DIIS BRIEF

Executive summary

After 33 years in force, the Biological Weapons Convention (BWC) remains the foundation of international commitment to the principles and norms that biological science is to be used exclusively for peaceful purposes. But it faces continuing challenges. Attempts to strengthen the treaty with a verification protocol have been controversial since the treaty's inception, ending in 2001 without agreement. Since then, BWC States Parties have engaged in a new process of annual meetings to strengthen compliance, but the treaty remains more of a paper tiger, challenged by a lack of compliance effectiveness. This brief provides a background to the historical use of biological weapons and outlines the issues challenging the current BWC process.

The next BWC Meeting of Experts will be August 18 – 22, 2008 in Geneva. At the meeting, States Parties and signatories to the Convention, along with intergovernmental organisations will discuss and promote common understanding and action on:

1. National, regional and international measures to improve biosafety and biosecurity, including laboratory safety and security of pathogens and toxins
2. Oversight, education, awareness-raising, and adoption and/or development of codes of conduct with the aim of preventing misuse in the context of advances in bio-science and biotechnology research with the potential of use for purposes prohibited by the Convention

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Status of the Biological Weapons Convention Today

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The BWC

Opened for signature in 1972 and entering into force in 1975, the Biological Weapons Convention (BWC) was the first multilateral disarmament treaty banning an entire category of weapons. Obligating states to ban the development, production, stockpiling and transfer of biological weapons, the BWC is a key element in the international community's efforts to prevent the proliferation of weapons of mass destruction (nuclear, biological and chemical weapons). As of 1 July 2008, the treaty has 161 States Parties.

The large number of States Parties allows for active participation in BWC implementation and furthers the prevention of illicit activities at the national, regional and international level. Compared to its non-proliferation treaty siblings however, the BWC is lagging behind: the Nuclear Non-Proliferation Treaty (NPT) has 190 States Parties and the Chemical Weapons Convention (CWC) has 184.

Of the 34 countries not party to the BWC, 14 have signed but not ratified the treaty, and 20 have neither signed nor ratified the treaty. Of these, four states are reported to be well advanced in the ratification process, and a further seven are reported to have begun the process. Egypt and Syria link acceding or ratifying the treaty to Israel signing the NPT, and committing to an overall 'WMD-Free' Middle East. For some states however – particularly small and/or developing states – assistance (financial, administrative, legal) and support is required to alleviate organizational difficulties in joining the Convention. The issue for many of these states is a basic lack of resources – some with only one person to be the point of contact for all issues regarding nonproliferation, chemical, biological and nuclear. They may also have minimal or non-existent pharmaceutical or biological science industries that make the treaty seem nationally irrelevant.

But the same could be said for the CWC – which has 23 more States Parties than the BWC and has been in existence for only 11 years – versus the 33 years of the BWC. The CWC however not only boasts a robust verification mechanism, but also an organization in The Hague dedicated to implementation of the treaty, such as facilitating international cooperation and capacity building for the peaceful applications of chemistry. This organization implements a number of programmes which are primarily designed for Member states whose economies are developing. No such similar organization, facilitation, and assistance are provided under the BWC. Further challenged by a lack of compliance verification, it is not surprising then that incentives to join are low and without organizational assistance not all members have adopted national legislative or administrative measures to implement the treaty.

Biological Weapons Then and Now

While little was known about how germs caused disease in early history, the debilitating effect of infection on enemy troops was understood as feces, human cadavers, and animal carcasses were dumped into wells and other water sources as an ancient war strategy. Almost as soon as the arrow was invented, humans were dipping them in feces or decaying meat before attacking an enemy. From the 14th to the late 18th Century disease warfare manifested in the catapulting of plague- and smallpox-infected bodies into besieged towns. The discovery of germ theory and how bacteria and viruses transmit illness in the late1870s led to further military applications with Germany in World War I trying (without much success) to infect allies' livestock with anthrax and glanders.

