

Disarmament and Security: Topic 2

Measures to prevent the militarization of biotechnology

Background:

According to Britannica, a biological weapon (also called germ weapon) is any of a number of disease-producing agents—such as bacteria, viruses, rickettsiae, fungi, toxins, or other biological agents—that may be utilized as weapons against humans, animals, or plants.¹ In the past, several different countries that were parties to the Geneva Protocol of 1925 started to develop biological weapons. These countries included Belgium, Canada, France, Great Britain, Italy, the Netherlands, Poland, Japan, and the Soviet Union. More than 500 million people have died of infectious diseases over the last century. The intentional release of pathogens or poisons was blamed for some tens of thousands of these deaths, mainly by the Japanese during their attacks on China during the Second World War.

In 1925 and 1972, two international conventions banned biological weapons. Unfortunately, they largely failed to deter countries from performing aggressive arms testing and developing biological weapons on a wide scale. A concrete example of an attempt to remove biological weapons was on behalf of President Nixon. In fact, many individuals were contaminated by the leakage of bacteria from naval vessels off the coasts of Virginia and San Francisco, including some 800,000 people in the Bay area alone. At more than 200 locations, including bus stations and airports, bacterial aerosols were released. The most notorious test was the 1966 infection of *Bacillus globigii*, a non-infectious bacterium used to mimic the release of anthrax, by the New York metro system to study the dissemination of the pathogen in a large area. President Nixon finally agreed to abandon aggressive biological weapons research and signed the Biological and Toxin Weapons Convention (BTWC) in 1972, an update on the 1925 Geneva Protocol, with the backlash to the Vietnam War increasing and the awareness that biological weapons could eventually become the poor man's nuclear bomb.

¹ Biological weapon. Retrieved November 16, 2020, from <https://www.britannica.com/technology/biological-weapon>



Current Situation:

In recent decades, there has been an exponential advance in the biotechnologies needed to turn pathogens and bacteria into weapons. This began from releasing pathogens of a known branch into a population, to genetically engineering pathogens to have a determined effect on the human body. Today, only 16 countries are suspected to have biological weapon programs: Canada, China, Cuba, France, Germany, Iran, Iraq, Israel, Japan, Libya, North Korea, Russia, South Africa, Syria, the United Kingdom and the United States. There are several conspiracy theories that arise when new diseases appear. For example, some believe that the global pandemic caused by COVID-19 is a government issued biological weapon to wipe a part of the population out. However, there is no evidence for this and it is widely rejected by the scientific community. Unfortunately, this conspiracy that lacks any foundation is still strongly believed by a portion of the world population. With biological weapons come a lot of risks, ethical issues and boundaries that have to be respected. The presence and advance of biological weapons has been growing exponentially along with the advance of science.

UN Resolutions:

- S/RES/1540 (2004)
- S/RES/2325 (2016)
- A/RES/59/70 (2004)
- A/RES/55/33 (2001)
- A/RES/63/88 (2009)

Relevant UN Treaties:

- [Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological \(Biological\) and Toxin Weapons and on their Destruction.](#)

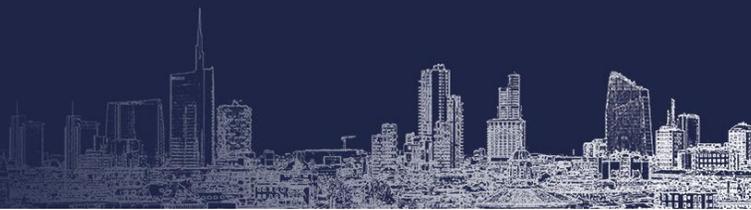


Important bloc positions:

- The United States has a strong National Biodefense Strategy. Both the *U.S. bio-weapons ban* and the *Biological Weapons Convention (BWC)* force any work in the area of biological warfare to be defensive in nature. In fact, since the BWC has no requirements for oversight or compliance, this gives BWC member-states broad discretion to perform biological weapons research. The treaty is basically an agreement of trust between participants based on by the long-prevailing thinking that biological warfare should not be used in combat.
- Under the Japanese occupation from 1937 to 1945, China was a target of large-scale biological warfare (BW) attacks, greatly affecting its subsequent nonproliferation activities. Biodefense science was announced in Beijing, and the country's increasing biotechnology industry provides it with important dual-use capabilities that could be defensive or offensive. China has continuously maintained that it does not have an aggressive BW policy.
- In the past Russia has made use of biological weapons. In terms of scale and development, the secret Soviet biological weapons industry was unsurpassed. It produced tons of anthrax, smallpox, and other agents yearly, which could be stored in laboratories worldwide. Mostly antibiotic-resistant, these pathogens were designed to be transported either by bomber planes or by warheads. After the dissolution of the Soviet Union, former Russian President Boris Yeltsin acknowledged that the biological weapons program was in progress and ordered the termination of the program. For a brief period of time, it appeared that openness had ultimately won and Russia could cooperate with the BWC. Today, however, this does not appear to be the case. The first issues started to crop up in the mid-1990s. Against their commitments and despite generous US support, the Russian authorities have repeatedly declined to allow foreign investigators to access crucial military biological facilities under the former Soviet Biological Weapons Program. At least three facilities in Kirov, Yekaterinburg, and Sergiev Posad are now known to have been off limits to any foreign inspection since the end of the Cold War, and thus seem to be plausible sites of illicit BW research. Even though Russia reported that all biological weapons activity had ceased, this layer of secrecy fuels concerns about practices that may not be consistent with the BWC.

Possible solutions:

- Creation of a treaty to eradicate the presence of biological weapons in all P5 nations.
- Creation a task force with international jurisdiction specifically for the monitoring and eventual elimination of all biological threats.
- Clear establishment of the difference between defensive and aggressive protocols of biological weaponry.
- Encouragement of transparency on creation, presence, and research of biological weapons.
- Creation of international policies to hold nations accountable in case of biological disasters.



Further reading:

1. Article on the [impact of Covid-19 on biological weapons](#)
2. Research paper [on Genetic Engineering and Biological Weapons](#)
3. Article on [Ultra Micro, Nonlethal, and Reversible Looking Ahead to Military Biotechnology](#)
4. Stanford Article on [Biological warfare: an emerging threat in the 21st century](#)
5. Research Paper on [Biowarfare and Bioterrorism](#)
6. Article on the [promise and peril of synthetic biology](#)

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3. Retrieved November 16, 2020, from <https://www.armyupress.army.mil/Journals/Military-Review/Directors-Select-Articles/Nanatechnology/>
4. Van Aken, J., & Hammond, E. (2003, June). Genetic engineering and biological weapons. New technologies, desires and threats from biological research. Retrieved November 16, 2020, from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1326447/>