YDMUN'25

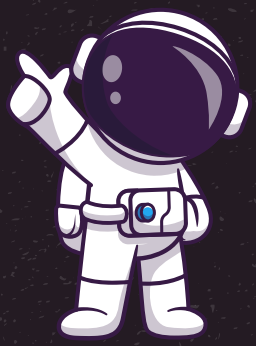
Study Guide

Disarmament and International Security Committee (DISEC)

Formulating Strategies to Prevent The Use of Chemical and Biological Weapons

Under Secretary General: Vuslat Aslı Karataş

Academic Assistant: Eylül Yiğit



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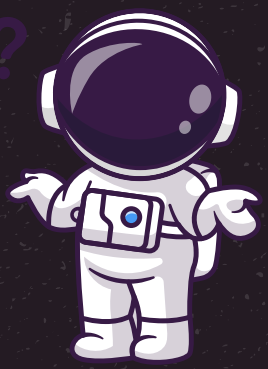

1. Welcome letter from the Secretary General

Dear Esteemed Delegates, Chairs, and Attendees,

It is with great honor and immense excitement that I welcome you all to the second edition of YDMUN! After the success of our inaugural conference, my team and I have been working tirelessly to ensure that this year's edition surpasses expectations and delivers an unforgettable MUN experience.

At YDMUN, our mission is not just to organize another Model United Nations conference, but to ignite a passion for diplomacy, debate, and leadership. We believe MUN should be more than just formal debates—it should be an inspiring journey that leaves every delegate with new perspectives, stronger confidence, and a deep appreciation for the art of negotiation. This is why my team and I are committed to crafting a conference that makes people "fall in love with MUN" whether it's your first time stepping into committee or you're a seasoned delegate.

This year, YDMUN is proud to present eight diverse and engaging committees: 1 General Assembly committees, 4 Special committees ,and 3 crisis committees.

Each committee has been carefully designed to challenge, engage, and inspire. Whether you find yourself negotiating in the halls of the United Nations, making tough calls in a historical crisis, or shaping policies in a semi-crisis setting, every moment at YDMUN will be an opportunity to grow as a diplomat and leader.

But beyond the debates, YDMUN is about the people.It is about the connections you will make, the friendships you will build, and the lessons you will carry beyond the conference. My team and I are dedicated to ensuring that every participant walks away with an experience that is not only intellectually enriching but also deeply memorable.

As we embark on this exciting journey together, I encourage you all to speak up, stand out, and make it count. Push boundaries, challenge ideas, and above all, enjoy the process. This is your stage to showcase your diplomacy, strategy, and leadership—make the most of it!

On behalf of my entire YDMUN team, I cannot wait to welcome you all to what promises to be an inspiring and extraordinary edition of our conference.

Let's make YDMUN not just a conference, but an experience to remember!

Sincerely,
Menna Eraslan
Secretary General

2. Welcome letter from the Under Secretary General and Academic Assistant

Dear delegates, welcome to YDMUN'25! It is with great honor and excitement that we welcome you to the DISEC committee. We, as Vuslat Aslı Karataş and Eylül Yiğit, are privileged to serve as your Under-Secretary-General and Academic Assistant.

Our agenda item focuses on a critical issue that demands immediate attention and action. *"Formulating Strategies to Prevent The Use of Chemical and Biological Weapons"* addresses one of the most alarming threats to global peace and security in the modern era. The development, stockpiling, and potential use of such weapons not only endangers lives on a massive scale but also violates fundamental principles of international humanitarian law. This issue requires a unified and decisive response from the global community to strengthen existing frameworks, promote transparency, and ensure accountability.

Ensuring the safety and the security of all individuals in the region is a key priority. We are confident that this committee will provide every delegate with essential knowledge and inspire innovative solutions to these pressing issues. We also want to thank our honorable Secretary-General Ms. Menna Eraslan and the entire academic team for giving us the opportunity to be a part of this committee.

As the next generation of problem solvers, critics and thinkers working towards meaningful solutions and collaborations is the key in building communities and systems that will bring harmony upon us all. We encourage each delegate to carefully read through this guide and do further research upon the agenda item in order to sufficiently participate during the sessions.We hope this committee will be a platform for thoughtful dialogue and meaningful collaboration. Most importantly, we aspire to make this experience enriching and memorable for each of you.

