



Committee: Disarmament and International Security Committee (GA1)

Issue: Biological weapons and bioterrorism preparedness and response

Student Officer: Panagiotis Lampropoulos

Position: Chair

INTRODUCTION

The first major bioterrorist attack was launched by the Mongol emperor Genghis Khan. During the siege of Caffa in 1346, the attacking Tartar force suffered the effects of an epidemic known as the plague. Intelligently enough, they used this to their advantage by catapulting bodies of their own dead soldiers who had been taken by this disease past the enemy line. Thus, began the Black Death, a long-term epidemic that peaked in Europe from 1346-1351 and was said to have reduced the world population from an estimated 450 million to 350-375 million. The plague reoccurred in Europe for the next 600 years until the very late 19th Century when the first vaccine was invented to treat this specific illness.

Biological warfare was also utilized by the Germans, with reports claiming that they attempted to ship horses and cattle with bacteria such as anthrax and glanders. Other allegations for German attempts to spread cholera in Italy and the plague in St Petersburg. From 1932 and up to the end of the Second World War, Japan was said to have a bio-warfare program known as Unit 731. During this time, more than 4000 prisoners of war were said to have died as a result of experimental infection. These were later considered to be the “most regrettable from the point of view of humanity.

It is important to recognize that this is a grave issue as it is not as easily controlled by UN authorities as weapons of mass destruction are and are palpably easier to disguise as research projects with different purposes,

rendering this topic an important one to tackle. Realistically, a new strategy must be installed, which is what your role as delegates will be.

DEFINITION OF KEY TERMS

Bioterrorism

Terrorism involving the release of biological agents¹.

Biological warfare

The use of toxins of biological origin or microorganisms as weapons of war.¹

Agent

A substance that brings about a chemical or physical effect or causes a chemical reaction.¹

Pathogen

A bacterium, virus, or other microorganism that can cause disease.¹

Escherichia coli

A bacterium commonly found in the intestines of humans and other animals, some strains of which can cause severe food poisoning.¹

BACKGROUND INFORMATION

Categories of priority

Different agents are listed under different priority groups depending on their graveness, as some have mortal consequences and others the potential for such consequences. High-priority or category A agents include ones that pose a

CGS MUN

risk to international security because they can be easily transmitted from patient to patient, have high mortality rates and have the potential for a major public health crisis, might cause public panic and require concentrated action for public health preparedness. These include E. coli, anthrax, smallpox, plague, botulism and viral hemorrhagic fevers. Second highest priority agents or category B agents are ones that are somewhat easy to disseminate, result in relative morbidity rates and low mortality rates, and require specific developments and improvements of diagnostic capacity and heightened disease surveillance. These include mainly water safety threats, as well as glanders and brucellosis. Finally, category C or third-priority agents, that could be engineered for mass dissemination in the future as a result of availability, ease of production and transmission, and potential for high mortality and morbidity rates and major health impacts include emerging pathogens such as Nipah virus and hantavirus.

Sub-categories of agents

Bearing in mind the intentional use of specific micro-organisms the last 100 years that are cultured in labs and research facilities, it is significant to note the 5 different sub-categories of agents used for biological warfare.

- **Bacteria:** A member of a large group of unicellular microorganisms which have cell walls but lack organelles and an organized nucleus, including some which can cause disease.
- **Virus:** 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.
- **Fungus:** Any of a group of spore-producing organisms feeding on organic matter, including molds, yeast, mushrooms, and toadstools.

CGS MUN

- **Toxins:** An antigenic poison or venom of plant or animal origin, especially one produced by or derived from microorganisms and causing disease when present at low concentration in the body.
- **Rickettsia:** Any of a group of very small bacteria that includes the causative agents of typhus and various other febrile diseases in humans. Like viruses, many of them can only grow inside living cells, and they are frequently transmitted by mites, ticks, or lice.

Potential for destruction and the graveness of the question

According to Bill Gates' speech at the Munich Security Conference, whilst governments are concerned with the minimalization of nuclear and chemical weapons such as the Atomic, Nuclear and Hydrogen bomb, little weight is put on other threats such as that of biological warfare. In all honesty, nuclear weapon will stop killing after hundreds of millions of people have died, but for bioterrorism the case is not at all similar. In fact, a smallpox or anthrax crisis will not stop as for one, the human population is naïve and will not take the absolutely necessary precautions due to the epidemic not being directly visible, and for two the agent population which will continue to reproduce and invade more and more human bodies, causing colossal number of deaths in a vast spectrum of time. In the most extreme of cases, large-scale epidemics have been responsible for significantly decreasing the world population, meaning that the quicker and more massive resolutions must be formed. In addition, what once took entire nations to assemble is now much simpler to make in the masses due to the rapid development of biological engineering. Biological warfare ambitions can now be achieved by small groups with limited resources and skills, which is the form with which biological advancement has backfired the society. In simpler words, bioterrorist agents can be produced and reproduced in greater numbers and released with more ease than in the past, which truly goes to show the effort that must be applied in order to terminate the issue, be that the



production of new vaccines, the enhanced detection of terrorist behavior and production of harmful agents or even a complete novelty of a solution.

