

**Committee/Council: Disarmament and International Security Committee****Issue: The clearance of biological weapons****Student Officer: Sofia Christoforidou****Position: Chair****Introduction**

As it might be already known, biological weapons belong to the umbrella of the Weapons of Mass Destruction, along with the Nuclear and the Chemical Weapons. The use of such weapons dates back to World War I (WWI) during which the Germans attempted to spread the plague, an infectious disease



Figure 1: Weapons of Mass Destruction

which causes headache, fever and weakness to those exposed to it, in order to weaken the Russians in St. Petersburg in 1915. Also, in the Cold War both sides, the United States of America and the Soviet Union and their respective allies, had active Research and Development Programs (R&Ds). In general, biological weapons are a category of weapons, which are really threatening for society and the environment since they can spread any disease amongst humans, animals and plants. Bacteria, rickettsiae, viruses, toxins, and fungi can be used and are used nowadays as biological weapons. Also, it is really important to mention the production cost of biological weapons. Many researches have proven that the production of bioweapons is the cheapest among the Weapons of Mass Destruction. Specifically, one analysis revealed that the costs of civilian casualties is 800\$ with nuclear weapons, 600\$ with nerve gas weapons (a chemical weapon) and 1\$ with biological weapons. Furthermore, it should be stressed how the biological weapons' viruses can be spread. First of all, the delivery of bombs and missiles but also the contamination of food and water supplies can result in the spread of viruses. All in all, the existence of such weapons can pose a great menace to the society especially in the era we are living in, in which terrorism and wars pose a great threat to the global security. Thus, it is our duty as the Disarmament and International Security

Committee to answer the following question: How can the clearance of the biological weapons be achieved on a global scale?

## Definition of Key-Terms

### Weapons of Mass Destruction (WMDs)

According to the Oxford Dictionaries, the Weapons of Mass Destruction (WMDs) can be defined as “weapons able to cause widespread devastation and loss of life” and are divided into four categories, namely: biological, chemical, radiological and nuclear weapons.

### Biological Weapons

According to the Oxford Dictionaries biological weapons can be defined as “a biological agent harmful to plants, animals, or people, especially a pathogen, deployed as a weapon to cause widespread devastation”

([https://en.oxforddictionaries.com/definition/biological\\_weapon](https://en.oxforddictionaries.com/definition/biological_weapon))

### Clearance

The Oxford dictionaries also define the word clearance as “the action or process of clearing or of being dispersed”.

(<https://en.oxforddictionaries.com/definition/clearance>)

### Virus

A virus can be defined as “an infective agent that typically consists of a nucleic acid molecule in a protein coat, is too small to be seen by light microscopy, and is able to multiply only within the living cells of a host”.

(<https://en.oxforddictionaries.com/definition/virus>)

### Bacterium

According to the Oxford Dictionaries the bacteria are “members of a large group of unicellular microorganisms which have cell walls but lack organelles and an organized nucleus, including some which can cause disease”.

(<https://en.oxforddictionaries.com/definition/bacterium>)

## Background Information

In order to understand in depth what kind of weapons the biological ones are, the following questions should be answered:

### Have they ever been used?

- a) 1710: The Russians used similar weapons such as plague in order to infect corpses against the Swedes.
- b) 1767: The British gave infected blankets to hostile Indian tribes which were used to wrap their smallpox victims during the French and Indian Wars.
- c) 1916-1918: Anthrax and equine disease are used by German agents in order to infect products which were to be exported to the Allied forces. As a consequence a Romanian sheep was infected with anthrax and glanders for export to Russia, which is an infection that occurs both in humans and animals and is caused by a bacterium called *Burkholderia mallei*. The same thing happened to Argentinian mules which were infected with anthrax.
- d) 1939: During the Soviet-Japanese conflicts in 1939, also known as the Nomonhan incident after Nomonhan, a nearby village on the border between Mongolia and Manchuria, the Japanese poisoned the water supply of the Soviet with intestinal typhoid bacteria. This can be remarked as the first use of biological weapons by Japan.
- e) 1937: A few years earlier, Japan begins its biological weapons program in Harbin, Manchuria. During these years, at least 10,000 prisoners were killed in this program, since the Japanese used them for their experiments.
- f) 1940: Japan drops rice and wheat which contained plague carrying fleas over China and Manchuria.
- g) 1942: As a consequence of the development of biological weapons in Japan, the Americans launch their offensive bioweapons program. The venues for research and development of the weapons were located in Camp Detrick, Frederick Maryland.
- h) 1945: The first and last use of bioweapons by the Germans occurred in 1945, in which a large reservoir in Bohemia was poisoned with sewage.

