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The Biological Weapons Convention and the Negotiations for a Verification Protocol

Biological warfare agents are a unique class of weapons, as they include living organisms with the ability to reproduce and perpetuate their destructive mission beyond the intended target area and time. The unique threat of biological weapons has engendered broad support for a global ban of these weapons. The Biological and Toxin Weapons Convention (BTWC) of 1975 is the principal agreement that prohibits such weapons under international law.

The last decade, however, has witnessed dramatic and rapid changes in bioscience that are likely to ease the development of biological weapons. In addition, the global consensus against the hostile use of living organisms is increasingly endangered. Some research programs currently underway threaten to blur the boundary between peaceful and hostile uses of biological agents.

To address these threats, the international community must undertake every effort to strengthen the Bioweapons Convention. At the next Review Conference of the BTWC, to be held in November 2001 in Geneva, the States Parties to the Convention must close loopholes in the convention and clarify that any use of biological agents in conflict is prohibited. In addition, a legally binding Protocol to strengthen the Convention is currently being negotiated in Geneva. We call on all governments to reach consensus on a strong Protocol promoting transparency and fair and effective verification and non-proliferation measures.

The BTWC

The Biological Weapons Convention was signed in 1972, entered into force in 1975, and has been ratified by 143 State Parties.¹ It is unique in its comprehensive and unambiguous prohibition of a whole class of weapons.² Any development, production, stockpiling or acquisition of biological or toxin weapons is prohibited. Article I of the Convention reads:

Each State Party to this Convention undertakes never in any circumstances to develop, produce, stockpile or otherwise acquire or retain:

¹ The text of the Convention and related documents can be found at <http://www.un.org/Depts/dda/WMD/page6.html>.

² The Chemical Weapons Convention is nearly as comprehensively outlawing another class of weapons. It contains, however, some exemption, e.g. for the use of chemical weapons for law enforcement purposes.

(1) *Microbial or other biological agents, or toxins whatever their origin or method of production, of types and in quantities that have no justification for prophylactic, protective or other peaceful purposes.*

The Convention outlaws any biological agent that is intended for hostile application, with no limitations or exemptions. It covers agents that target humans, animals, plants or material. The BTWC's provisions are not explicitly restricted to wars, and there is no exemption for law enforcement purposes.

It is important to note that the Convention defines biological weapons with the so-called "general purpose criterion". Specific living organisms are not prohibited by the BTWC, rather their development for hostile purposes. This is because biological agents have dual-use. All organisms of natural origin, even dangerous ones, might be used for beneficial purposes.³ Nearly all the know-how and equipment necessary for an offensive biological warfare program has applicability to civilian medical or biological research. Whether a given experiment is offensive or defensive is a matter of researchers' intent.

Current Problems

Lack of Verification: While the BTWC is very broad and unambiguous in its prohibition all biological weapons, it lacks verification provisions. At the beginning of the 1990s, it became apparent that at least two States violated the Convention and engaged in offensive biowarfare programs. In 1992, Russian President Yeltsin admitted that the former Soviet Union developed and produced biological weapons. Soon thereafter a special UN Commission (UNSCOM) found clear evidence of an offensive program in Iraq. These revelations were instrumental in triggering negotiations to strengthen the convention. In 1994, a Special Conference of the States Parties of the BTWC established an Ad Hoc Group with a mandate to discuss a legally binding Verification Protocol.⁴ Its goal is to negotiate a Protocol text before the 5th Review Conference of the BTWC convenes in Geneva in November 2001.

Global consensus endangered: The global consensus against the hostile use of living organisms is increasingly endangered. For example, pathogenic fungi are being developed for use in programs of forced eradication or narcotic crops, and US military strategists have called for relaxing controls on biological weapons to allow the use of material-degrading (e.g. oil eating) microbes. These important issues are not addressed in the Protocol negotiations and must be taken up by the 5th Review Conference. The Review Conference must close any loopholes in the Convention and reaffirm the unrestricted applicability of the BTWC to any hostile development of biological agents, encompassing weapons targeting humans, animals, plants or material, for use against states, populations, or individuals, and in the all conflict, including declared wars, internal conflicts, law enforcement and civil unrest.

Biotechnology developments: Additional problems will arise from future developments in the biosciences. The deciphering of the human genome, new approaches to gene therapy or drug delivery, and the manifold genetic engineering experiments with potentially pathogenic microorganisms will increase the availability of much more sophisticated biological agents with a potential for hostile uses. For example, a recent genetic engineering experiment with

³ One example is botulinum, a toxin weapon that can heal as well as harm. Botulinum toxin can paralyse and kill; but is also used as a medicine to control certain conditions marked by involuntary muscle contractions. More info at: Luba Vangelova (1995) Botulinum Toxin: A Poison That Can Heal. In: FDA Consumer magazine December 1995, http://www.fda.gov/fdac/features/095_bot.html.

