

# MACMUN 2024



# DISEC

## Background Guide





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All attendees are expected to be respectful and courteous to Staff and Secretariat members, as well as other delegates at all times. The dais will immediately call to order delegates who do not abide by this rule. Delegates who feel they are not being treated respectfully are encouraged to raise their concerns with their committee staff or a member of the Secretariat.



## ***DISEC***

### ***Committee Welcome***

Dear Delegates,

It is with great pleasure that we welcome you to DISEC as part of the ninth edition of McMaster Model United Nations (MACMUN). Your chairs for this committee are Benjamin McDonnell and Naïla Bounefissa.

DISEC, the United Nations Disarmament and International Security Committee, focuses on addressing global issues related to disarmament, arms control, and international security. As a vital organ of the United Nations, DISEC plays a crucial role in promoting dialogue and collaboration to ensure a safer and more secure world. In this conference, delegates in DISEC will be deliberating on two topics:

1. Strategies for Combatting International Terrorism
2. Addressing Gaps in Present-Day Biotechnology Regulations

We anticipate that the lively discussions and debates in our committee will encourage thoughtful reflection on various aspects of the agendas, leading to innovative solutions for ongoing issues.

We hope that your time on this committee will be enjoyable and provide valuable learning experiences in Model UN and beyond. Should you have any questions or concerns, please feel free to reach out to us via email at [disec@macmun.org](mailto:disec@macmun.org).

Your DISEC Staff,

Benjamin McDonnell & Naïla Bounefissa  
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## ***Committee Mission***

The United Nations Disarmament and International Security Committee (DISEC) is dedicated to promoting global peace, security, and stability through the collaborative pursuit of disarmament and effective arms control measures. As an essential organ of the United Nations, DISEC plays a pivotal role in addressing contemporary challenges related to international security, arms proliferation, and the responsible use of emerging technologies.

Through open and constructive dialogue, DISEC endeavours to provide member states with a platform for collaboration, innovation, and consensus-building to achieve our shared goal of a world free from the threat of armed conflict and weapons of mass destruction. Together, it strives to create a safer and more secure global environment for the benefit of all nations and their people.



## Topic #1: Strategies for Combatting International Terrorism

### *Introduction*

In an increasingly globalizing world, no nation state is immune to the adverse effects of international terrorism nor equipped to effectively counteract international terror alone.<sup>1</sup> As stated by the North Atlantic Treaty Organization (NATO), terrorism is the most asymmetric threat to international stability and prosperity.<sup>2</sup> Terrorism is a persistent and global issue which knows no borders, nationality, or religion, and therefore constitutes a challenge which the international community must tackle unanimously. From the perspective of the United Nations (UN), and in accordance with the UN Fact Sheet No. 32: “Terrorism and Counterterrorism,” no standardized definition of “terrorism” exists despite various declarations, resolutions, and universal “sectoral” treaties which seek to articulate terrorism and its core elements. Therefore, in the absence of an internationally agreed upon definition of terror acts, the High Commissioner for Human Rights (HCHR) requires individual sovereign states to refer upon key elements of terrorist acts as outlined in the UN Security Council resolution 1566.<sup>3</sup> This resolution details a loose groundwork for a universally accepted concrete rationale. The resolution itself specifically outlines “calls upon [all member] States to cooperate fully in the fight against terrorism” which is aptly described as “one of the most serious threats to peace and security.”<sup>4</sup> However, cumulative definitions have historically and continuously remained to the full discretion of said states, resulting in varying interpretations and responses in domestic and counter-terrorism legislation.

Apart from loosely defined international law and state-specific definitions, there are numerous ways in which nation states define and go about combating the threat of terrorism. Organizations such as NATO and military institutions within its member-states oftentimes employ a “360-degree approach” to both deterrence and defense by expanding counter-terrorism efforts through various operations and missions within Alliance borders or beyond.<sup>5</sup> For example, since 2017, NATO has been a member of the Global Coalition to Defeat ISIS, playing a key role in combating international terrorism by projecting military power as a means of ensuring stability in the Euro-Atlantic area and beyond.<sup>6</sup> Examples include joint training operation with alliance nations, surgical strikes on known terrorist positions, and the continuing support of local forces dealing with counter terrorism in affected states.<sup>7</sup>

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<sup>1</sup> United Nations, “Terrorism Prevention,” UNODC, <https://www.unodc.org/roseap/en/what-we-do/terrorism-prevention/index.html>.

<sup>2</sup> Ibid.

<sup>3</sup> United Nations, “OHCHR and Terrorism and Violent Extremism,” OHCHR, <https://www.ohchr.org/en/terrorism>.

<sup>4</sup> Ibid.

<sup>5</sup> North Atlantic Treaty Organization, “Countering Terrorism,” [https://www.nato.int/cps/en/natohq/topics\\_77646.htm](https://www.nato.int/cps/en/natohq/topics_77646.htm).

<sup>6</sup> Ibid.

<sup>7</sup> Ibid.