Sincerely,
Vuslat Aslı Karataş & Eylül Yiğit

P.S. If you have any inquiries regarding the procedure or the agenda item please feel free to email me. vuaskrts.mun@gmail

3. Introduction to the United Nations (UN)

The United Nations (UN) is a global organization established on 24 October 1945. The main reason for the UN to be created was for governments to find solutions to global concerns through cooperation. Currently, the UN has 193 member States. The UN mainly comprises the General Assembly, the Security Council, the Economic and Social Council, the Trusteeship Council, the International Court of Justice, and the UN Secretariat. The UN is trying to resolve global issues concerning human rights, health emergencies, peace and security, gender equality, international peace and much more.

4. Introduction to Disarmament and International Security Committee (DISEC)

The United Nations (UN) Disarmament and International Security Committee (DISEC) is the first Main Committee of the General Assembly under the United Nations therefore it is also referred to as “The First Committee”. It was established in 1945 after the end of the Second World War. DISEC is also an institution of the United Nations Office for Disarmament Affairs (UNODA). The UNODA deals with nuclear weapons and mass destruction and conventional weapon disarmament. DISEC through its work conducted in the General Assembly for substantive norm-setting support to further its disarmament initiatives. This committee is central to the UN’s broader goal of reducing the global arms race and preventing the escalation of military conflicts.

The primary purpose of DISEC is to establish general principles of cooperation in the maintenance of international peace and security. DISEC especially prioritizes the principles governing disarmament and wishes to address threats possessed by both conventional and unconventional weapons. It strives to reduce the spread of weapons of mass destruction especially biological, chemical and nuclear weapons. Throughout its operations DISEC aimed to establish international norms that govern arms control. Overall DISEC wishes to achieve security throughout all regions and to protect citizens across the globe by fostering peace and stability with international cooperation, aiming to contribute to long-lasting solutions.

Even though DISEC is referred to as the Main Committee it does not have any authority to put any resolutions to act. The influence of DISEC is limited with it only extending to drafts and promotion of international agreements aimed for arms control and disarmament. It operates as an advisory board for the United Nations Security Council (UNSC). Throughout drafts and treaties, DISEC contributes to international cooperation by providing a forum for member states and emphasizing the broader foal of global peace and security despite the political divisions among the member states. DISEC, despite the lack of authority to take action, remains as a vital part of achieving the sustainable development goals and international peace and security via facilitating dialogue, drafting resolutions and promoting agreements.

5. Definition of Key Terms

1. Cholera: Cholera is a bacterial disease that spreads through contaminated water and food. Cholera can cause severe diarrhea, dehydration, and even death if the disease goes untreated.
2. Typhus: Typhus is a disease that spreads through lice. It causes fevers, rashes and headaches.
3. Biological agents: Biological agents are bacterias, viruseses, fungus, other microorganisms and their associated toxins. They have the ability to adversely affect human health in a variety of ways, ranging from relatively mild, allergic reactions to serious medical conditions, even death.
4. Pathogens: Pathogens is an infectious agent, or simply a germ which may come as viruses, bacterias, protozoans, prions, viroids, or funguses.
5. Non-pathogenic microbes: Non-pathogenic microbes are organisms that do not afflict, hurt or kill another organism.
6. Bacillus Globigii: Bacillus Globigii is a species of black-pigmented bacteria.
7. Anthrax: Anthrax is an acute infectious disease caused by a spore-forming bacterium called Bacillus anthracis. It is generally acquired following contact with anthrax-infected animals or anthrax-contaminated animal products.
8. Smallpox: Smallpox is contagious disease happens by the variola virus

9. Hepatitis: Hepatitis is a liver inflammation caused by various viruses which may lead to deadly health problems.
10. Parasitic infections: Parasitic infections are organisms that live off of other living beings.
11. Gastroenteritis: Gastroenteritis is a temporary illness triggered by the infection of the digestive system.
12. Salmonella: Salmonella infection is a common bacterial disease that affects the intestinal tract. Salmonella bacteria typically live in animal and human intestines and are excreted via feces.
13. Herbicides: Herbicides is a chemical which is used to control unwanted vegetation.
14. Tear gas: Tear gas is a type of Chemical Weapon that stimulates the nerves in the eye to make tears.
15. Agent Orange: Agent Orange is a type of Chemical Weapon the USA used in the Vietnam War.
16. Sarin: Sarin is an artificially made human nerve agent.