- i) 1966: The United States in their efforts to test their vulnerability to such weapons conduct a test to imitate a bioweapons attack by releasing a harmless biological substance into the subway system of New York.
- j) 1969: The president of the USA, Nixon, announces the dismantlement of the United Nations Biological Weapons Program and puts in 1970 an end to the production of toxins.
- k) 1979: In this period, there was an outbreak of pulmonary anthrax in Sverdlovsk in the Soviet Union.
- l) 1985-1991: During those years, Iraq manages to develop biological weapons capability by producing anthrax, botulium toxin and aflatoxin.
- m) 2001: An incident in the United States killed 5 people and injured 17 when anthrax spores through letters were delivered to the US senate and media offices. This can be considered as bioterrorism.

Which are the most recent bioweapons substances?

- a) Anthrax: Anthrax is a bacterium that can be produced in a laboratory and is considered one of the most deadly ones. A state which wants to produce anthrax is required to have access to biotechnology facilities. A former Soviet scientist who used to participate in the whole production process of this substance said that, although it is widely said that anthrax is difficult to be made, if someone has basic knowledge on topics regarding microbiology and biotechnology, then it would not be a difficult process. A special characteristic of anthrax is that it can be kept for considerable periods of time. Lastly, researches have proven that only if the spores are distributed in aerosol form, they could be taken into consideration as a very deadly weapon, because in that way they can be spread in the air, inhaled from the victims and cause many respiratory disorders and deaths.
- b) Plague: In the 14<sup>th</sup> century, the plague killed one third of Europe's population. During the Second World War, Japan might have infected areas in China with plague while the United States and the Soviet Union have been considered of spreading such bacteria in the form of a gas. After the attack in 2001, they have started looking for vaccines that could be helpful to people who are exposed to such bacteria. Plague can cause bubonic, septicemic and pneumonic infection to humans. The bubonic infection has a mortality rate between 40 and 70 per cent, while pneumonic and septicemic are always

fatal. Plague affects countries such as the Democratic Republic of Congo, Madagascar and Peru.

- c) Smallpox: Smallpox is categorized as one of the most fatal diseases in the history of the humanity. It is caused by the variola virus and has been declared eradicated by the World Health Organization. As each and every bioweapon, smallpox dates back to the Cold War between Americans and Soviets. Smallpox is considered one of the most dangerous infectious diseases. Since it can be transmitted from person to person, it may cause a plethora of health problems to the society as well as public panic and social disruption. That is why it can be used for bioterrorism. It is believed that the variola virus is stocked not only in the US and Russia, but also in Iraq and North Korea.

#### Why do they pose a threat to the society?

Nowadays, our societies are threatened by the terrorist groups and the attacks they commit not only in Europe and the Western countries but also in Middle Eastern and African countries. The question that still remains unanswered is whether or not terrorist organizations, such as ISIS, have the power and the knowledge to produce biological weapons. The answer is given by the European Parliament and it is positive. What we take for granted concerning ISIS is that it possesses great amounts of money; they have scientists and access to every toxin which is stockpiled in Syria, Iraq and Libya. What recently alarmed all countries was a laptop that belonged to a Tunisian physicist and member of ISIS, with a plan on making biological weapons with bubonic plague bacteria, which are obtained by animals. And since the Islamic State has attacked the Kurds in Kobani in Syria with a chemical weapon called mustard gas (falling under the category of the WMDs), why couldn't they be able to manufacture and make use of biological weapons? However, nothing can be proven yet, since everything is nothing more but a theory.

