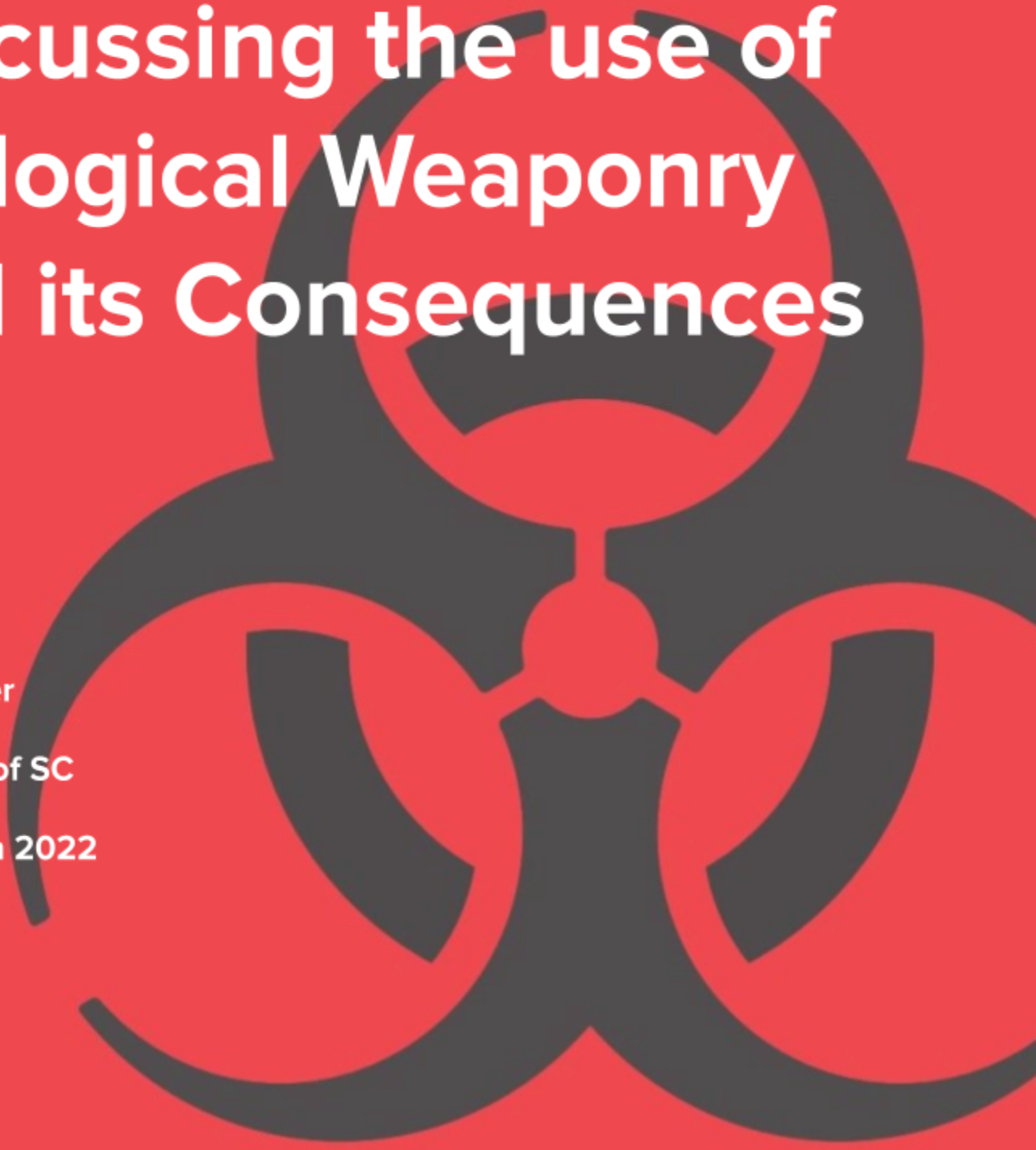
Research report for SC

Discussing the use of Biological Weaponry and its Consequences



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Introduction

Biological arms are defined as **microorganisms and toxins weaponised to harm and kill humans, animals, and plants at large rates**. BWs are recognised as **weapons of mass destruction**. While they are often used to kill large amounts of people through **epidemics**, they can also work to eradicate healthy agriculture and farm animals within a nation and thus wreak havoc on its functionality. These toxins and viruses can be distributed in **large-scale warfare** as grenades and bullets to wipe out towns, cities, countries, but they are impossible to contain. They can also be used in large-scale warfare targeted at **agriculture and livestock** in order to strip a region of its resources and significantly weaken its economy. In the case of **direct attacks**, biological weapons can be injected into food, mixed into drinks, or laced onto fabrics in order to harm or kill an **individual** or **smaller targeted group** of people. **Containment of BWs gets less manageable as the scale increases**. It is an **unruly class of weaponry** that works incredibly **quickly** and is **highly effective**, which is why it was the **first class of weaponry to be banned in its entirety**.

The **Biological and Toxin Weapons Convention** was enacted in 1975 in order to **effectively ban biological and toxin weapons**. Currently only 10 states have not signed or agreed to the treaty. While few nations fall outside of this agreement, **there are not sufficient enforcement measures** to assure **global safety** from the consequences of biological weapons. Biological weaponry is a **threat to an international degree**, but that is not entirely the fault of governments. Any access that **terrorist groups** or even individuals may have to a BWs is a global threat.

Key terms

Bioterrorism is the use of biochemical agents as a means of terrorism.

WMDs or *weapons of mass destruction* are nuclear, biological, or chemical weapons that can inflict large-scale detriments to a nation.

BWs or *biological weapons* are microorganisms produced and enhanced to intentionally elicit widespread disease, death, and/or devastation (though they are sometimes used on a smaller scale for directed assassination as well).

