weak'?

It is believed that the acceptance of a legally binding protocol to the treaty by all state parties is fundamental to the success of the treaty. However, since this idea is not acceptable to all state parties, the challenge before the review conference is to find mechanisms to negate the absence of this mechanism as far as possible. Successive review conferences are attempting to resolve this tangle but with not much success and the same was the case during the Seventh Review Conference.

The CBMs have been found as a viable arrangement to bring in some form of transparency in the system. The CBMs get discussed with some rigor mostly because they are viewed as

an alternative (in a limited sense) to the verification mechanism. However, on ground only a few states have been found to take their responsibilities in this regard, seriously. This conference could have at least made a reference to the individual States Parties that have failed to submit their CBM declarations for all these years. Such 'naming and shaming' could have had some impact and would have encouraged (forced) at least a few states to make some concrete commitments about the CBM submissions.

However, with respect to CBMs, after many years some progress has been made at the Seventh Review Conference. There is a need to start making preparations for the future. Discussions need to commence at an academic level by involving NGOs and other agencies on how to take the process of the CBMs further, what could be done towards strengthening compliance, what more could be done in the area of national implementations, whether suggestions like voluntary visits are workable etc.

Should the ISU be viewed as an institutional framework (in broad terms) similar to the IAEA or OPCW? Definitely not, it is just a secretariat. The experience with ISU is good and the Seventh Review Conference giving it extension is a welcome step. However, the structure of the ISU would not even permit to undertake a small incremental addition to its responsibilities apart from overseeing the routine activities of the secretariat. The outcomes of various BTWC review conferences suggest that the conventional UN idea of setting up a regime based on standard declarations and inspections is unlikely to work. Also, it is important to note that the current verification mechanism may not completely address the proliferation concerns stemming from advances in the life sciences. Perhaps the BTWC regime needs to devise a novel model to overcome existing difficulties. If this convention has to be made more meaningful

then there is a need to devise and debate on such a model before the Eighth Review Conference.

The first impediment, which the BTWC faces before implementing any new ideas, is that of final constraints. The Seventh Review Conference has emphasised the standard UN practices of asking state parties to convention to bear the cost. However, the experience with regard to the states making payment on time is not very encouraging. Now, the time has come to look for plausible measures, which could go beyond the standard UN rules and regulations. It is ironical that the global biotechnology industry is performing well but there is no money to devise a mechanism to stop the misuse of this technology.

Various review conferences in the past have indicated that there are some differences in the opinions amongst the developed countries and the developing countries on some issues relevant to the convention. For this review conference there was a suggestion about the establishment of a 'Fellowship Programme'.⁴² However, the review conference has not agreed for this. It is important to note that there has been an agreement on the sponsorship programme for a representative from the developing countries to be funded to attend the BTWC treaty meetings. The question over here, which needs to be addressed objectively, is about the presence of people in Geneva versus the importance of giving developing states assistance to build their own expertise. For the success of the BTWC more assistance needs to be given to develop mechanisms at national level.

⁴² The UN Programme of Fellowships on Disarmament was launched by the General Assembly at its first special session devoted to disarmament in 1978. It aims at the training and specialisation of national officials in more Member States, particularly in the developing countries, and to enable them to participate more effectively in international deliberating and negotiating fora.

During the concluding session of the Seventh Review Conference, Iran had raised valid argument about the missing of the final extended deadline of April 29, 2012 to destroy chemical weapons by the states like US and Russia. This raises questions about the viability of the Chemical Weapons Convention (CWC) as well as its integrity. This issue is important because the success of the CWC particularly with a legitimate verification mechanism is always quoted as an example during the discussions on the BTWC.

Many are still concerned about the future of the verification protocol and feel that it is incorrect to give-up on this front altogether. Dr.Cindy Vestergaard mentioned that, “political desire by larger states with large pharmaceutical and bio industries are not aware (or concerned) that their industrial and biodefensive programmes are viewed with concern by other states”.

Overall, the limited achievements of the Seventh Review Conference and the limitations of the convention displayed during this conference indicate that much is desired from the future. Notionally, the effective strengthening of the convention through a multilateral mechanism that would be legally binding is important and sagacious. There is a need to devise a mechanism, which could bring in more transparency. In the 21st century the pace of bioscience advances are intimidating and the Seventh Review Conference has demonstrated that the risks would exceed the pace of political response. Hence, it is important for the state parties to become more proactive. Various efforts undertaken in all seven review conferences highlight that in spite of all such efforts and the implementation of various innovative ideas, the treaty will remain a non-success. This is because of the lack of political will by a few states and the industry to address paucities.