

What are biological weapons?

Biological weapons (BW) spread disease among humans, animals or plants. Diseases may occur when a population is exposed to infectious microorganisms or to chemicals – toxins – which are manufactured by such organisms. With microorganisms, the symptoms of the disease become apparent after an incubation period, during which time the organisms are multiplying. With toxins, symptoms generally appear more rapidly. Among people and animals, the effects of disease may range from incapacitation to death.

THE AGENTS: TYPES OF MICROORGANISMS AND TOXINS USED IN BIOLOGICAL WEAPONS:



BACTERIA: single-celled microorganisms that cause diseases such as anthrax and the plague.

VIRUSES: cannot carry out all necessary metabolic functions and therefore need living cells in which to replicate and grow. Among the disease-producing viruses are smallpox and Ebola.

FUNGI: a number of fungal pathogens, such as wheat cover smut, can be used to destroy crops, causing hardship and famine.

TOXINS: the products of microorganisms such as that from *Clostridium botulinum*, which causes botulism. Whilst microorganisms may be further spread through the population by person-to-person contact thus magnifying the effect of the initial exposure, toxins cannot.

A wider definition of BW would also include anti-materiel agents, which attack, degrade and destroy inanimate substances such as rubber and plastic. However, there is still confusion and international argument around the classification of these agents.

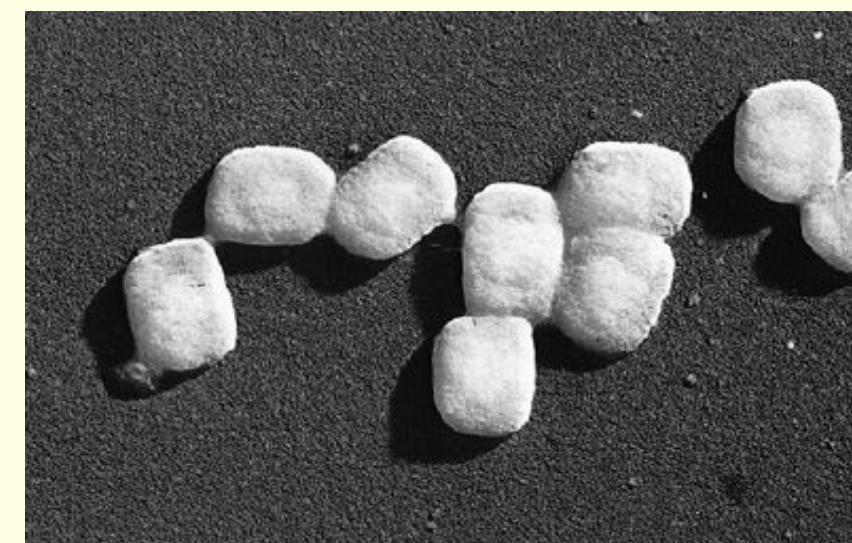
Smallpox virus.
Photo: Centre for Applied Microbiology and Research.
Available at <http://hq.nato.int>

The way forward:

- Multilateral action remains central to any long-term response to the BW threat. While tightened domestic legislation against state and non-state bioterrorism is crucial, such controls must be enforced as part of a unified global approach to combating this international menace. Disease knows no borders, and only the development of an effective international prohibition regime will ensure universal BW control.
- Illicit government programs still represent the most serious biological weapons threat. With this in mind, mandatory international inspections into those national biotechnology programs that could potentially facilitate BW production, and the creation of an international agency with enforcement powers, remain essential to an effective solution to the problem.
- Under current international law, only countries can be held accountable for violations of the BWC. It is vital that breaches of the convention by individuals or groups should also be treated as international crimes. For this to happen, an international legal framework needs to be developed so that there are no safe havens in which BW offenders can seek sanctuary.
- Innovative thinking on this issue is crucial. The BW prohibition process should not be limited to States Parties to the BWC, but should also involve other interested organizations and groups. The United Nations, regional inter-governmental organizations such as the European Union, health professionals and the pharmaceutical and biotechnology industries should all be consulted and included. It is in the interest of all that effective measures against the BW threat are devised.

a basic guide to

BIOLOGICAL WEAPONS control



Plague Bacterium. Photo: Centre for Applied Microbiology and Research. Available at <http://hq.nato.int>

How great is the threat today?

Because the technology required for BW production can be easily obtained and camouflaged by states, the true number of bioweapon producers and possessors and the extent of holdings is unknown. While publicly available information is scarce, the following states are frequently reported as having or seeking an offensive biological weapons capability: China, Iran, Iraq, Israel, Libya, North Korea, Russia and Syria. Questions regarding the biological weapons capabilities of Cuba, Egypt, Pakistan, South Korea and Taiwan have also been raised. In addition, there have been concerns expressed that U.S. biodefense research programs may potentially have offensive uses and breach the Biological Weapons Convention (BWC).