One should be aware of what the aforementioned term bioterrorism means. A bioterrorist attack is an attack that targets not only politicians but also a community as a whole. This method is considered an effective and easy one since specialized knowledge is not required and the creation of weapons is an inexpensive process. Something that should be mentioned is the symptoms and the fatality of exposed people during a bioterrorist attack. The symptoms of anthrax occur within 7 days and can be similar to those of a simple flu, which can develop to breathing difficulties and eventual shock, while the exposure to smallpox cause symptoms, such as high fever, fatigue, head and back pain. The exposure to those viruses can be fatal, if not treated properly.

## Major Countries and Organizations Involved

### United States of America

The United States of America used to possess biological weapons during World War II and the Cold War by producing toxin weapons with Bacillus, anthrax and Coxiella burnetii also known as Q-Fever. It was the President of the US, Richard Nixon, who gave an end to the Biological Warfare Program on 25<sup>th</sup> of November 1969. Following the decision of Nixon, the United States have not possessed any Biological Weapons Program since then and they have also ratified the Biological and Toxin Weapons Convention in 1975. At this point, USA plays a major role in the non-proliferation of such weapons, despite some issues that have been raised in the international community regarding their biodefense system.

### Russian Federation

Having signed the Geneva Protocol and the Biological and Toxin Weapons Convention (BTWC) the government of the Russian Federation reassures the international community that they do not possess any stockpiles of biological weapons or take part in illegal activities concerning the production and development of such weapons. The Western countries claim that Russia may not comply with the BTW, since they have significant pharmaceutical and biological sectors, like any country which produces medicines and bearing that in mind one can understand that under these circumstances a biological program can be created since they have any facility they might need. Similar to the United States, Russia (the former Soviet Union) used to possess such weapons during the Cold War.

### Japan

Japan is one of the major powers that possessed biological weapons during World War II and is famous for its Unit, namely Unit 731, which conducted human experiments to Chinese civilians and allied prisoners of war by using biological agents such as plague, cholera and hemorrhagic fever. Following the end of WWII and after the attack against China, Japan abandoned its Biological Weapons Program, signed the BTWC and ratified it in 1982 and was open to any protocols proposed in order to strengthen the treaty even more. Although Japan has biological industry, it is not claimed that they could start producing such weapons again.

### Iraq

Iraq has been suspected in the past for producing and developing biological weapons. Specifically, a former dignitary of the Iraqi army testified that in 1995 they have been weaponizing biological agents and testing them, such as Bacillus anthrax, Bacillus subtilis, botulinum toxin, aflatoxin, and ricin, in their facilities based in al

Muhammadiyah, Khan Bani Saad, Jurf Al-Sakr Firing Range and Abou Obeydi Airfield. In 1972, Iraq signed the BTWC. However, they have violated the convention since after 1985 they have started organizing biological weapons programs by constructing facilities for producing biological weapons. On 30<sup>th</sup> of September 2004 a report was released by ISG which stated that between 1991 and 1992 Iraq destroyed the stockpiles of the biological weapons although it had the capability of re-establishing their biological weapons program.

### Timeline of Events

<u>DATE</u>	<u>DESCRIPTION OF EVENT</u>
1907	The Hague Convention
1925	The Geneva Protocol
1939-1945	World War II
1934-1939 (was built) 1941 (the name was adopted)	Unit 731
26th of May 1975	Biological and Toxin Weapons Convention
1947-1989 (when communism fell) or 1991 (when the Soviet Union collapsed)	Cold War between the USA and the Soviet Union

### Relevant UN Treaties, Resolutions and Events

#### Biological Weapons Convention (BWC)

This convention bans the production and stockpiling of the biological weapons, a very dangerous WMD. It was opened for signatories on 10<sup>th</sup> of April 1972 and entered into force on 26<sup>th</sup> of May 1975.