6. Introduction to the Agenda Item: Formulating Strategies to Prevent The Use of Chemical and Biological Weapons

A. Biological Weapons (BW)

Biological weapons (BW) or toxin weapons are artificially engineered microorganisms like viruses, bacteria or fungi to deliberately cause disease and death to living beings. “Biological agents' ' such as anthrax, botulinum toxin and plague pose major threats to public health and safety due to them causing death in a short period of time. An attack involving infectious biological agents may lead to epidemics. It is very likely that a biological agent will mimic a natural cause, causing the public health assessment and response to get complicated. If in a war

or conflict, high-threat pathogens laboratories can be targeted, which might lead to serious public health consequences.

Biological weapons, often referred to as unconventional weapons or weapons of mass destruction, involve chemical, nuclear and radiological weapons. Biological weapons delivery methods come in various forms. In the past the delivery of biological weapons were made with missiles, bombs, hand grenades and rockets. A number of engineers have also designed spray-tanks to be fitter to aircrafts, cars, trucks and even boats. It's documented that efforts have been made to create devices for discreetly delivering harmful agents in assassinations or sabotage operations.

Furthermore, the usage of biological weapons isn't only done by the States but also non-state actors due to their generation of widespread fear. For instance, in 2001, letters containing fatal anthrax spores were leaked through the US postal system. A more recent instance occurred in 2014 and 2016, chemical weapons were used by Da’esh (Daesh, a.k.a ISIS, is a transnational Salafi-jihadist group that formerly controlled territory in Iraq and Syria.) in Iraq and Syria.

As long as information about weapons and their precursors remains readily available on the Internet and commercial controls on precursors remain weak, the risk of individuals or terrorist organizations using such weapons will remain high. Likewise, many biological pathogens occur naturally in the environment; This makes it even more important to ensure that countries are aware of the threat and have robust mitigation measures in place. Rapid developments have been made in biotechnology in regards to genetics and genomics. However such developments raise ethical social and political challenges for developed nations because they open tremendous avenues for the creation of biological weapons.

B. Chemical Weapons (CW)

Chemical weapons (CW) are certain types of chemicals with toxic properties used to deliberately cause death or harm . Munitions, devices and any type of equipment specifically designed to use

harmful chemicals also fall under the definition of CW. Among these could be mortars, artillery shells, missiles, bombs, mines or spray tanks. A common conception of chemical weapons is that the only form they come in is as poisonous substances delivered through bombs or shells. While this is true, the Chemical Weapons Convention (CWC) actually has a broader definition that bans many more things. According to the CWC, any toxic chemical or ingredients to create precursors are chemical weapons. This includes all such chemicals regardless of their origin or method of production and whether they are produced in facilities, in munitions or elsewhere. However, for approved harmless uses, quantities provided are viewed as appropriate.

C. History of Biological Warfare

Surprisingly, it was not the North American government that initiated the bioweapons programme but the Nobel Prize winning discoverer of insulin Sir Federick Banting. Sir Federick Banting created the first private biological weapon research center in 1940 during World War II, with the assistance of corporate sponsors. Although there was little evidence that the Germans planned to use such weapons, the United States eventually followed suit due to Allied fears (especially Britain and France) of a German biological weapons attack. In contrast, Japan had a large scale bioweapons program and even used them in their conquest of China in World War II. In contrast, Japan had a major bioweapons program and even used them in China. The Japanese attempts to obtain yellow fever virus legally, and then illegally, from a New York institute in 1939 should have been a dead giveaway.