Covert operations and intelligence-based counter-terror responses are among many defenses a secondary category nation-state may employ when handling terrorist threats. For more context, non-stop covert operations against American adversaries overseas occur simultaneously in varying regions all over the world.<sup>8</sup> Covert operations give policymakers the ability to achieve strategic foreign policy objectives when disarmament of an enemy through direct military intervention is undesirable based on varying political, economic, or tactical factors.<sup>9</sup> One relevant contemporary example is the U.S. intelligence and strategic military apparatuses mission to kill al-Qaeda leader Osama bin Laden who had lived without contention in Pakistan, warranting a surgical strike that did not involve any additional parties other than the terror group itself.<sup>10</sup>

In addition to the previously mentioned remedies for combating terrorism, nation states can also rely on non-violent methodology such as economic or financial punishment in the form of sanctions or seizures. For example, the implementation of sanctions is a common deterrent, which essentially declares all property and or interests held by the designated individuals in a country to be blocked and reported to the treasury board unless authorized otherwise.<sup>11</sup> International terrorism, regardless of intent and or action, remains a serious threat to global stability and serves as a hindrance to achieving many of the UN Social Development and Governance targets.

## ***History***

Despite differing pseudo-legal rationales for what constitutes ‘terrorism’, the extent of terror acts themselves, in an international context, only became centered following the infamous September 11th attacks and the subsequent ‘War on Terror’. Under the direction of then-president, George W. Bush, the ‘War on Terror’ began initially as a US-led military coalition and comprehensive foreign policy plan to identify and halt terrorist activity around the world.<sup>12</sup> The War on Terror, inaugurated by the Bush administration, profoundly challenged the preexisting notions of international law and relations instilled by the United Nations.<sup>13</sup> On September 24th, 2001, the US President signed an executive order to freeze the assets of terror groups and other related entities, essentially kickstarting the beginning of the conflict that eventually defined modern geo-political relations between the West and its “adversaries”. The war itself was conducted with almost limitless scope, encompassing a wide range of nation states across multiple continents, involving major wars in Afghanistan and Iraq, and covert operations in Yemen. In its scope, expenditure, and general impact on international relations, the War on Terror was comparable to that of the

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<sup>8</sup> Adam Elkus. “Covert Operations and Policy,” *Infinity Journal* 2, no. 1 (2011): 13-16, <https://www.militarystrategymagazine.com/article/covert-operations-and-policy/>.

<sup>9</sup> Ibid.

<sup>10</sup> Ibid.

<sup>11</sup> Ibid.

<sup>12</sup> National Archives, “Global War on Terror,” George W. Bush Library, <https://www.georgewbushlibrary.gov/research/topic-guides/global-war-terror>.

<sup>13</sup> Antony Anghie, “The War on Terror and Iraq in Historical Perspective,” *Osgoode Hall Law Journal* 43, no. 3 (2005): 45.



Cold War (1945-1991).<sup>14</sup> Aside from direct military action, intelligence reorganization, economic restrictions, and diplomatic efforts were also instituted. The aim of these actions was to construct and maintain a global network of coalition partner states to combat anti-American terror groups to prevent future attacks on US soil.<sup>15</sup>

Less than one month following the September 11th attacks, on October 7th, the US initiated a large-scale deployment of regular and covert operations forces into Afghanistan with the intention of toppling the ultra-conservative Taliban regime, which had been harboring al-Qaeda terror cells.<sup>16</sup> The second stage of the war between 2002-2008 involved the US strategy of ‘nation building’ and the attempt at establishing a pro-democratic state capable of subduing both the Taliban and Islamic extremist groups to prevent further destabilization in the region. The final stage of the conflict beginning in 2011, for the majority involved the gradual withdrawal of UN-mandated International Security Assistance Force (ISAF) troops and a lengthy transition of security responsibility to the Afghan military and law enforcement.<sup>17</sup> In January 2015, over a decade after the initial invasion, NATO launched the Resolute Support Mission (RSM) to train and assist Afghani security forces. However, the mission was officially terminated following the complete withdrawal of NATO forces in mid-2021, bringing total international military assistance to an end.<sup>18</sup>

Following government crackdowns against pro-democratic protests inspired by the Arab Spring of 2011, violent eruptions in Syria eventually led the nation to full-blown civil war within that same year. Designated terror groups such as the quasi-governing Islamic State (IS) and al-Qaeda took advantage of the gradual breakdown in societal structure, and eventually joined the fighting amongst emerging factions of similar nature. Concerns about the possibility for Syria of becoming terrorist training grounds prompted the US to equip rebels within the Free Syrian Army with non-lethal aid and intelligence through networks overseen by the Central Intelligence Agency (CIA).<sup>19</sup> The covert mission to assist anti-Assad forces by the CIA was eventually reportedly terminated by then president, Donald Trump, who believed the program too costly.<sup>20</sup> At first, US operations were conducted from afar, before, in 2015, a small contingent of ground forces were deployed to train, advise, and assist local Kurdish groups in their fight against IS. Operation ‘Inherent Resolve’, a US sanctioned multi-branch task force was subsequently directed to militarily defeat IS in

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<sup>14</sup> Richard Jackson, "war on terrorism," Encyclopedia Britannica, December 22, 2023, <https://www.britannica.com/topic/war-on-terrorism>.