BWC/**BTWC** or the *Biological [and Toxin] Weapons Convention* is a multilateral treaty banning the development, stockpiling, production, and transfer of BWs among ratified nations.

Anthrax is the deadliest common BW and an infectious disease that is often fatal upon inhalation.

UNODA or the *United Nations Office for Disarmament Affairs* is a committee under the United Nations formed in 1998 which aids the creation and implementation of disarmament measures.

Weaponised agents are the toxins/viruses/microorganisms used in biological attacks.

Delivery mechanisms are the mechanisms used to diffuse the weaponised agent in biological attacks.

Universalisation is the widespread agreement of a notion, idea, or action.

Ratification is the officialisation of a treaty through signing or consenting to it. (Note: ratification is a general term for formalised participation in a treaty as well as a specific term for being a founding member of a treaty).

Accession is the officialisation of a treaty through signing or consenting to it, but is different from ratification. They have an equal legal effect, but accession takes place typically after a treaty has already been negotiated and enacted by other nations.

Succession is the officialisation of a treaty in a nation that falls under the sovereignty of a successor state. If a nation succeeds to a treaty, that nation is accepting the treaty which has already been ratified in its sovereign state.

Instruments are documents for legal action.

Depositaries are nations who manage and oversee a treaty.

CDC or *Centres for Disease Control [and Prevention]* work generally to protect and cure people from/of health threats.

General Overview

There are two elements required to enact biological weaponry; a **weaponised agent** and a **delivery mechanism**. The weaponised agent is the fatal disease or toxin (ex. anthrax, botulism, smallpox), and the delivery mechanism is the method of diffusion throughout the targeted region. The agent is typically **enhanced from its natural state in order to maximise and optimise production, storage, and dissemination**. The delivery mechanism is oftentimes a **missile, bomb, grenade, or rocket**, however the toxins can also be spread with the use of spray-tanks that have in the past been attached to vehicles and tanks. These devices typically pertain to BWs on a larger scale, however, the agent may also be sprayed, brushed, or injected onto surfaces, clothing, and food depending on the **intent behind the biological attack**.