Shiro Ishii, Japan's World War II bioweapons program leader, viewed these weapons as a way to achieve Japan's imperial goals. He started his research in 1930 at the Tokyo Army Medical School and later became head of Japan's bioweapon programme during the Second World War. Shiro Ishii's program was massive with nearly 5000 employees. They conducted cruel human experiments and tested 25 diverse diseases on prisoners and even unsuspecting civilians. It is documented that human experiments killed 600 prisoners per year. Through the war, 1000 water wells located in China were poisoned by the Japanese army to research cholera and typhus. The Japanese military operations during World War II involved dropping plague-carrying fleas on Chinese villages which had a long lasting devastating effect. Resulting in persistent outbreaks

that claimed the lives of over 30,000 people, even after Japan's surrender in 1945. Furthermore, Japanese troops used biological biological agents against the USSR (The Soviet Union). However, it isn't known for certain if the deaths were caused by the intentionally spreaded disease or by natural infections. After the war was over, the Japanese biowarfare research facility was seized by the Soviets due to convicted war crimes.
On the other hand, the USA granted the right to research in exchange for knowledge on their human experiment. Masaji Kitano, the successor of Ishii, published several articles on the human experiments and very disrespectfully changed ‘human’ with ‘monkey’ when referring to the experiments in China.

Unfortunately for the USA, the information provided by the Ishii's bioweapon program wasn't useful. The USA initiated its own biological program in 1941 on a small scale to form defense tactics against the potential of Japanese bioweapon attack. But, studies indicate that the USA used bioweapons offensively as well. After the war was over the USA conducted open-air tests with pathogenic and non-pathogenic microbes on animals, volunteers and unwitting civilians. On the coasts of San Francisco and Virginia were infected by naval vessels, infecting 800,000 people. In over 200 sites bacterial aerosols were released. The most devastating test occurred in 1966 when the New York metro system was contaminated with Bacillus Globigii. However it was abandoned by President Nixton upon realizing its danger. The research eventually stopped in 1972. The ban of such development was signed by the US with the Biological and Toxin Weapons Convention (BTWC), improving the 1925 Geneva Protocol. The BTWC prohibited the use of chemical and biological weapons and also research on bioweapons.

Even though the USSR signed the same treaty, it launched a confidential bioweapon program named The Biopreparat. This program, with various facilities, employed 50,000 employees and produced stockpiles of deadly agents like anthrax and smallpox. When virologist Nikolai Ustinov died due to experimenting on himself, his followers realized the virus had mutated into a more virulent form.

Through these experiments many accidents happened but got very little attention. In 1971, in Aralsk (a city of Kazakhstan) smallpox broke out, killing 30 percent of the infected. It is

assumed that the infection spread from a bioweapons research center located on an island in the Aral Sea. With the collapse of the USSR in 1991, the majority of bioweapon research was eradicated. It is unknown whether or not these weapons were destroyed or not. Western experts raise concern about this issue and state that these weapons might not be fully destroyed and could be in the hands of dangerous actors.

Apart from government bioweapon programs, non-state actors and individuals have started getting their hands on dangerous biological agents. For instance, the spread of hepatitis, parasitic infections, severe diarrhea and gastroenteritis. A religious sect attempted to interfere with an election by spreading Salmonella with salad bars. A Japanese cult, Aum Shinrikyo, successfully launched a chemical attack in 1995 and released Sarin gas through Tokyo subway killing 12 bypassers and severely injuring approximately 5,000 people. Although the chemical attack was a success the cult struggled to disperse anthrax spores effectively.
Such incidents highlight how easily such weapons and materials could be obtained and also further illustrate the difficulty in disseminating biological agents in comparison to chemical ones. Unfortunately, the anthrax attacks in 2001 in the USA were more successful. It has caused casualties and a disturbing antibiotic use.

Bioweapons were not only used for mass harm but also as a political tactic by various parties. Cuba often accused the US of possessions and usage of bioweapons. These allegations, later proved to be wrong, were used as propaganda or justification for war. Such claims should not be taken lightly, especially when they could lead to military action or increased research spending. Examples include the British allegations of Germans using the Paris and London subways to research bacteria and tests on animals before World War II. Although these accusations were sustained, it played an important role in promoting British research on anthrax.

During the Korean and Vietnam Wars, the USA was accused of deploying bioweapons and conspiracy theories about HIV being used as a bioweapon rose. The problem is, these claims can persist despite being debunked. This mistrust can go both ways, with Cuba accusing the US of biological warfare as well. The key takeaway is to be wary of such accusations and focus on evidence-based response.