<sup>15</sup> Jackson, "war on terrorism."

<sup>16</sup> Griff Witte, "Afghanistan war," Encyclopedia Britannica, December 4, 2023, <https://www.britannica.com/event/Afghanistan-War>.

<sup>17</sup> Ibid.

<sup>18</sup> North Atlantic Treaty Organization, "NATO and Afghanistan," [https://www.nato.int/cps/en/natohq/topics\\_8189.htm](https://www.nato.int/cps/en/natohq/topics_8189.htm).

<sup>19</sup> Tess Bridgeman and Brianna Rosen, "Still at War: The United States in Syria," *Just Security*, April 29, 2022, <https://www.justsecurity.org/81313/still-at-war-the-united-states-in-syria/>.

<sup>20</sup> Ibid.





cooperation with regional allies, conducting over 11,235 airstrikes in support of the operation by August of 2017 before its eventual scale-back.<sup>21</sup>

In addition to combating terror activity through direct and/or indirect civilian intelligence and military intervention, the global effort to curb terror has spawned unified economic sanctions against nations and groups labelled as terror groups. Canada, amongst many UN-complying member states, has implemented measures to suppress international terrorism by preventing designated terrorists from gaining access to the global financial system and preventing the concealment of funds or assets utilized to finance terrorism.<sup>22</sup> In 1999, under the United Nations Act, Canadian regulations froze the assets of the Taliban, Osama Bin Laden and his associates, and varying members of the al-Qaeda network. On May 9th, 2013, the Government of Canada officially delegated the Taliban legally as a terrorist organization under the Criminal Code, reflecting the Taliban Sanctions list previously initiated by the United Nations Security Council Resolution in 1988.<sup>23</sup>

### ***Current Situation***

International terrorism remains an existential threat to the overall state of global peace and stability. Yet, in the wake of decades of collaborative efforts to mitigate the spread of terror, attacks have increasingly grown in lethality and scope.<sup>24</sup> Continuing terror activity throughout the world has pitted varying ethnic, religious, geographical, and/or ideological groups against one another. This has resulted in the gradual degradation of foreign relations between nations and has decreased the likelihood of adequate peaceful solutions and long-term commitments to the eradication of terror without incentive.

According to the Institute for Economics and Peace (IEP) 2022 annual statistical report on global terrorist activity, terror attacks in Afghanistan increased by nearly 33 per cent, with deaths increasing by 14 per cent overall due to an increase in Taliban-coordinated armed attacks.<sup>25</sup> Many of the attacks, including the country's deadliest attack of that year which claimed the lives of at least 170 people, were estimated to be an indirect result of US and NATO troop withdrawal.<sup>26</sup>

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<sup>21</sup> U.S. Department of Defense, "Combined Joint Task Force Operation Inherent Resolve," <https://dod.defense.gov/OIR/>.

<sup>22</sup> Government of Canada, "Canadian Sanctions Related to Terrorist Entities, including Al-Qaida and the Taliban," Global Affairs Canada, [https://www.international.gc.ca/world-monde/international\\_relations-relations\\_internationales/sanctions/terrorists-terroristes.aspx?lang=eng](https://www.international.gc.ca/world-monde/international_relations-relations_internationales/sanctions/terrorists-terroristes.aspx?lang=eng).

<sup>23</sup> Ibid.

<sup>24</sup> Global Terrorism Index, "Global Terrorism Index 2023 Key Findings in Five Charts," Vision of Humanity, <https://www.visionofhumanity.org/global-terrorism-index-2023-key-findings-in-5-charts/>.

<sup>25</sup> Institute for Economics & Peace, "Global Terrorism Index 2022: Measuring the Impact of Terrorism," March 2022, [https://www.visionofhumanity.org/wp-content/uploads/2022/03/GTI-2022-web\\_110522-1.pdf](https://www.visionofhumanity.org/wp-content/uploads/2022/03/GTI-2022-web_110522-1.pdf).

<sup>26</sup> Ibid.