As well as the potential danger from states, there is increasing concern about the ability and willingness of non-state actors to employ bioterrorism. The post-September 11 anthrax attacks in the United States, which resulted in five deaths and 17 non-fatal infections, greatly increased these fears. Although the source of these attacks is still uncertain, the physical and economic damage they caused was considerable and has led the Bush administration and many other governments to devote substantial resources to improving biodefense capabilities.

Risks clearly do exist, and preventative governmental action is vital. However, nearly all attempts by non-state actors to develop BW have ended in failure and widespread public anxiety about bioterrorism, fuelled by ill-informed media reports, can itself be damaging. Such public alarm, based upon inadequate risk and threat assessments, can lead to counterproductive policies developed by governments that are under pressure to act. This, in turn, can lead to the growth of biohaxes, fueling further fear.

Additional resources:

- Acronym Institute** <http://www.acronym.org.uk/bwc/index.htm>
- BWC and its Protocol Website** <http://www.opbw.org/>
- Center for Nonproliferation Studies** of the Monterey Institute of International Studies, <http://cns.miis.edu/research/cbw/index.htm>
- Centers for Disease Control** <http://www.cdc.gov>
- Center for Conflict Resolution** The South African Chemical and Biological Warfare Program, http://ccrweb.ccr.uct.ac.za/cbw/cbw_index.html
- Federation of American Scientists** <http://www.fas.org/bwc/index.html>
- GeneWatch UK** <http://www.genewatch.org/>
- Harvard-Sussex Program on CBW** (Chemical and Biological Warfare) Armament and Arms Limitation, <http://fas-www.harvard.edu/~hsp/>
- Henry L. Stimson Center** <http://www.stimson.org/cbw/>
- Joint University of Bradford / SIPRI** Chemical and Biological Warfare Project, <http://www.brad.ac.uk/acad/sbtwc/>
- Stockholm International Peace Research Institute** <http://projects.sipri.se/cbw/cbw-mainpage.html>
- Sunshine Project** <http://www.sunshine-project.org/>
- U.S. State Department** <http://www.state.gov/t/ac/bw/>
- VERTIC** <http://www.vertic.org/>

BASIC : WWW.BASICINT.ORG

BRITISH AMERICAN SECURITY INFORMATION COUNCIL

Lafone House • 11-13 Leathermarket St. • London SE1 3HN • UK • +44-(0)20-7407-2977
1012 14th St., NW • Suite 900 • Washington, DC 20005 • USA • +1-202-347-8340

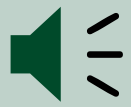
Biological warfare is nothing new. In 1346, for example, the bodies of Tartar soldiers who had died of the Plague were thrown over the walls of the besieged city of Kaffa (now Fedossia in the Crimea) to infect the populace within. In the 1767 French and Indian War in North America, the English used blankets contaminated with smallpox virus to spread the disease among the native population. However, it was only after the discoveries of Koch, Pasteur and Lister on the microbial basis of infectious disease in the 19th century that biological weapons research really began.

Despite the signing of the Geneva Protocol in 1925 banning offensive use of biological weapons, a number of European countries developed bioweapons during the 1930s and 1940s. However, to date the only fully documented modern use of biological weapons by a state was Japan's attacks against China during World War II. In the immediate postwar period at least three countries – Britain, the Soviet Union, and the United States – continued large, ambitious programs of bioweapons development, building on their wartime work.

On 25 November 1969, U.S. President Richard Nixon announced the unilateral and unconditional renunciation of biological weapons. (Britain had closed down its offensive bioweapons program in the early 1960s.) Washington's action led to the negotiation of the Biological Weapons Convention (BWC) which prohibited the development of biological agents "of types and in quantities that have no justification for prophylactic, protective or other peaceful purposes." Despite ratifying this agreement the Soviet Union continued to carry out a covert offensive biological weapons research program, which at its height employed over 60,000 people. Though these activities officially ended in 1992, concerns about potential covert offensive Russian programs persist. During the 1990s, evidence also came to light of the secret biological weapons programs run by Iraq and the apartheid regime in South Africa.

The BWC does not prohibit defensive research and development programs, and many countries have continued activities such as producing vaccines, antivirals, and antibiotics to protect their citizens. However, concerns are often raised that such programs may be acting as a cover for offensive weapons development.

BIOLOGICAL WEAPONS PROHIBITION ENDANGERED



In 1972, the Biological Weapons Convention (BWC) prohibiting the development, production and stockpiling of bioweapons was opened for signature. It was the first-ever arms control convention to completely ban a whole class of weapons. However, it lacked mechanisms for monitoring or verifying compliance.