This issue requires a balanced approach. Public awareness is important, though it may lead to overreactions and mass fear. The research priority should be on existing and preventable diseases rather than the potential but unconfirmed threats of biowarfare attacks.

D. History of Chemical Warfare

Chemical weapons are not new as they could be seen used in the distant past. In ancient times Greek people would mix sulfur and pitch-resin to engulf enemies in poisonous fumes to fight during the Trojan War. The dramatic shift to CW took place when Germany released chlorine gas on Allied troops at Ypres, Belgian in 1915. This attack has been planned for months. Nearly 6,000 gas tubes were installed by the Germans to use against the French Army.

Fritz Haber was the brilliant mind behind weaponizing chemistry for World War I. Although chemistry was seen used in history as a weapon, Fritz Haber made a significant impact on militarizing chemical weapons. He personally witnessed the horrific results of his work at Ypres, the very first deployment of chemical weapons in modern history. Regardless of the damage, Fritz Haber continued to advocate for chemical weapons, arguing that they were more humane than artillery weapons. He directly contradicted the peace treaty ending World War I by continuing to work on chemical weapons for Germany until 1933. This included recommending a colleague to the Russians for their chemical weapons program and assisting the Germans in a clandestine chemical weapons program. Haber's work in this area arguably began the escalation of chemical warfare during the war, with Germany's use of mustard gas in 1917 being met with retaliation by the Allies. The horrific consequences - 1.3 million casualties and 90,000 deaths from a total of 125,000 tons of chemical weapons used - led to the Geneva Protocol of 1925, a treaty prohibiting the first use of chemical weapons. Fritz Haber’s impact wasn't fully negative. Fritz Haber also discovered the Haber-Bosh reaction. This Nobel Prize-winning process for synthesizing ammonia led to the creation of affordable fertilizers, revolutionizing agriculture and significantly boosting food production. Haber also played a significant role in the improvement of 20th century electrochemistry and physical chemistry.

In 1935 World War II, the Italians used mustard gas against Ethiopians, killing 15,000. The Japanese also attacked China and Manchuria. In the World War in Europe, CW was not used mainly because President Roosevelt declared that the USA will not be using CW unless the Germans did. Germany on the other hand, produced 11,000 tonnes of Tabun around 1942 and 1945; unaware that the Allies did not have such a stockpile. People believed that Hitler would not use CW. During World War II, President Roosevelt was asked to certify CW use on Iwo Jima. This could have changed the direction of the war, however Roosevelt still refused to use CW and did not certify the attack.

The USA used 11,000 tınes of herbicides and tear gas against the Vietnamese around 1962 and 1967. Although these tear gasses were not deemed to be that serious, soldiers that suffered from Agent Orange would disagree. Many Southeast Asian countries accused the USA of chemical warfare. Around the 1980s, With the assistance of Western companies Iraq managed to develop CW. Saddam Hussein's Iraq used CW against Iran and Kurd citizens and killed approximately 50,000 people. During the Civil War in 2013 in Syria, the Assad regime killed nearly a thousand people. Due to this Syria was forcefully added to the CWC by Russia. Many nations, with the inclusion of The USA, collaborated to successfully eradicate a thousand tonnes of Sarin and other dangerous chemicals in Syria.

E. The International Norms Against CBW

I. 1925 Geneva Protocol

The 1925 Geneva Protocol ,signed on 17 June 1925 in Geneva, banns the use of chemical weapons (asphyxiating, poisonous or other gasses, and of all analogous liquids) and any kinds of Bacteriological and disease causing biological agents during warfare but does not prohibit the production of stockpiles. Therefore, countries were still permitted to create CBW. Regardless, the Geneva Protocol still holds great significance due to it being the first international agreement on CBW and serves as a response to the cruel use of such weapons in World War I. However, the main concern for the Geneva Protocol was that it lacked a verification mechanism. It did not have a concrete system, making it difficult to hold countries accountable for violations. It has also influenced the 1972 Biological and Toxin Weapons Conventions Treaty, which banned all production of stockpiles.