Similarly, Syria remains a hotspot for insurgency as IS terror cells continue to carry out attacks on police and military personnel in the northern provinces of the country.<sup>27</sup>

The international community must operate in tandem with respect for international law to provide a comprehensive global strategy for combating the ongoing threat of terror that will result in durable peace. Effectively enacting counter-terrorism strategies on a global scale is an incredibly difficult task from a multitude of perspectives, including numerous challenges. These include the maintenance of individual liberty and security of person as well as adherence to the right of due process when States detain persons suspected of terrorist activity.<sup>28</sup> Furthermore, ensuring that efforts taken by all levels of government, military, or law enforcement agencies within participating States avoid discrimination on a basis of race, colour, and or descent when performing counter-terrorism measures must be a priority.<sup>29</sup> Surveillance and data collection efforts carried out by intelligence or law enforcement agencies for the purpose of counterterrorism must be both effective in scope but respectful to personal privacy.<sup>30</sup> Finally, counter-terrorism operations conducted by individual States or in cooperation must adhere to international human rights, humanitarian, and refugee law invariably regardless of circumstance.<sup>31</sup>

Global terror, unsurprisingly, results in adverse economic, humanitarian, and standard of living conditions often propagated by compounding factors including psychological causes, religious reasons, and ethnic identities. Fundamental psychological theories such as the social learning theory, outline the idea that behavioral patterns are formed through social contingencies and may help to explain the frequency of terrorist activity. Aggression is perceived as a learned behavior, and thus, complex acts like terrorism may also be subconsciously reinforced.<sup>32</sup> Moreover, the formation of terror groups and or the promotion of conflict can be a result of differences in political or religious extremist values between groups.<sup>33</sup> Conflict resulting from divide amongst ethnic groups can lead to the formation of terror groups or drive pre-existing quasi-political organizations to carry out acts of terror. One example can be drawn from the African National Congress (ANC) use of terror-style attacks against the white-minority apartheid government and military throughout the early 1990s, who had maintained a system of racial oppression against the majority black population.<sup>34</sup>

Ideologies are commonly regarded as the system of beliefs and values on which programs are built, including social, economic, and political agendas. Such beliefs are often subject to extreme

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<sup>27</sup> Institute for Economics and Peace, "Global Terrorism Index."

<sup>28</sup> United Nations, "Fact Sheet No. 32: Terrorism and Counter-Terrorism," OHCHR, July 1, 2008, <https://www.ohchr.org/en/publications/fact-sheets/fact-sheet-no-32-terrorism-and-counter-terrorism>.

<sup>29</sup> Ibid.

<sup>30</sup> Ibid.

<sup>31</sup> Ibid.

<sup>32</sup> Randy Borum, *Psychology of Terrorism* (Tampa, FL: University of South Florida, 2004): 13.

<sup>33</sup> Khalil Azar, "Causes of Terrorism," *Indiana University South Bend Undergraduate Research Journal* 6 (2003), 6.

<sup>34</sup> Ibid., 4.



interpretations that stray from the intended philosophy. Ideologies ultimately play a crucial role in the target selection process of terror groups, such as the right-wing ideology of Christian Identity that US domestic terrorist Timothy McVeigh used to justify the 1995 Oklahoma City bombings.<sup>35</sup> A history of oppression can also lead to the formation of terrorist groups. According to Larry C. Johnson's article, "The Future of Terrorism," occupation is one of the highest forms of violence and therefore is often directly responsible for the spawning of terror activity in response to the adverse actions of perceived harmful regimes. For instance, the British military occupation of the former American colonies led to open revolt in 1775, highlighting the effects of overbearing oppression on a population.<sup>36</sup>

There are several challenges facing nation states in their attempt to quell international terrorism, yet there remain adverse effects of such a global mission that are often overlooked. Active terror groups (independently operating organizations or "non-state actors") present a current threat to international security—and are credited as propagating economic costs for nations around the globe. The most immediate and measurable economic impact can be derived from direct economic destruction, described as the physical destruction which occurs to factors of production, critical infrastructure, and commercial holdings. Billions of dollars' worth of property and productive resources which may generate valued goods for market sale can be destroyed both by terror organizations directly and as the result of various counter-terrorism operations partaken by military personnel. Widespread devastation of any nation regardless of cause will ultimately hinder the ability for the afflicted nation to adequately generate wealth, improve living standards, and function efficiently in international markets.<sup>37</sup>

In addition, the physical consequences of terrorism-related acts and subsequent counter-terrorism measures partaken by nation states can lead to the general degradation of the health of individuals caught within the crossfire. Apart from broken bones, disability, long term chronic pain, and or cardiovascular difficulties, psychological trauma can engender a metamorphosis of the psyche leading to mental decomposition. Such psychological ailments can ultimately affect survivors' sense of self, producing identity disorientation, shattering pre-existing core beliefs.<sup>38</sup> Survivors of terrorist acts – such as hostage taking, hijacking, and or kidnapping may experience shame or grief or even resentment towards the groups responsible.<sup>39</sup> Notably, one of the most diagnosed mental health disorders in survivors of large-scale atrocities is post-traumatic stress disorder (PTSD). This can lead to reoccurring nightmares, emotional numbness, and flashbacks that may persist for months or even years after the original cause.<sup>40</sup>

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<sup>35</sup> Azar, "Causes of Terrorism," 2.

<sup>36</sup> *Ibid.*, 7.

<sup>37</sup> Sean Ross, "Top 5 Ways Terrorism Impacts the economy," Investopedia, June 24, 2022, <https://www.investopedia.com/articles/markets/080216/top-5-ways-terrorism-impacts-economy.asp>.