⁴ Final Declaration of the Special Conference (VEREX) held in September 1994 (<http://www.brad.ac.uk/acad/sbtwc/verex/verex1.htm>). The mandate of the Ad Hoc Working group comprises, *inter alia*,

- Definitions of terms and objective criteria, such as lists of bacteriological (biological) agents and toxins (...);
- A system of measures to promote compliance with the Convention;
- Specific measures designed to ensure effective and full implementation of Article X (i.e., cooperation on peaceful purposes).

mousepox virus in Australia inadvertently created a lethal virus when they added a gene believed to be "harmless" to mousepox. The case highlights the high potential for military abuse of genetic engineering.

It is unclear today how a reasonable and effective approach to address future developments would look. An open and broad discussion to identify new approaches to prevent the hostile exploitation of these developments must now be initiated.

The dual use nature of biological weapons makes it a difficult task to detect and stop a country that wants to develop bioweapons. In most cases, bioweapon agents are self-replicating, and even the smallest amounts can quickly generate sufficient quantities for weapon production. The goal of any activity or legally binding document must be to build an international climate that prevents countries from pursuing offensive biowarfare programs. Therefore the Convention, Protocol, and other biological weapons controls must be designed and implemented multilaterally and to

- reaffirm and strengthen the global moral rejection of biological weapons,
- enhance transparency and confidence between countries, and
- make it as difficult as possible for any country or person to build and conceal a biological weapons programme.

The Protocol to strengthen the BTWC

The Ad Hoc Group (AHG) has already met 22 times. Its goal is to complete negotiations before the 5th Review Conference of the BTWC convenes in Geneva in November 2001. Core issues that remain unresolved include the establishment of legally binding verification measures and export control, trade, and technology transfer-related measures.

Compliance measures

The general approach to verification is pretty straightforward and is generally agreed upon by the negotiating parties in Geneva. It focuses on existing biotechnology facilities and relies on measures to enhance transparency. The concept is based on the four pillars declaration, visits, clarifications and investigations. While the general approach is widely accepted, some of the crucial details are still very controversial. The last five years have seen a gradual watering down of many provisions, mainly due to the intransigence of the US government. Strong conceptual differences still exist on the following points:

- **Declarations:** Biotechnology facilities from industry, military or academia that might be related to bioweapons research or could be (mis)used for bioweapons production must be declared by each State Party. But which facilities have to be declared? Only broad declaration triggers would provide for a strong Protocol.
- **Visits** at the declared facilities will help to control the correctness of the declarations, and to enhance transparency between States. It is desirable that facilities that are to be visited by international inspectors are selected randomly from all declared facilities. Some countries still oppose the concept of mandatory random visits. It is still far from sure whether any kind of mandatory visits – apart from investigations – will be part of the protocol. Attendant issues on the purpose and extent (e.g. sample collection and analysis) of visits remain controversial.
- A **clarification** process will be initiated if a declaration is unclear, or if it is suspected that a declaration is incomplete or that a facility that ought have been has not been declared. As a last step during the clarification process

clarification visits at the facility of concern must be possible, a provision that is not yet accepted by all negotiating parties.

- The strongest instrument would be a **challenge investigation**, conducted in the case of suspicion being voiced by a Party that alleging possible production or use of biological weapons. The procedure for initiating investigations is still heavily debated. Some countries favor the requirement that a majority of the Executive Council members⁵ to approve an investigation before it can proceed. This would be time consuming, politically sensitive, and likely to impede effective implementation.

An "Organisation for the Prohibition of Biological and Toxin Weapons", which will govern all measures provided for by the protocol, will be established by the Protocol. It would, for example, receive the declarations and make the visits.

Non-proliferation and cooperation on peaceful use

These tightly connected issues have resulted in difficult negotiations attempting to balance Southern concerns about trade and technology transfer against the desire of many Northern countries to limit the access of some governments to dual use technology. The relevant articles of the Convention are Articles III and X. Article III on non-proliferation reads:

Each State Party to this Convention undertakes not to transfer to any recipient (...) any of the agents, toxins, weapons, equipment or means of delivery specified in article I of this Convention.

On the other hand, Article X on technology transfer encourages exchange of biotechnology:

(1) The States Parties to this Convention undertake to facilitate (...) the fullest possible exchange of equipment, materials and scientific and technological information for the use of bacteriological(biological) agents and toxins for peaceful purposes. (...)

The difficulties achieving consensus on ways to simultaneously satisfy these provisions are considerable. Discerning the end-use of dual-use technology can be difficult. For example, a fermenter that can be used in making vaccines may also be effective for manufacturing biological weapons. The most technologically advanced and best-tooled fermenters are safest and most efficient – qualities that any user would desire - and may be equally desirable for weapon making and health programs. According to Article X, if the fermenter is intended to produce vaccines it must be allowed to trade, but the same machine must not be traded for the production of biological weapons.

To restrict international trade in dual use technologies, a group of almost exclusively Northern countries have organized in the Australia Group. Strongly opposing the Australia Group are the Southern countries of the Non-Aligned Movement (NAM).⁶ Many in the NAM are familiar with the aggressive demands of liberalized trade and argue the Australia Group has as much to do with economic hegemony as arms control. They say the Australia Group is engaged in creating the same kind of non-tariff trade barriers that many Northern countries so bitterly oppose at the WTO and elsewhere. The NAM argues that if Parties are members in good standing of the BTWC and submit to inspections under the legally binding Verification Protocol, any export control system established must give all countries equal rights.