II. 1972 Biological and Toxin Weapons Convention (BTWC)

The 1972 Biological and Toxin Weapons Conventions (BTWC), is an international treaty which was opened for signature in 1972 and got in the force in 1975 with 193 parties. This treaty prohibits the development, production,use, acquisition, stockpiling, transfer and any activity related to biological agents and toxin weapons with a more comprehensive approach than the 1925 Geneva Protocol. Although everything listed previously is banned, the BTWC encourages peaceful and safe biological research and cooperation and information exchange to further improve security measures and avoid intentional or natural biological problems. Even though the BTWC includes verification methods it is difficult to identify the use of the research due to the verification methods being weak.The BTWC showcases a vital international agreement for eliminating bioweapons and has certainty played an important role in eliminating biological threats.

7. Major Parties Involved

A. Organization for the Prohibition of Chemical Weapons (OPCW)

The Organisation for the Prohibition of Chemical Weapons (OPCW) is the implementing body of the CWC. It was established in 1997 and currently it has 193 Member States with the common objective to prevent the use of chemical weapons. The OPCW wishes to eradicate all existing CW under international verification by the OPCW, monitor chemical industry to prevent CW from re-emerging, provide safety and protection to States Parties against chemical threats and foster international cooperation to strengthen implementation of the Convention and promote peaceful uses of chemistry. The mission of the OPCW is to implement the provisions of the CWC to achieve full disarmament of CW and end all threats of CW.

B. Chemical Weapons Convention (CWC)

The Chemical Weapon Convention strives to eradicate weapons of mass destruction by prohibiting the development, production, acquisition, stockpiling, retention, transfer or use of chemical weapons by States Parties. States Parties must take the necessary steps to enforce the ban for the jurisdiction. In the CWC All 193 State Parties are obligated to disarm chemically by eradicating stockpiles of CW they may hold and any facilities which produce them, as well as any chemical weapons they abandoned in the past. States Parties have also agreed to create a verification regime for certain toxic chemicals and their precursors. States Parties can not refuse a surprise inspection by the convention to ensure chemicals are being only used for their purpose.

C. World Health Organization (WHO)

WHO is a specialized organization under the UN with 192 Member States with 6 regional offices and 141 country offices. The WHOs the objection is to coordinate health affairs and to gather information on public health concerns. About this topic, the WHO plays an important part in mitigating the public health consequences of chemical and biological weapons attacks. The WHO programmes provide technological assistance in various areas like disaster preparedness, disease surveillance and chemical safety. The WHO also opens information on outbreaks to the public and analyzes data about the possibility of biological warfare.

D. Food and Agriculture Organization (FAO)

FAO is an autonomous agency of the United Nations system with 175 Member States, and of which the European Union is also a member organization.

Its Constitution requires that FAO shall furnish technical assistance to governments that may request it. In collaboration with the governments concerned, such missions may be needed to assist, to fulfill the obligations arising from their acceptance of the recommendations of the United Nations Conference on Food and Agriculture and the Constitution of FAO.

FAO has not formally been involved in the control of biological and chemical weapons, but is,

however, prepared to play an active part within its broad mandate in providing technical and humanitarian assistance. In recent years, FAO has contributed significantly in emergency relief and rehabilitation when droughts, floods, earthquakes, hurricanes, locust swarms, livestock plagues, war, civil strife, and natural and man-made disasters have caused immense suffering to the populations affected.

E. World Organisation for Animal Health (OIE)

The World Organisation for Animal Health is composed of the official veterinary services of 157 countries. Its three main goals are to inform governments of the occurrence and course of animal diseases worldwide, and of ways to control these diseases, to provide international coordination of research on, and control of, important animal diseases and to work towards the harmonization of trade regulations for animals and animal products.

Although OIE has no programmes or activities with the specific objective of preventing or reacting to biological warfare, the ongoing sharing of information on the occurrence, prevention and control of animal diseases, including zoonoses, is relevant to this objective. Senior animal health officials from all countries meet annually to discuss recent scientific developments and to

agree on matters of international importance affecting public veterinary services. OIE has established an information system to collect and disseminate information on outbreaks of animal diseases that are the most serious from the animal and public health viewpoints. The urgency of dispatching information varies according to an internationally agreed classification of diseases. OIE has an emergency fund that is available for sending missions to developing countries in need of urgent technical assistance to investigate and control outbreaks of animal diseases.