<sup>38</sup> "Counter-Terrorism Module 14 Key Issues: Effects of Terrorism." UNODC, <https://www.unodc.org/e4j/zh/terrorism/module-14/key-issues/effects-of-terrorism.html>.

<sup>39</sup> *Ibid.*

<sup>40</sup> *Ibid.*



Unlike traditional warfare, counter-terror operations or any military action taken against designated terror organizations by a nation state brings up an abundance of additional nuanced measures of ethicality, even more so than conventional warfare. Ethical considerations remain when considering counterterrorism and international military intervention. Individuals who commit acts of terror are not recognized as traditional combatants or “soldiers” in a legal sense, and thus are not entitled to protections of the war convention.<sup>41</sup> If captured, these individuals are not granted the protection of domestic criminal law of the nation responsible for the detainment, nor protections afforded by the Geneva Convention relative to the treatment of prisoners of war (POWs). Terrorist entities and affiliates will not be recognized as organized military units until they begin to behave accordingly, such as carrying weapons openly or wearing a distinctive unit identification.<sup>42</sup> However, outliers exist such as the Islamic Revolutionary Guard Corps (IRGC). It remains an organization designated by the US Department of State as a foreign terrorist group, despite being officially recognized as a component of the Iranian military under Article 150 of the Iranian Constitution and behaving in the ways mentioned above.<sup>43</sup>

Ethical considerations are crucial in the requirements for waging a ‘just’ war in which abides by international law. Attacks against enemy targets must be isolated and they must be proportionate.<sup>44</sup> In simpler terms, attacks on enemy combatants or infrastructure must be carried out in such a way that minimizes damage to innocent persons or objects. Such a notion includes the choice of weapon(s) utilized, tactics, and precision. Proportionality regards the requirement that the damage performed in an attack is reasonably like the value or nature of the target, such as in size.<sup>45</sup> For example, a group of individuals hiding in a truck, the subsequent bombing of the entire city block would be disproportionate. Despite these considerations, there is still a tendency for terror-based groups to hide combatants amongst civilian populations.<sup>46</sup> Ultimately, the morality of targeted attacks against enemy forces becomes increasingly clouded when it is no longer possible to separate intended targets from civilians. The identification, discussion, and creation of legislation with reverence to such ethical considerations is imperative to minimize damage and casualties to persons involved.

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<sup>41</sup> Martin Cook, “Ethical Issues in Counterterrorism Warfare,” Markkula Center for Applied Ethics at Santa Clara University, <https://www.scu.edu/ethics/focus-areas/more-focus-areas/resources/ethical-issues-in-counterterrorism-warfare/>.

<sup>42</sup> Cook, “Ethical Issues.”

<sup>43</sup> U.S. Department of State, “Foreign Terrorist Organizations,” State Department, <https://www.state.gov/foreign-terrorist-organizations/>.

<sup>44</sup> Cook, “Ethical Issues.”

<sup>45</sup> Ibid.

<sup>46</sup> Ibid.



## ***Bloc Analysis***

It is crucial to emphasize that these categorizations are generalized, and individual countries may have diverse approaches, experiences, and responses to terrorism. Additionally, geopolitical dynamics and national policies can evolve, impacting a country's position in these categories over time.

*Alliance Bloc (NATO): United States, Canada, United Kingdom, Germany, France, Spain, Poland, Denmark, Finland, and other NATO member-states*

The 'Alliance Bloc' contains all current member-states of the Western-centric multilateral military agreement, the North Atlantic Treaty Organization (NATO). Member-states of NATO are typically similar regarding both system of governance and comprehensive national defense policy, collectively favoring a democratic approach to government with a strong inclination for the maintenance of human rights within their respective constitutions. These countries primarily rely on each other for cooperation in joint-military and intelligence operations against potential adversaries or threats to the national security of member states. Although each member state is technically equal in terms of cooperation, specific countries experience stronger associations through the form of 'special relationships' such as those observed in the close partnership between the United States, the United Kingdom, and Canada, all of which maintain a unique un-official relationship based on cultural and ideological similarities. Additionally, alliance countries unanimously work together against international terrorism through direct engagement through military intervention, passive deterrence against emerging terror threats, and advisory missions to assist countries suffering from the effects of terrorism. Alliance nations are also strong proponents of universal human rights using those outlined in the Universal Declaration of Human Rights (UDHR) as a baseline for categorizing nations which do not comply. Historically, NATO and its affiliates have stood in direct opposition to differing ideological spheres of influence such as those propagated by Russia, Iran, China, and Syria, which has only been exacerbated by the current Russia-Ukraine War and China's unlawful incursions into Taiwanese sovereignty. Nations which display similar ideological values or have been heavily influenced by powerful members of NATO like the United States will typically serve in support of NATO decisions regarding terrorism. For instance, Australia and New Zealand both participated alongside US and NATO forces in counter-terrorism operations in Afghanistan.