This class of weaponry is considered a threat from multiple directions. While there is concern over governments developing and employing BWs, individual people as well as **terrorist organisations** have utilised biological arms in the past. The weapons have a past of being used in **warfare, directed assassination attempts, and accidental leaks from labs**. **Distinguishing between whether an epidemic has a natural cause versus an accidental or intentional one is important but incredibly convoluted**. The difficulty of tracing the origins of widespread disease leaves room for false accusations and political entanglement by proxy. Because of the **wide range of consequences that arise from biological weapons– economic, sociopolitical, agricultural, and health–**, addressing the risks requires collaboration from a nation's **medical, political, and agricultural sectors**. This kind of collaboration would be useful in detecting and **mitigating all genres of disease and infection**.

The BWC was the **first multilateral disarmament treaty which prohibited an entire class of WMDs**. It was signed in 1972 and enacted 3 years later. **Effectively, it bans all biological weaponry**. The first article dedicates itself focally to completely **prohibiting the development, production, stockpiling, acquisition, and retaining of all biological weapons** (see diagram for other key articles). The depositaries carry the responsibility of monitoring and managing the ongoing activities of the treaty. The three **depositaries** of the BWC are **Russia**, the **United States**, and the **United Kingdom**.

(Note: the below diagram does not depict the entire treaty, simply its key points.)

Key provisions of the Biological Weapons Convention include:	
Article I	Never under any circumstances to develop, produce, stockpile, acquire or retain biological weapons.
Article II	To destroy or divert to peaceful purposes biological agents, toxins, weapons, equipment and means of delivery prior to joining.
Article III	Not to transfer, or in any way assist, encourage or induce anyone else to acquire or retain biological weapons.
Article IV	To take any national measures necessary to implement the provisions of the BWC domestically.
Article V	To consult bilaterally and multilaterally and cooperate in solving any problems with the implementation of the BWC.
Article VI	To request the UN Security Council to investigate alleged breaches of the BWC and to comply with its subsequent decisions.
Article VII	To assist States which have been exposed to a danger as a result of a violation of the BWC.
Article X	To facilitate the fullest possible exchange of equipment, materials and information for peaceful purposes.

As it stands, the treaty has 183 state parties and 4 signatories, leaving 10 nations who have not agreed to it at all. The first step in becoming part of the convention consists of state negotiations and a signature to confirm that the state is in agreement. The process for **ratification** differs by country, however. States that formed and initiated the convention may **ratify** it, states that agree to it once it has been negotiated and ratified may **accede** to it, and states that fall under the sovereignty of a ratified/acceded successor state may **succeed** to it. Each process has its respective document to be signed and **confirmed by one of the three depositaries** in order for a state to become a ratified party of the convention **after domestic constitutional policies are fulfilled**. The four signatories are: Egypt, Haiti, Somalia, and Syria. The ten unsigned states are: Chad, Comoros, Djibouti, Eritrea, Israel, Kiribati, Micronesia, Namibia, South Sudan, and Tuvalu. (Note: varied use of the term *ratified* may be confusing, however it unilaterally indicates the formalisation of the agreement to the treaty and its distinction from *accession* and *succession* are not important in this matter.)

The **universalisation** of the BWC is instrumental to its utility. Without all states in ratified agreement, the risks of BWs are evidently more threatening. Again, the depositaries are Russia, the United Kingdom, and the United States of America. **The role of the depositaries is to manage the documents of ratification/accession/succession as well as any other instruments pertaining to membership**. This means that any member states wishing to join must do so through one of the depositaries.

Universality is so important due to the fact that **disease knows no legal bounds**. Any widespread, effective BW would pose a threat to a nation, its neighbours, and any others in trading and tourist relations with it. In a **highly globalised world** with connections only thickening through the centuries, biological weapons cannot be directly pointed to just one city, region, or even continent. While **small-scale directed biological attacks** are possible, the consequences of using BWs for **large-scale warfare** would be **impossible to contain** within any desired borders and has a not insignificant likelihood of spreading

to a global scale. This obviously means that **the distributor of the BW could also be threatened by the weaponised agent, depending on its severity, intent, and method of diffusion**.