MAJOR COUNTRIES AND ORGANISATIONS INVOLVED

United States of America (USA)

Following the September 11th attacks on the Twin Towers in 2001, an outbreak of anthrax began. In this instance, terrorists sent envelopes filled with causative agent anthrax spores. Numerous cases of both lung form and skin form of anthrax were recorded, and apparent that there was an outbreak, doctors began to pay more attention to bacteriological analyses. The rate of deaths and contaminations made it evident that the US did not have the resources to deal with the issue in the short-term, but operational measure in order to keep the number of sufferers to a minimum were taken nonetheless. One measure taken was that authorities conducted mandatory anti-epidemic measures in an attempt to prevent the spread of anthrax. As proven in the United States, the spread of agents through biological terrorism has a detrimental effect on society. Pranksters sent envelopes containing a form of harmless powder in order to scare others. Such pranks were carried out in all sorts of places, ranging from people's houses to police precincts. This would lead to the temporary lockdown of buildings, and what was intended in good humour led to a further extent of terror amongst the public.

Russian Federation

The Russian Federation has inherited both a legacy and a powerful arsenal of biological weapons from its status as the Soviet Union, of unknown capacity, accumulation and ability of reproduction. These contain a number of

CGS MUN

military-grade pathogens and toxins, which has sparked debate as to the extent of the weaponized biological inventory owned by the USSR and the manner with which the attitude of modern day Russia has been affected towards utilizing or removing this inventory. The conclusion that can be drawn out by this thesis is that Russia still poses a potential threat in terms of stockpiled, deployable biological weaponry and its ability for production.

Islamic State of Iraq and Syria (ISIS)

According to Turkish media, an intelligence report revealed that the Islamic State terrorist group had plans to attack Turkish water sources with biological agents. According to the report, *Francisella tularensis*, the epidemic causing tularemia also known as rabbit fever was mainly used on these water supplies. Turkish civilians were infected in several manners such as tick and deer fly bites, skin contact with infected animals, ingestion of contaminated water, inhalation of contaminated aerosols and laboratory exposure.

Democratic People's Republic of Korea (DPRK)

Alarm for North Korea's biological weaponry was at first raised in 2006, when Pyongyang's funding of smallpox and anthrax labs was terminated as "rudimentary". 5 months prior to North Korea's very first nuclear tests the same year, it was uncovered that the North Korean regime had long ago purchased pathogens with symptoms such as smallpox and anthrax yet appeared to lack technical skill. Ten years later, the communist regime seems to be advancing to the point where microorganisms are produced "by the tonne". Research facilities include ones specializing in genetic modification. This industrialization North Korea is undergoing could render her fearsome and threatening towards her neighbours. Despite a treaty between the US and the DPRK being signed promising to shut down Korean nuclear test programmes in May 2018, a pact

CGS MUN

with regard to the issue of biological weapons is yet to have been touched upon and could prove destructive in future years.

Canada

In Canada, every level of government is focused on preparedness and response for bioterrorist attacks. Municipal governments respond to local emergencies and the Public Health Agency of Canada, under the co-ordination of Public Safety and other government departments such as Health Canada is devoted to protecting the nation from epidemics and agents launched with belligerent intent. The Canadian Food Inspection Agency focuses on food safety and has emergency responsibilities such as developing laboratory protocols for testing for potential biological terrorist agents and monitoring disease outbreaks and global disease events through their Global Public Health Intelligence Network. Canada is also in close co-operation with the UN World Health Organisation (WHO) so as to work to tackle biological warfare and bioterrorism.

People's Republic of China (PR China)

According to published surveys, Chinese people are extremely opposed and avoid the consumption of Genetically Modified Organisms (GMOs) as 13.8% of respondents agreed that GMOs were created by the United States with the purpose of launching a bioterrorist attack against China, and that all patriots should oppose such products. There was also no correlation when it came to opposition of GMOs to knowledge of what they are, despite the fact that GMOs actually reduce chemicals and make farming more sustainable, acting as a barrier against biological attacks.