8. Psychological Effects and Societal Impacts

Chemical and biological weapons are mostly known for being tools meant to harm or threaten lives. While this may sound like something effective in war, in truth, biological weapons are not very reliable in military use and chemical ones are limited in what they can actually do on the battlefield. This might be the reason why many countries have agreed through international treaties to limit or ban these types of weapons, since modern armies feel confident enough to fight wars without relying on them.

Rather than being useful in military tactics, these weapons serve another purpose. They are more like tools of terror. Today we often see them in the news paired with the word “terror,” which gives the idea that their real power is not just physical but also psychological. They work by spreading fear, uncertainty, and confusion in people’s daily lives. These psychological effects usually appear in two forms, one is immediate, and the other long term.

While it is generally expected that a large-scale panic would happen if chemical or biological weapons were used (or even just suspected to be used), there is no solid proof that such panic would actually occur. In the past, populations have shown the ability to withstand similar threats like aerial bombings, despite earlier fears that they would cause mass hysteria. Still, there is one response that seems to be predictable, and that is what experts call mass sociogenic illness.

A few examples have already been observed. On September 29th, 2001, a strange smell, later discovered to be just paint fumes, caused a bioterror scare at a middle school in Washington state. Sixteen students and one teacher ended up in the hospital. Then, on October 3rd in Manila, Philippines, over 1000 students rushed to clinics complaining of flu-like symptoms after a rumor

started spreading that they had been exposed to bioterror. Another incident happened on October 9th in Maryland, when a man sprayed some unknown liquid in a subway station. 35 people suddenly experienced headaches and nausea, but it turned out the bottle just had window cleaner in it.

These cases show that the reaction to these threats can sometimes do more damage than the actual weapons themselves. For instance, sending investigators in big space suits to check possible attacks or installing chemical detectors in public transport areas like the Washington DC subway may seem like smart precautions. But they might end up causing more panic than protection. During the Gulf war, there were about 4500 chemical alerts but none of them were linked to a real attack.

In fact, the longer-term effects of these weapons can be just as serious, or worse, than the immediate ones. Take the Gulf war again: even though there was an accidental release of a nerve agent called sarin, there's no solid proof that it caused serious health problems right away. But the psychological and political consequences have lasted for years.

What's more concerning is how society reacts afterwards. Based on similar events in the past, communities affected by chemical or toxic threats usually end up dealing with four main health worries. These include chronic diseases caused by exposure, fears about problems with pregnancy, mental health issues, and more people showing up with general symptoms that can't be easily explained.

The general feeling of fear, confusion, and stress may stay around for a long time, sometimes years. And it can make existing mental health conditions worse. One issue that adds to the problem is that science doesn't yet fully understand what happens with low-level exposure to toxic agents over time. Because health experts can't give full guarantees that brief or mild exposure won't cause harm, it creates even more fear and sometimes anger toward officials. That distrust can grow and make it harder for governments to respond effectively.

On top of that, there will likely be debates in both science and media in the years after such incidents, about what really happened, and whether or not people were truly affected. We've seen this kind of controversy already after events like the Gulf war, or deployments in the Balkans. These debates could go on for a long time, feeding confusion and making it even harder to recover.

9. Threats of Biological and Chemical Weapons

A. Proliferation Risks

CBWs hold great threat for national and international peace and security. The fundamental issue with CBWs is their accessibility. The knowledge, materials and technology to create CBWs has become accessible around the globe. Pathogens could be found in nature and research laboratories. What makes this even more alarming is that pathogens could now be made from scratch with technologies available to the world.

Another crucial worry comes from the fact that these substances and technologies have multiple uses; for example, they can be used for peaceful purposes in areas like medicine, farming or industry but also quickly turned into something dangerous. This complication makes it hard to monitor and manage the making and spreading of these agents as well as their precursors. In some cases, even materials being produced for good reasons can be secretly changed towards bad uses without getting noticed.

Increased accessibility further magnifies the risks of proliferation because some biological agents and chemical substances needed for armament are easy to get or produce with basic laboratory tools. This easy access reduces obstacles for countries and groups that are not states to acquire these materials potentially turning them into weapons, increasing the chance of misuse.