While nearly any harmful toxin or microorganism might be used, there are of course ones that are most dangerous and ones that are most common, and they fall into classes. **Anthrax**, **botulism**, **plague**, and **smallpox** have all been categorised within **category A** threats among other ***major*** **public health hazards**. **Cholera**, **encephalitis**, and **food poisoning** have been categorised within **category B** threats among other **public health hazards**. **Category C** of BWs describes **pathogens that have been enhanced** in order to be used as weaponised agents. The **means of diffusion can vary**, but the motives behind biological weaponry are **mass destruction**, whether that be pointed toward a **population directly**, or its **surrounding environment**, **agriculture**, and **livestock**. When targeted at agriculture and livestock, BWs work to **deprive food**, **dismantle the economy**, and **weaken the morale** of the nation under attack. Whatever the intention, BWs are devastating to a region and oftentimes any surrounding it.

The role of the **COVID-19 pandemic** in the matter has mainly been incentivising medical progress and raising awareness for general human hygiene. The virus has added a new element of fear to being caught in another pandemic, especially one with a virus specifically weaponised to cause damage.

Major countries and parties involved

Russia, the **United States**, and the **United Kingdom** play key roles in the matter because of their roles as depositaries in the Biological Weapons Convention. The role of depositary states lies in managing the signatory and ratification processes as well as monitoring any action or formal discourse relating to the convention. Essentially, the convention has been entrusted to these three nations.

The **UNODA** deals with the politics and technicalities of disarmament, creating a forum for discussion and action on disarmament issues. The organisation was founded under the United Nations in 1998.

The **WHO** deals with the health concerns of biological weaponry. The organisation has its main concerns rooted in the consequences of BWs, rather than the discussions and

politics surrounding it. The WHO, alongside other health-oriented programs such as the CDC, have the same responsibility in the matter that they have in any epidemic or disease-related issue. Enhancing the global standard of health and enriching the human experience through improved hygiene and protection is how these organisations can best assist in the matter of BWs.

A worrisome flaw in the BWC as it stands is the lack of verification and enforcement programs. Many ratified nations have upheld active bioweaponry programs. It was revealed that the **Soviet Union** kept these programs long past ratifying the treaty, even though the state is a depositary itself, but they were later dismantled. A leading threat in the production and even storage of the weapons on its own, is the prospect of terrorist groups accessing them. There is evidence of smallpox being held in **Russian** possession, which isn't only a threat because of government actions, but also because of the risk of individuals or organised groups taking them and wreaking pandemic havoc on a global scale. Signatory of the BWC, **Iraq**, has also broken the treaty because of its bioweaponry research programs and development of Anthrax-based weapons as well as other weaponised agents, all of which were not eradicated until the early 90s. Multiple countries are still suspected to have ongoing research programs or other involvement with BWs.

Biological warfare dates back to 1347, as far as records show, but has evolved significantly since. The first recorded use of it showed people throwing plagued cadavers over city walls in order to infect neighbouring rivals. As the technology developed, the next significant use can be traced back to the 15th century, when Spain sent wine mixed with leprotic blood to France. It has also been employed on battlefields by ways of firing rabid saliva at opposing combatants, a technique coined by Polish warriors in the mid-1600s. Later techniques see the distributing and selling of diseased clothing to the targeted victims.

Moving relevantly forward into the 20th century, both the **Soviet Union** and the **United States** respectively developed large-scale BW production programs. Each of these programs was stopped by the BWC, which was signed in 1972 and enacted 3 years later in 1975, and of which both nations were/are depositary states. The **United States** followed through on the demands of the treaty, but the **Soviet Union** did not. Since the treaty was so new, there were not sufficient resources to ensure the compliance of nations. Upon the fall and division of the **Soviet Union** in 1991, the program was dismantled, but still, completed weapons, production information, and materials were not easily contained. Efforts were made to ensure the halting of BW activities.