*Neo-Western Bloc (Special Relationship States): South Korea, Australia, Japan, New Zealand, Ukraine, Saudi Arabia, and Taiwan*

The 'Neo-Western' bloc contains states who have a unique relationship with the United States and its allies in which they are not members of NATO but remain engaged through close military and socioeconomic ties. Such nation states have had their overall cultural identity, system of government, constitution, and/or civil structure heavily influenced either directly or through close cooperation with Western nations. Despite not being in a large-scale military alliance such as NATO, nations within this category often actively participate in joint defense or counter-terrorism



operations. In some cases, NATO member-states such as the United States directly provide resources for the purpose of national defense, such as the case for Ukraine in its war against Russia and South Korea for the protection of its border against the hostile Democratic People's Republic of Korea (North Korea). Taiwan currently has its sovereignty protected by the United States as it continuously comes under threat from Chinese annexation. These nations for the most part follow the policy conduct of NATO either out of necessity for the survival of their respective state, or due to the close ideological and/or cultural similarities shared between member states.

*Neutral Bloc: India, China, and South Africa*

The 'Neutral Bloc' consists of independent states which are neither member states of NATO nor do they maintain close economic or military ties with the United States and its affiliated allies. Typically, these countries only serve to counteract terrorist activity when it directly affects the national security within domestic borders. They rarely contribute towards direct international efforts such as military incursions or joint security operations. However, these countries, such as India, do take-part in non-confrontational measures such as diplomatic or consular services to nations affected by terrorism. Despite not actively contributing towards various conflicts directly, China has recently provided Russia with financial aid in its war against Ukraine, which may be used to fund terror-like organizations such as the para-military group Wagner. Additionally, China has placed itself at a level of contention against both Alliance countries and Neo-Western countries in its repeated illegal expansion of its territory and unlawful claim to regions within the South-China Sea. Despite the circumstances, these nations remain mostly impartial to the conduct of terror groups and subsequent responses unless directly affected.

*Critical States: Afghanistan, Russia, Syria, Cuba, North Korea, Iran*

The countries included in this list are categorized due to previous history of funding internationally designated terror organizations or for being currently unlawfully governed by an illegitimate regime. Each country featured is considerably hostile towards NATO and its close allies, both diplomatically and militarily. The United States and its allies maintain strict economic sanctions on each country featured for a variety of reasons, the primary one being historical or current record of directly financing terror groups. Iran has and continues to provide both military and financial support to terror groups such as the Islamic Revolutionary Guard Corps (IRGC), and Hezbollah, and thus faces heavy sanctions from Western nations. Russia faces similar treatment for its unlawful invasion of Ukraine and contested sponsorship of terror-esque groups faces. Afghanistan, since 2021, has remained completely under the control of the terrorist organization the Taliban, reforming under the 'Islamic Emirate of Afghanistan' which is not officially recognized by the United Nations as the legitimate successor to the previous republic that had existed prior to the hostile takeover. Finally, Syria has repeatedly supported known terrorist entities and the use of weapons prohibited by the Geneva Convention, posing a potential threat to the stability of the Middle East and world beyond.



## ***Research and Preparation Questions***

### *Geopolitical Questions – The Burden of Responsibility*

1. Should nations proven to support and harbor terror-organizations within their sovereignty be punished through international military intervention? Even if there is a UN Security Council resolution to do so?
2. Which nations and or organizations should be burdened with the responsibility of counter-terror operations, more specifically, who (or what) should decide when and/or where counterterrorism is appropriate? How does the Western world handle terrorism? How do non-Western nations do so? Is there a difference?
3. When does it, if ever, become necessary for the international community to intervene in foreign affairs for the purpose of counterterrorism? Does the preservation of basic human rights serve as adequate justification for intervention? Is counter-terrorism synonymous with the UNs vision of global peace and stability? Why or why not?

### *Ethical Questions – Moral Ambiguity of Counterterrorism*

1. Is it possible for counterterrorism with direct military intervention to be paradoxical? As in, does military intervention exacerbate or worsen the state of countries affected by terrorism? Even if the overall goal was to safeguard human rights or eliminate a terror group responsible for limiting those human rights? Would those nations be better off without direct foreign assistance?
2. How or what constitutes a terrorist organization? Which nations have or do not have the right to classify terrorist groups? What is the difference between a terrorist group or a rebel faction that employs similar tactics? Does the overall goal of the group change the way in which they are perceived? (I.e. were the Mujahadeen fighters during the Soviet invasion of Afghanistan freedom fighters or terrorists? Does classification of terror groups depend on their primary adversary?)
3. How can terror groups who hide amongst the civilian population be effectively combated? Is collateral damage the fault of the terror groups themselves or counterterrorist forces?