The advancement in technology, especially biotechnology and chemistry, has made it easier to grow and spread biological or chemical weapons. For example, methods of genetic manipulation can make biological substances more powerful or longer-lasting. Artificial chemistry allows people to create new kinds of harmful compounds that were not possible before. These changes

increase the strength of those who might have these weapons and make it harder for efforts against them to succeed completely.

The economic aspect of biological and chemical weapons is moreover similar to nuclear armaments which makes them more appealing towards marginalized groups seeking abilities that can cause great damage. Especially the cost-effectiveness and covert deployment potential of these weapons make them easy-to-access options for both governmental and non-governmental actors aiming to achieve strategic goals through unconventional means.

Working together around the world is very important to reduce the spread of risks. This can be done by making arms control rules stronger, improving systems for checking facts, putting in place better measures for keeping biology and chemicals safe, and creating good readiness along with response abilities. If everyone works on these issues together, it will help protect global safety as well as public health and the environment from threats of biological or chemical weapons.

B. Bioterrorism

Bioterrorism is a planned and intentional non-state actor release of pathogenic strains and biological agents such as viruses, bacteria and other germs to devastate a population. Even though biological agents could be found naturally, in the case of bioterrorism it is possible that the agents could have been altered to increase their ability to cause disease, make them resistant to current medicines, or to increase their ability to be spread. With the rapidly increasing changes in genetic modification in bio-molecular engineering and the production of bioweapons is correlated.

Unfortunately the enhancements in bio-molecular engineering made it easier for terrorist organizations to get access to more detrimental weapons. As we have mentioned it previously in the Study Guide, bioweapons have been a threat for humans even in history. But now, bioweapons have become even more fatal. Non-state actors have used bioweapons in the past. Non-state actors are prone to attack metropolitan cities, big urban conglomeration, and districts

having international borders but no regime could be considered non-vulnerable. The type of attack could differ based on the type of agents used. Aerosol mechanisms are likely to be used if the objective is to infect a large population. Food and water contamination with toxins could also be another method. Deliberate infiltration of infected animals, pests or vectors through borders could be other modes of attack. Bioterrorism is not a case that should be taken lightly.

C. Accidental Release

The accidental release of pathogens can cause a very major public health impact as it can lead to outbreaks of infectious diseases within populations that are exposed to these pathogens. This can result in many illnesses ranging from mild symptoms to fatal conditions depending on the severity and transmission of said pathogen.

These illnesses may also cause varying social disruption and public outrage depending on the severity of said illness caused by these biological agents. The symptoms caused by these pathogens may not be serious at times, however it may lead to social disruption including panic amongst the public, mistrust upon authorities, and stigmatization amongst affected individuals. Misinformation regarding the illnesses caused by the biological agents can also lead to the worsening of the public effect regarding the situation.

Social disruption can also lead to another kind of disruption, which is economic disruption. These economic disruptions may be caused by increased healthcare costs due to the amount of affected people, which may lead to pauses in more important research to find a cure for said illness caused by these pathogens.

Another worry caused by accidental releases can be the challenge released upon governments to provide swift responses to misinformation caused by the public. They may also be required to make swift investigations that may not be 100% true as the type of pandemic these pathogens may release can cause an internal panic within governments and force them to conduct insufficient research and investigations. This may cause mistrust upon authorities as the information provided by the investigations and researches may not be fully truthful, an example

for this is where misinformation was spread about the COVID-19 vaccines such as neutering people, causing later health problems, etc.

These releases may be caused by inadequate security measurements in research facilities and laboratories. These inadequate security measurements may include; improper monitoring systems, unqualified workers interfering, not sealing biological agents properly, exposing infected or contaminated animals or humans to the public, slip-ups, etc.

10. Questions to Ponder

1. How can countries counter bioterrorism?

2. How can countries address and detect the accuracy of possessions or usage of CBWs allegations?

3. How can the UN be involved in the situation; in both militarily and humanitarian ways?

4. How can countries strengthen international law frames to prevent the usage and production of CBWs?

5. How can countries increase public awareness regarding the situation without causing an outrage or mass fear?

6. How can countries implement international cooperation regarding the usage of biological and chemical weapons?

7. How can countries protect their citizens in case of a CBW attack?

8. How can countries enhance their verification for safe usages of biological and chemical research?

9. How can countries enhance border and postal security in order to prevent the transfer of biological agents such as anthrax?

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