Key Obligations of the BWC	
BWC Article	Obligations
Article I	Never in any circumstance develop, produce, stockpile, or otherwise acquire or retain biological or toxin weapons
Article II	To destroy them, or divert them to peaceful purposes, not later than 9 months after the entry into force of the convention
Article III	Not to transfer to any recipient, nor to encourage, assist or induce anyone else to acquire them
Article IV	To ensure national implementation of the convention through domestic processes to give legal effect
Article V	To consult and cooperate, bilaterally and multilaterally, in solving any problems that may arise
Article VI	To cooperate with the UN Security Council in any investigation which it may initiate should it receive a complain that one state party finds another state party to be acting in breach of its obligations
Article VII	To assist victims if biological or toxin weapons are used against a state party
Article X	To pursue international cooperation in the peaceful uses of microbiology for the prevention of disease and other peaceful purposes; and to implement the BWC to avoid hampering the economic or technological development of States Parties

Biological weapons (BW) research and development programmes began in Canada, France, Hungary, Italy, the Soviet Union and the United Kingdom in lead up to World War II. One of the more known was that of Japan, where the military tested the lethality of various disease agents on Chinese prisoners of war, killing thousands. The US programme did not begin till the years of World War II, and while the BW programmes in Canada, France, Germany, Hungary, and Italy ended during WWII or shortly thereafter (the UK programme ended in 1956), the US and USSR programmes were ramped up during the Cold War years. Both explored the use of hundreds of different bacteria, viruses and biological toxins, and devised sophisticated ways to disperse these agents in fine-mist aerosols, packaging them in bombs ready to launch on missiles. In 1969, President Nixon unilaterally terminated the offensive biowarfare programme and ordered all stockpiled weapons destroyed, giving an extra push toward the signing of the BWC in 1972. South Africa and Iraq also developed BW programmes during the years of the Cold War which have since been terminated.

There are only a few instances of the use of biological agents by non-state actors. In 1984 in the US, the Rajneesh sect sprinkled salmonella bacteria on supermarket produce and restaurant salad bars in Oregon in hopes of keeping voters home during a local election in which a cult member was running for a county judgeship. 751 people became ill. The Aum Shinrikyo cult in Japan – which released nerve gas in a Tokyo subway in 1995, killing 12 people and thousands seeking medical attention – is the best known for its experimentation with biological agents, specifically botulin toxin. While its attempts to disperse the agents between 1990–1995 were unsuccessful, the

revelations of its experimentation heightened the threat of bioterrorism in the 1990s.

The anthrax letters of 2001 that turned up at newsrooms and official government mailrooms across the US led to five deaths, 23 anthrax infections and thousands of US residents taking courses of antibiotics after possible exposures. The likelihood of a disaffected or terrorist actor producing the anthrax letters has been rejected given the purity and concentration of spore particles which would require a highly specialized knowledge in biological weaponisation. As some of the spores were the size most effective in spreading aerosolized bacteria – between one and five microns, it is suspected that the anthrax was weapon-grade, or near weapon-grade. Specialists across the US concluded that the letters may have been weaponised in a US government or contractor lab and/or made as part of the US biodefence programme.

On August 6, 2008, US authorities identified Bruce Ivins, a biodefense researcher for 28 years at the U.S. Army Medical Research Institute for Infectious Diseases in Fort Detrick, Maryland as the sole perpetrator for the attacks. The announcement came six years to the day when another Fort Detrick scientist, Steven Hatfill, was publicly listed as a 'person of interest' in the attacks. Hatfill was never charged and sued over the matter, a case the US government settled just in June. Ivins however will not be able to have his day in court as he reportedly died of suicide a week before when authorities were preparing to charge him. Authorities are continuing to build their case against Ivins as mounting skepticism develops from researchers and legal analysts about the forensics and evidence put forward. While the details of the case unfolds, the anthrax attacks serve as an important example of the need for high security and safety measures in place at laboratories housing dangerous biological materials. Biosafety and biosecurity measures are the first step in preventing both insider and outsider threats.

Confidence Building or Confidence in Ambiguity?

States Parties meet about every five years at a review conference to review the treaty's implementation. The 2nd BWC Review Conference in 1986 introduced Confidence-building Measures (CBMs) "in order to prevent or reduce the occurrence of ambiguities, doubts and suspicions and in order to improve international cooperation in the field of peaceful biological activities." At a meeting of scientific and technical experts in 1987, the CBMs were elaborated and consequently altered and expanded by the 3rd Review Conference in 1991. While the 2nd Review Conference did not specifically use the term 'confidence-building measures' given its close association with the military dimension of the Helsinki Process, initiated by the 35-member Conference on Security and Cooperation in Europe (CSCE), the measures that the conference did adopt would be referred to as confidence-building measures. Since 1991 the CBMs consist of 7 measures:

- exchange data on research centers and laboratories and on national biological defence research and development programmes
- exchange information on outbreaks of infectious diseases
- encourage the publication of biological research results and promote the use of knowledge from the research
- actively promote scientific contact
- declare legislation, regulations and other measures pertaining to the BWC
- declare offensive or defensive biological research and development programmes in existence since 1 January 1946
- declare vaccine production facilities

Despite that States Parties are politically bound to submit a CBM every year, participation in the CBMs has been irregular and inconsistent, ranging from an annual number of submissions between 30 at its lowest (in 1987) and 61 at its highest (in 2007). Annual CBM submissions are thus only made by less than half – and often less than a third – of States Parties of the BWC. Some states submit returns in some years, but not in others, and many submissions are also incomplete, where only some of the seven forms are submitted but not all. Denmark has submitted 14 times (out of a total 21): every year between 1987–1997, none between 1998–2004, and submitted every year since 2005. All Member States of the EU submitted CBMs for 2007 and it is now EU policy to have all member states submit every year.