## Topic #2: Addressing Gaps in Present-day Biotechnology Regulations

### *Introduction*

In the intricate dance between science and innovation, biotechnology emerges as a captivating instrument with a dual-use nature that presents both immense opportunity and significant ethical and security challenges. On one hand, biotechnology holds the promise of groundbreaking advancements in medicine, agriculture, and environmental sustainability, offering solutions to pressing global challenges. On the other hand, the same scientific tools and knowledge can be applied for less benevolent purposes, raising concerns about the potential misuse of biotechnological innovations for destructive purposes, such as the development of bioweapons or the creation of engineered pathogens. Striking a balance between harnessing the benefits of biotechnology for the betterment of humanity and mitigating the associated risks requires careful consideration of ethical standards, regulatory frameworks, and international cooperation. The dual-use nature of biotechnology emphasizes the need for responsible management and thoughtful governance to ensure its application aligns with the international values of safety, security, and the common good.

### *History*

Biotechnology is not limited to laboratories; it is a powerhouse in shaping the essence of international relations. The tug-of-war between ethical dilemmas and scientific strides creates a dynamic landscape of complicating debates on intellectual property rights, biosecurity concerns, and the power of bioweapons in war. However, it is not all doom and gloom; international collaboration has become a hero in this field, as observed through the World Health Organization acting as the guardian of norms and regulations.<sup>47</sup> As we stand at the frontier of emerging technologies with global impacts, the international community is tasked with defining the limits of scientific progress. Biotechnology's evolution involves more than just science — it forms a gripping narrative where economic, security, and ethical considerations intersect, shaping the geopolitical story of our times.

Bioweapons have evolved in tandem with the progress of biotechnology. Early instances involved crude attempts to contaminate water supplies and spread diseases to indigenous communities.<sup>48</sup> However, the 20th century saw an increased awareness and understanding of microbiology.<sup>49</sup> During and after the world wars, concerns of sophisticated bioweapons and their potential grew.

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<sup>47</sup> “Biological Weapons,” World Health Organization, [https://www.who.int/health-topics/biological-weapons#tab=tab\\_1](https://www.who.int/health-topics/biological-weapons#tab=tab_1),

<sup>48</sup> Jordan Gill, “‘Extirpate This Execrable Race’: The Dark History of Jeffery Amherst,” *CBC News*, April 29, 2017, <https://www.cbc.ca/news/canada/prince-edward-island/jeffery-amherst-history-complex-1.4089019>

<sup>49</sup> Robert Bud, “Biotechnology in the Twentieth Century,” *Social Studies of Science* 21, no. 3 (1991): 427.





The international community strove to navigate the dual-use nature of biotechnology, seeking to enhance global biosecurity and prevent the hostile use of these advances in warfare.<sup>50</sup>

### *Biotechnology During WWII*

During World War II, biotechnology found applications in both medical and military contexts. The production of penicillin, a revolutionary antibiotic, was scaled up to treat bacterial infections among wounded soldiers, significantly improving survival rates,<sup>51</sup> and malaria control efforts involved biotechnological strategies to combat the disease.<sup>52</sup> Biotechnological advancements in blood transfusions and blood plasma preservation also played a crucial role in medical treatment on the battlefield.<sup>53</sup> Furthermore, agricultural biotechnology contributed indirectly to the war effort by enhancing food production, while synthetic rubber production incorporated biotechnological processes.<sup>54</sup> Overall, World War II laid the groundwork for post-war biotechnological advancements.

Japan's Unit 731, a covert biological and chemical warfare research and development unit of the Imperial Japanese Army during World War II, conducted extensive and brutal experiments on humans, primarily Chinese prisoners of war and civilians in an effort to develop biological weapons.<sup>55</sup> These experiments included exposing prisoners to bombs designed to penetrate the skin with infectious particles, exposure to freezing temperatures for frostbite studies, field-testing of disease-spreading weapons, and many more. Thousands died in China both due to the spread of plague infections and at the hands of Japanese forces to conceal evidence of their war crimes.<sup>56</sup> Despite the atrocities, the United States granted immunity to some members of Unit 731 after the war in exchange for access to their research findings.<sup>57</sup> Some historians argue that the information obtained from Unit 731 contributed to the development of the U.S. biological warfare program and influenced military strategies during the Cold War.<sup>58</sup> However, due to the classified nature of much of this information, the full extent of the impact remains a subject of debate and speculation.

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<sup>50</sup> Bud, "Biotechnology in the Twentieth Century," 422.

<sup>51</sup> Diane Bernard, "Penicillin: How a Miracle Drug Changed the Fight against Infection," *The Washington Post*, July 11, 2020. <https://www.washingtonpost.com/history/2020/07/11/penicillin-coronavirus-florey-wwii-infection/>

<sup>52</sup> "Biological Warfare: Infectious Disease and Bioterrorism," in *Biotechnology*, 2<sup>nd</sup> ed, eds. David P. Clark and Nanette J. Pazdernik (Amsterdam: Elsevier Inc., 2015).

<sup>53</sup> Harvey J. Alter, and Harvey G. Klein, "The Hazards of Blood Transfusion in Historical Perspective," *Blood* 112, no. 7 (2008): 2617.