Seeking to address this omission, States Parties began to negotiate a legally binding verification protocol to the BWC in 1995. Over the next six years, the deliberations focused on concrete measures to ensure compliance with the BWC. Yet on 25 July 2001, the Bush administration not only rejected the draft Protocol text but also dismissed the entire "approach" of the Protocol. A collapse of the negotiations soon followed, effectively stalling the Protocol process.

The situation further deteriorated in December 2001 at the Fifth Review Conference of the BWC, a meeting of States Parties to assess and strengthen the Convention. Only two hours before the scheduled end of negotiations, the United States demanded the termination of the Protocol process. The U.S. bombshell, announced without prior warning, created a rancorous atmosphere, prompting the suspension of the Conference for a one year 'cooling off' period.

The Bush administration's position, stemming from concerns over national security, corporate intellectual property rights and enforceability, has left a dangerous gap in the BW control regime. The international community must redouble its efforts to fill this breach both by persuading the United States of the benefits of multilateral and legally binding controls and by promoting new and innovative policies.

What can you do?

- Encourage government officials to participate in discussions on this crucial subject. Sample letters and contact information are available on BASIC's website at www.basicint.org/nuclear/biological/advocacy.htm.
- Write letters to your local newspaper highlighting the need for a renewed global approach to the issue. Stress that only stringent international investigations can assure governments and citizens that countries are not pursuing BW development.
- Distribute this leaflet widely to improve public understanding of the issue. Additional copies can be obtained free of charge from BASIC. For in-depth information, see *Disease by Design: De-mystifying the Biological Weapons Debate*, available at www.basicint.org/pubs/Research/2001diseasebydesign1.htm.
- Stay informed on developments in bioterrorism, national and international BW policy and legislation, and new trends in pharmaceutical and biotechnological research. Sign up for BASIC's free monthly email service, *Biological Weapons Update*, by contacting basic_update@basicint.org.

THE BEST DEFENSE

A good health care system, as well as an effective disease detection and medical response program, are the primary requirements in a country's bioweapon protection strategy. These should be coupled with resources for intelligence, anti-terrorism, civil biodefense and emergency programs. However, no single government will be able to totally protect its citizens from the nightmare of biological terrorism or warfare by these means alone. Integrated national and international strategies are required. Countries must establish and enforce responsible export controls to ensure that they and their industries, while promoting beneficial scientific development, are not also contributing to the spread of biological weapons. All States must maintain the international prohibition on biological weapon development and use. The best defense against a biological weapons attack is to prevent terrorists or states from acquiring BW or their components in the first place.

17 JUNE 1925

Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or other Gases, and of Bacteriological Methods of Warfare is signed in Geneva.

26 MARCH 1975

The BWC enters into force. The convention has 145 States Parties to date.

10 APRIL 1972

Biological Weapons Convention (BWC) opens for signature in London, Moscow and Washington.

2 APRIL 1979

An epidemic of pulmonary anthrax kills at least 64 civilians in Sverdlovsk in the Soviet Union. In 1992 Russian President Boris Yeltsin admits the outbreak was caused by an accidental release from a Soviet microbiology facility.

3 APRIL 1991

Following the Persian Gulf War, U.N. Security Council Resolution 687 establishes a Special Commission (UNSCOM) to eliminate WMD in Iraq. Over several years, UNSCOM uncovers a highly developed covert BW program.

SEPTEMBER 1994

A Special Conference of BWC State Parties establishes an Ad Hoc Group to consider appropriate measures to strengthen the Convention. At the heart of AHG work is the negotiation of a legally binding Verification Protocol to the BWC.

16 DECEMBER 1998

In the face of continuing obstruction, UNSCOM withdraws its staff from Iraq. Weapons inspectors have yet to return to the country, leading to serious worries that Iraqi WMD programs have been rebuilt.

JULY 2001

The United States rejects the draft BWC Verification Protocol text, which results in a collapse of the negotiations.

SEPTEMBER–OCTOBER 2001

Anthrax attacks
Unknown parties dispatch a series of letters containing anthrax spores to media and government addresses in the United States. Several deaths and considerable economic and political disruption result.

19 NOVEMBER–7 DECEMBER 2001

BWC Review Conference
Following a last-minute attempt by the United States to terminate the BWC Ad Hoc Group, the Conference fails to reach any agreements and is suspended until 11 November 2002.

11 APRIL 2002

Dr. Wouter Basson, former head of the South African chemical and biological (CBW) program, is found not guilty of 46 charges. The 30-month trial contained numerous revelations concerning South Africa's apartheid regime covert BW program.

11 NOVEMBER 2002

Resumption of the BWC Review Conference.