Second Review Conference (1986) and Third Review Conference (1991)

The second review conference had as a main topic the international cooperation of the countries that had signed the treaty in order to reduce the suspicions a country may have had for another one. According to this conference, all states had to make some reports in order to inform the other countries on their biological defense programs and researches, on their vaccine production facilities and general information of their legislation concerning such topics etc. The third review conference set up a group of governmental experts which was created to *“identify and examine potential verification measures from a scientific and technical standpoint.”*

Fourth Review Conference (1996) and Fifth Review Conference (2001)

(<https://www.un.org/disarmament/wmd/bio/> useful link for both of them)

Sixth Review Conference (2006)

In this conference, the Convention was finally reviewed. The most important initiative except for making a plan in order to promote the adherence of all states was the establishment of the Implementation Support Unit (ISU), which manages to give States the help they need in order to implement the convention as best they can.

UN General Assembly Resolutions

[A/RES/72/71 – 2017](#)

[A/RES/71/87 – 2016](#)

[A/RES/70/74 – 2015](#)

[A/RES/69/82 – 2014](#)

[A/RES/68/69 – 2013](#)

[A/RES/67/77 – 2012](#)

[A/RES/66/65 – 2011](#)

[A/RES/65/92 – 2010](#)

[A/RES/64/70 – 2009](#)



[A/RES/63/88 — 2008](#)

[A/RES/62/60 — 2007](#)

[A/RES/61/102 — 2006](#)

[A/RES/60/96 — 2005](#)

[A/RES/59/110 — 2004](#)

[A/RES/58/72 — 2003](#)

[A/DEC/57/516 — 2002](#)

[A/DEC/56/414 — 2001](#)

[A/DEC/55/40 — 2000](#) (You can read all resolutions by using this link <https://www.un.org/disarmament/wmd/bio/>)

## Previous Attempts to solve the Issue

Generally, the only previous attempts to achieve the non-proliferation of the biological weapons are the treaties that have been signed and especially the BWC since after the convention was signed by the states, most of them started destroying their weapons and facilities. That means that it was up to the President's hand (as Nixon did) to take this initiative. Thus, all the previous attempts we have are conventions, GA resolutions and some Secretary General announcements. Except for the ones that have been mentioned before, one should also stress the importance of the 1907 Hague Convention which condemned the use of both biological and chemical weapons. Lastly, the Geneva Protocol of 1925 banned the use of asphyxiating, poisonous and other gases and the use of bacteriological warfare.

## Possible Solutions

First of all, since there are already many conventions which could easily be a solution to our issue, it would be advisable for all states to sign and ratify those conventions and, in case of violation, such a case could be taken to the Security Council, which can always propose sanctions to a state that does not follow the rules of the convention. Furthermore, a transparency policy between the states in terms of their pharmaceutical companies is needed in order that specialists share the same data,

evaluate them and reach a conclusion about the capability of a state to establish Biological Weapons Programs.

Furthermore, the decontamination can be a very good solution to the issue. It is already known that biological substances can easily grow and multiply. For example, anthrax can remain active for 40 years without being eradicated. These resources can be decontaminated by using chemicals, heat or UV rays.

Since the conventions and generally the UN initiatives play a significant role in the solution of the problem it would be advisable for all signatories to review and amend the convention in the best possible way in order for it to be more effective in our technologically improved century and fit in every country's policy.

Lastly, since the terrorist organizations pose a great threat to our community nowadays, all countries which might have facilities or stocks should take the initiative to destroy or protect them from members and scientists belonging to terrorist groups, since as I have already mentioned terrorist groups, such as ISIS, have the means to produce such weapons and pose a great threat to the international community by making use of them.

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