Most recently, with the **Russian** invasion of **Ukraine**, misinformation on BWs has been more of a threat than the weaponry itself. **Russian** fear tactics have included claims unsupported by evidence that imply that the **United States** is developing biological weaponry within **Ukraine**. There is no evidence of this and it mainly works to elicit fear and distrust in **Ukrainian-American relations**. Catastrophizing in the media for more fruitful discourse from outside of the conflict itself has led to this brand of false claims and inflated fear which distract from the actual crux of the issue.

No party stands in blatant disagreement with the notion that BWs are incredibly dangerous on an international scale. Because of the undeniable danger for every country in the matter, there isn't much conflict when it comes to believing that BWs are something to be feared. Illness is a part of the human story, it's something all people have in common. But of course, there is a lot of distrust between nations.

Due to the threatening nature of BWs, accusations are grave and fear is as well. The agreement to completely rid of bioweaponry requires so much **trust between nations** and it also takes away the element of discovery that inevitably follows BW research. Thus, while there is little disagreement on the urgency to manage the threat of BWs, there is natural and expected hesitancy due to the politics and **universality** of the matter.

Possible solutions

On independent national scales, **funds against bioweaponry** can be directed toward the individual state's personal **anti-terrorist and national security efforts**. **Technology** that works to detect viral substances and other toxins is a leading **preventative measure** that countries may take.

Supporting medical research that works to develop vaccines and, in general, better health efforts is also worthwhile action against the prospective consequences of BWs. **Promoting vaccination** and **following rigorous health measures nationwide** lessens the vulnerability a country may have if a BW were to be used against it.

On an international scale, **strengthening the existing BWC** and implementing **reliable, longevous systems of enforcement** and surety would best suit the **collaborative effort** of avoiding the threats of biological warfare. **Inspections** that are reciprocated from one

nation to another is possibly the fairest way to go about this, since no nation– not even the convention's depositaries– is absolved of suspicion in the matter. Generally, **infusing the existing convention with rigour** and more promise is a great, though vague, way forward. It is important to note the resistance that many, and likely most, nations would have to BW inspections. Whether this is out of principle or actual need to hide weapons, it is an obstacle to address nonetheless.

Waiting for an incentive other than fear to strengthen and affirm the BWC could claim lives around the globe.

In short

- What are biological weapons?
    - Microorganisms, toxins, viruses that are weaponised in order to cause mass destruction
- What are the effects?
    - BWs can be directed towards people to harm and kill them
    - BWs are also used to disrupt the agriculture and livestock of a nation, which collapses the economy by extension
    - BWs are not containable and cannot be kept within the borders of a city or region and so pose a global threat
- What is the BWC?
    - A treaty enacted in 1975 to effectively ban biological weapons
    - Depositaries: Russia, United States, United Kingdom
    - The BWC lacks effectiveness in enforcement measures and has been broken and suspected to be broken many times
- Who matters?
    - The depositaries play an instrumental role
    - The WHO, CDC, and any national health organisations work to address the consequences of any prospective epidemic that may come from natural or directed causes
- What are different nations' opinions?
    - There isn't much disagreement on the global threat that BWs pose
    - Most nations do fear the access that others might have to BWs
    - Because of the inability to restrict the consequences of BWs to a directed area, the threat is global

- Recent developments
    - The largest BWs development was the Anthrax outbreak in the Soviet UNion in 1979
    - Recently, threats and accusations have been the main channel of discourse on the matter
    - COVID-19 has increased social awareness and fear of disease around the world, especially in privileged Western countries
- What are possible solutions?
    - Strengthening the BWC, since there are not sufficient enforcement measures
    - Ensuring eradication of all research and development worldwide
    - Strengthening health programs across the globe

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