Verification

Unlike the development of nuclear weapons, the development of agents for biological warfare is possible without vast expenditures of money or the construction of huge production facilities. The development of a biological weapons programme could proceed under the guise of legitimate medical or bacteriological research as was done in the USSR – where biological weapons development was conducted under the guise of civilian research and development facilities. Inherently 'dual use', facilities used to support research and development for BW defence purposes also have the capability for offensive purposes. In 2005, the US alleged that other BWC States Parties China, Iran, North Korea and Russia, and BWC signatory Syria, as possessing offensive biological weapons programmes. The US' extensive biodefence programmes have also raised concerns regarding activities that could be perceived as crossing the line between permitted and proscribed actions.

With treaty violations and ambiguity over state programmes, the need to strengthen the convention is clear. To close the loopholes in the convention and add transparency through verification, an ad hoc group formed in 1994 produced a protocol 6 years later with a legally-binding framework and inspection regime at its core. In July 2001, at the meeting of the Ad Hoc Group, the US rejected the draft protocol and refused further protocol negotiations, claiming that such "traditional arms control measures" would not strengthen BWC compliance and could harm US national security and commercial interests (i.e. claiming concerns about industrial espionage). At the Fifth Review Conference five months later, Washington suggested that the Ad Hoc Group be disbanded and member states instead meet annually in a new body to assess the implementation of any measures agreed to at the conference and consider new measures for strengthening the convention. The idea caused uproar and the Chair of the meeting had to suspend the conference for a year. Despite the conference's resumption in 2002, States Parties failed to agree on any verification measures and instead agreed to hold annual meetings before the next review conference in 2006.

The New Process

At the annual meetings between 2003–2005, States Parties discussed five topics: 1) national implementation measures; 2) biosafety and biosecurity; 3) enhancing international response capabilities to natural disease outbreaks or alleged use of BW; 4) strengthening and broadening institutional efforts for surveillance, detection, diagnosis of infectious diseases; and 5) codes of conduct for scientists. This first intersesssional process did not fully alleviate the political differences and resentments of 2001, however. At the 6th Review Conference in 2006, States Parties decided to hold four sets of annual meetings in lead up to the 7th Review Conference. Each set of annual meetings include one week of Meeting of Experts,

followed by a one week Meeting of States Parties.

Essentially a continuation of the 2003–2005 process, States Parties agreed to add education and awareness raising to the topic of codes of conduct along with a sixth topic concerning regional and subregional cooperation to the intersessional process for 2007–2010.

- 2007 – enhancing national implementation and regional and sub-regional cooperation on treaty implementation
- 2008 – improving biosafety and biosecurity and education, awareness raising and adoption and/or development of codes of conduct to prevent misuse of advances in bio-science and bio-technology research
- 2009 – identifying requirements and requests for assistance with capacity enhancement and opportunities for those interested in providing such assistance
- 2010 – enhancing common understanding and effective action in the case of alleged use of biological or toxin weapons and improving national capabilities for disease surveillance, detection and diagnosis

In many respects the 2007–2010 intersessional process is a rehash of 2003–2005, but there is some new material on the table, specifically in terms of bringing in actors not involved in the process. 2007, for example, was a refresher course on national implementation of 2004, identifying where the gaps are, which countries require additional assistance and that effective national implementation is an ongoing task. New elements were building connections with stakeholders in civil society and commercial industry, such as pharmaceutical companies and regional biosafety associations. The 2007 Meeting of States Parties on national implementation and regional/subregional did produce a consensus document where States Parties recognised and agreed upon the value of effective national implementation and regional cooperation, along with calling on States Parties in a position to do so to provide technical assistance and support to States Parties requesting it. But it's a far cry from concrete, substantive results of which a common approach or common bar to measure implementation success. It will be up to the 7th Review Conference in 2011 to take action on the issues discussed. The hope should be not to have another talk rehash on the same topics from 2012–2015.

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