UN World Health Organisation (WHO)

According to the G20 Health Minister's Forum, despite anthrax and smallpox being the most generic of diseases when discussing bioterrorism and biological warfare, other epidemics such as malaria, cholera, dysentery, AIDS, measles and respiratory infections should not be taken with a grain of salt. Furthermore, they also concluded that the methods utilized to prepare for, detect, defend against and combat biological and chemical weaponry should be very similar to ones used for ordinary disease outbreaks. In addition, when it comes to nations being in a belligerent state where the civilians of the war theatre are attacked on through biological weapons, it is much more complex and difficult to protect them than it would with military personnel. WHO has been thoroughly involved in advising Member States on their preparedness to face epidemics such as smallpox and anthrax. Meetings and informal contact held by G7 health ministers and Mexico deduced in expanding smallpox vaccines on a global spectrum. WHO is regularly consulted on the availability of smallpox vaccine, both in the western developed MEDCs as well as the developing MEDCs and is actively seized upon expanding its stockpile.

VECTOR

The State Research Centre for Virology and Biotechnology is operated by the Russian Ministry of Health. VECTOR develops and manufactures preservative, therapeutic and diagnostic preparations. Its main focus is viral infection research. That and the State Research Centre of Public Health are the sole institutions based in CIS countries that study and examine highly dangerous pathogens on an up-to-date level. VECTOR had been affiliated with the European Culture Collection Organization (ECCO) since 1995. It is also one of the two institutes, along with the Atlanta-based Centers for Disease Control and

CGS MUN

Prevention (CDC) that are WHO collaborators for smallpox and other poxviral infections.

TIMELINE OF EVENTS

Date	Description of Event
600 BC	Solon uses the purgative herb hellebore during the siege of Krissa
1155	Emperor Barbarossa poisons water wells with human bodies in Tortona, Italy
1346	Tartar forces catapult bodies of plague victims over the city walls of Caffa, Crimean Peninsula
1495	Spanish mix wine with blood of leprosy patients to sell to French foes in Naples, Italy
1675	German and French forces agree to not use “poisoned bullets”
1710	Russian troops catapult human bodies of plague victims into Swedish cities
1763	British distribute blankets from smallpox patients to Native Americans
1797	Napoleon floods the plains around Mantua, Italy, to enhance the spread of malaria
1863	Confederates sell clothing from yellow fever and smallpox patients to Union troops during US Civil War
World War I	German and French agents use glanders and anthrax
World War II	Japan uses plague, anthrax and other diseases; several other countries experiment with and develop biological weapons

CGS MUN

1980-1988	Iraq uses mustard gas, sarin and tabun against Iran with ethnic groups inside Iraq during the Persian Gulf War
1995	Aum Tenrikyo uses sarin gas in the Tokyo subway system
October 9 th 2001	Anthrax attacks on USA commence

UN INVOLVEMENT: RELEVANT RESOLUTIONS, TREATIES AND EVENTS

- The “Convention on the Prohibition of the Development, Production, and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction”, signed 26th March 1975, all signatories agreed to cut production of biological weapons that can be used to wage war, and destroy their pre-existing arsenal in order to prevent a major epidemic that could threaten the very existence of the human race.
- UN Security Council Resolution 1540 (2004): Requested that all States “refrain from providing any form of support to non-State actors that attempt to develop, acquire, manufacture, possess, transport, transfer biological weapons” particularly for terrorist purposes.
- UN General Assembly Resolution 33/59 (1978): Urged the Soviet Union and the USA to co-operate in putting an end to chemical and biological weapons and called for member states to sign and ratify the Geneva Protocol and the Biological weapons convention.
- UN General Assembly resolution 71/87 (2016): Notes with satisfaction the decision of the Seventh Review Conference on the establishment of a sponsorship programme in order to support and increase the participation of developing States parties in the meetings of the intersessional programme, welcomes the increased amount of voluntary contributions made in 2016, and calls upon States parties in a position to do so to offer voluntary contributions for the programme;

- **UN General Assembly resolution 72/71 (2017): “Notes with appreciation the events organized by some States parties, regional organizations and the Office for Disarmament Affairs of the Secretariat for exchanges of views on the implementation of the Convention, and encourages States parties to continue to participate in such informal exchanges and discussions;”**

PREVIOUS ATTEMPTS TO SOLVE THE ISSUE

At the EU Council meeting of 15th November 2001, there was agreement between the Health Ministers for the Belgian Presidency to request the Commission to develop and action programme on co-operation to tackle the issue of preparedness and response to biological and chemical threats. In that meeting, priorities to tackle the issue were set as follows:

- 1) Develop a mechanism for consultation in the event of a crisis linked to the bio-terrorist risk and a capacity for the deployment of joint investigation teams;**
- 2) Set up a mechanism for information on the capacities of European laboratories with respect to the prevention of and fight against bio-terrorism;**
- 3) Set up a mechanism for information on the availability of serums, vaccines and antibiotics, including concerted strategies for developing and using those resources;**
- 4) Set up a European network of experts responsible in the Member States for evaluating, managing and communicating risks;**
- 5) Promote the development of vaccines, medicines and treatments.**