Parties agree in principle that situations can arise in which access to particular technologies should be restricted; but the NAM is suspicious of the Australia Group's

⁵ The executive organ of the Organisation for the Prohibition of Biological and Toxin Weapons.

⁶ Despite the political changes of the past decade, BTWC negotiators in Geneva are still organised in the Cold-War-era groups (Eastern, Western, NAM).

insistence that it should be allowed to wield extensive power in a dual system of mandatory inspections and export controls.

One solution that has been proposed is a broad export notification system for dual use items. Such a system could be instrumental in identifying secret bioweapons programs. For example, by analyzing export data, UNSCOM discovered that Iraq had purchased vast amounts of growth medium. When Iraqi officials were unable to explain how it had all been used, the export data suggested Iraq was producing bioweapons. Compilation of an international database on dual use exports could help to identify non-compliance and make hiding a bioweapons program more difficult. It seems possible that negotiators in Geneva can agree on a notification system, although it will probably be restricted to very few items like large fermenters.

Current status

Recent efforts to develop compromise texts have opened the possibility of starting a final phase of negotiations, but the outcome is still open. Two more rounds of negotiations will be held from April 23 – May 11 and from July 23 – August 17 2001. If no agreement can be achieved until the 5th Review Conference in November, the negotiations could continue, or be abandoned entirely.

The Long Shadow of the US

The intransigence of the US has impeded the ability of the Western Group to unify with strong positions. Five years ago, European Union countries began with strong proposals including measures that would have created a very strong protocol. But the EU's position has steadily worsened as its negotiators relent to US pressure. The US particularly opposes mandatory non-challenge visits. Inside the US government, backers of this position include the US Department of Commerce and US National Laboratories,⁷ who dislike the idea of inspections of their biodefense work. In May 1999, (former) US Secretary of Commerce William Daley rejected transparency visits on the basis that they "*offer no national security benefits*".⁸ In addition, Pharmaceutical Research and Manufacturers of America (PhRMA) has lobbied heavily for a Protocol with limited declarations and without mandatory non-challenge visits.⁹

Conclusion

The Verification Protocol is now in its most critical stage. An agreement on a weak protocol or stopping negotiations would have a detrimental effect on biological weapons control. The international consensus against biological weapons would be severely weakened. In light of the increasing biowarfare threat, this must not happen. All governments should undertake efforts to reach consensus on a strong, fair, and transparency-promoting Protocol that must at least include the following key measures:

- Broad declaration triggers;
- Mandatory visits at randomly selected facilities;
- Clarification procedures that include visits;
- Challenge investigations that are fast to initiate;

⁷ Alan P. Zelicoff of Sandia National Laboratory, presentation at the Twelfth Nonproliferation Policy Reform Task Force Meeting 10 August 2000, in the Nonproliferation Policy Education Center (<http://www.wizard.net/~npec/summary12.htm>).

⁸ Letter from William M. Daley to Madeleine K. Albright, 24 May 1999, quoted in: Marie Isabelle Chevrier: Preventing Biological Proliferation, in: Oliver Thränert (ed) Preventing the Proliferation of Weapons of Mass Destruction: What Role for Arms Control. Friedrich Ebert Stiftung, Bonn, 1999.

⁹ In a July 2000 policy statement, PhRMA, the European and the Japanese Bioindustries objected to any non-challenge visits: "...clarification procedures (...) are regarded as appropriate but should not necessitate any on-site activities." And: "(...) any routine on-site activity is not a useful concept under the Protocol." In: Compliance Protocol to the Biological Weapons Convention: A Joint Position of European, United States and Japanese Industry, issued by the "Forum for European Bioindustry Coordination", PhRMA, and the "Japan Bioindustry Association".

- Establishment of a comprehensive export notification system.

Beyond the Protocol: The 5th Review Conference of the BTWC

The global consensus against the hostile use of living organisms is increasingly endangered. Some programs blur the boundary between peaceful and hostile uses of biological agents, such as pathogenic fungi that are currently developed for use in forced drug eradication programs.¹⁰ Recent statements by US Army officials have called for the development of gas-guzzling bacteria to curtail an enemy's mobility. Pursuit of biological weapons in the drug war, or materiel-degrading microbes as weapons, would be a step down a slippery slope, that, following the same logic, could easily lead to the use of other plant pathogens, animal pathogens, or even non-lethal biological weapons against humans. These technologies can only legally be pursued by punching holes in the Biological Weapons Convention.

The 5th Review Conference of the BTWC, to be held in November 2001 in Geneva, should ban the use of biological agents for drug crop eradication purposes and in law enforcement, should close any loophole in the convention and reject any attempt to impinge on the scope of the Convention.

¹⁰ For comprehensive information on biological weapons in the drug war see our homepage www.sunshine-project.org.