In September 2006, the UN General Assembly adopted the Global Counterterrorism Strategy, with a mandate from the 2005 World summit and recommendations put forward by the esteemed Secretary General. These concluded to 3 possible actions to counter bioterrorism

CGS MUN

- 1) To establish a technical unit
- 2) To develop a state-of-the-art biological investigation capability
- 3) Enforce the 1975 Biological Weapons Convention

POSSIBLE SOLUTIONS

One way to tackle this issue is by the rapid production of vaccines. Bioterrorist agents have been engineered by various biochemical methods to alter or mask pathogens and avoid detection by the immune system. For this reason, it is vital to produce new vaccines in a rapid manner so as to tackle these “masked” pathogens and render the attack in vain.

Furthermore, preparedness is crucial when it comes to gathering the intelligence to detect chemical and biological threats that will in turn offer a significance timing advantage. This will in turn give time to institutes such as VECTOR to commence research and develop a defence mechanism against the pathogen or agent.

The CDC’s plan on tackling bioterrorism is based on preparedness and prevention, detection and surveillance, diagnosis and characterization of biological or chemical agents, response and communication.

BIBLIOGRAPHY

“Home - PMC - NCBI.” *Advances in Pediatrics*, U.S. National Library of Medicine, www.ncbi.nlm.nih.gov/pmc/.

“Morbidity and Mortality Weekly Report (MMWR).” *Centers for Disease Control and Prevention*, Centers for Disease Control and Prevention, 21 June 2018, www.cdc.gov/mmwr/index.html.

CGS MUN

“Centers for Disease Control and Prevention.” *Centers for Disease Control and Prevention*, Centers for Disease Control and Prevention, 26 Apr. 2017, www.cdc.gov/. Ezepchuk, Yurii V. “The Bioterrorist Attacks on America.” *OMICS International*, OMICS International, 20 July 2012, www.omicsonline.org/the-bioterrorist-attacks-on-america-2157-2526.1000115.php?aid=7757.

“ISIS and Bioterrorism: Tularemia Planned Use in Turkey's Water.” *Outbreak News Today*, Outbreak News Today, 21 Jan. 2016, outbreaknewstoday.com/isis-and-bioterrorism-tularemia-planned-use-in-turkeys-water-67823/.

I T Supreme Court of the United States. www.bing.com/cr?IG=8D6C166A78D94A02BB985AAD8C178AC7&CID=0DCFBDF7C79961173905B1ECC62E6051&rd=1&h=dJ2lnOOh_Sx0na7UgFgUE6YqvZsSvBHjVywMK5Gn1SM&v=1&r=http://spj.org/pdf/news/carpenter-v-us.pdf&p=DevEx.LB.1,5069.1.

Public Health Agency of Canada. “Bioterrorism and Emergency Preparedness.” *Canada.ca*, 18 June 2012, www.canada.ca/en/public-health/services/emergency-preparedness-response/bioterrorism-emergency-preparedness.html.

“Bioterrorism and Military Health Risks.” *World Health Organization*, World Health Organization, 2 Aug. 2011, www.who.int/dg/brundtland/speeches/2003/DAVOS/en/. Farmer, Ben. “Bioterrorism Could Kill More People than Nuclear War, Bill Gates to Warn World Leaders.” *The Telegraph*, Telegraph Media Group, 17 Feb. 2017, www.telegraph.co.uk/news/2017/02/17/biological-terrorism-could-kill-people-nuclear-attacks-bill/.

“Biological Weapons – UNODA.” *United Nations*, United Nations, www.un.org/disarmament/wmd/bio/.¹

“Biological Weapons – UNODA.” *United Nations*, United Nations, www.un.org/disarmament/wmd/bio/.

¹ oxforddictionaries.com

CGS MUN

“Helping the United Nations Combat Bioterrorism.” *Bulletin of the Atomic Scientists*, 28 June 2018, thebulletin.org/2007/02/helping-the-united-nations-combat-bioterrorism/.

“Biological and Chemical Terrorism: Strategic Plan for Preparedness and Response.” *Centers for Disease Control and Prevention*, Centers for Disease Control and Prevention, www.cdc.gov/mmwr/preview/mmwrhtml/rr4904a1.htm.

Clercq, Erik De. “Antiviral Drug Targets and Strategies for Emerging Viral Diseases and Bioterrorism Threats.” *Antiviral Drug Discovery for Emerging Diseases and Bioterrorism Threats*, 2005, pp. 83–113., doi:10.1002/0471716715.ch4.