<sup>54</sup> Brian Tokar, "Agribusiness, Biotechnology and War," Institute for Social Ecology, July 17, 2016. <https://social-ecology.org/wp/2011/02/agribusiness-biotechnology-and-war-2/>

<sup>55</sup> Howard Brody, Sarah Leonard, Jing-Bao Nie, and Paul Weindling, "U.S. Responses to Japanese Wartime Inhuman Experimentation after World War II," *Cambridge Quarterly of Healthcare Ethics* 23, no. 2 (2014): 221.

<sup>56</sup> Ibid.

<sup>57</sup> Richard Stockton, "6 Horrifying Human 'Experiments' That WWII Japan Got Away With," All That's Interesting, June 7, 2023. <https://allthatsinteresting.com/unit-731>.

<sup>58</sup> Christopher Reed, "The United States and the Japanese Mengele: Payoffs and Amnesty for Unit 731," *The Asia-Pacific Journal | Japan Focus* 4, no. 8 (2006): 1.



It is essential to note that the decision to grant immunity to individuals involved in war crimes, including those associated with Unit 731, has been a subject of criticism and controversy. Critics argue that this compromises principles of justice and fails to establish accountability for crimes against humanity.<sup>59</sup> Thus, the ethical implications of using information derived from such experiments has been a topic of ongoing debate in historical and bioethical discussions.

### *Biotechnology During the Cold War Period*

The Cold War era witnessed a complex interplay between biotechnology and geopolitics. The United States and the Soviet Union, both vying for a strategic advantage in biological warfare and defense capabilities, invested heavily in understanding and manipulating biological agents for potential military applications. These efforts included research into the development of more effective biological weapons, as well as efforts to devise countermeasures such as vaccines and detection methods.<sup>60</sup> The secrecy surrounding these programs fueled an atmosphere of suspicion and competition, with both nations seeking to outpace the other in biotechnological advancements. This rivalry extended beyond military applications, with research in genetic engineering and molecular biology becoming integral to the broader scientific and technological competition. Meanwhile, bioterrorism threats and biodefense became increasingly paramount.<sup>61</sup>

The Biological Weapons Convention (BWC) was established in 1972 to address these concerns by prohibiting the development and use of biological weapons.<sup>62</sup> Japan, having experienced the devastating consequences of biological warfare, became an early supporter of the BWC and thus, the revelations about Unit 731's experiments contributed to the development of international ethical guidelines for biomedical research, emphasizing informed consent, human rights, and the protection of research subjects.<sup>63</sup> Despite the treaty, both superpowers — the U.S. and the Soviet Union — continued to conduct covert research. Notably, the Soviet Union was accused of violating the convention by conducting offensive biological warfare research, a claim later confirmed by Russian authorities after the end of the Cold War.<sup>64</sup> The Soviet Union's admission underscored the challenges in enforcing the BWC; the timing of the disclosure in the post-Cold War context added complexity to addressing historical violations, emphasizing the need for strengthened oversight and pointed to the BWC's lack of robust verification mechanisms and demand for full compliance. The Convention has, however, been successful in discouraging overt development and use of

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<sup>59</sup> Brody et al., "U.S. Responses to Japanese Wartime Inhuman Experimentation after World War II," 227-228.

<sup>60</sup> Christopher F. Chyba, "Arms Control Today," *Biotechnology and the Challenge to Arms Control* | Arms Control Association, 2009, [https://www.armscontrol.org/act/2006\\_10/BioTechFeature](https://www.armscontrol.org/act/2006_10/BioTechFeature).

<sup>61</sup> Sheila Jasanoff, "Biotechnology and Empire: The Global Power of Seeds and Science," *Osiris* 21, no. 1 (2006): 278.

<sup>62</sup> "Biological Weapons Convention (BWC)," The Nuclear Threat Initiative, March 9, 2023, <https://www.nti.org/education-center/treaties-and-regimes/convention-prohibition-development-production-and-stockpiling-bacteriological-biological-and-toxin-weapons-btwc/>.

<sup>63</sup> "Ibid.

<sup>64</sup> Raymond A. Zilinskas, "Take Russia to 'task' on Bioweapons Transparency," *Nature Medicine* 18, no. 6 (2012): 850.



biological weapons, fostering transparency, and promoting international collaboration in areas such as disease surveillance and response.<sup>65</sup> While some countries have adhered to the BWC's principles, the absence of foolproof enforcement mechanisms has stressed the ongoing need for vigilance and strengthening of global efforts to prevent the re-emergence of biological weapons programs.

## ***Current Situation***

### *Case Study: Chinese CRISPR Scandal*

The revolutionary CRISPR-Cas9 gene-editing technology, celebrated for its transformative potential in treating genetic disorders and advancements in medical research, has found itself at the center of a dual-use conundrum exemplified by the Chinese CRISPR scandal. In 2018, Chinese scientist Dr He Jiankui used CRISPR-Cas9 gene-editing technology to create the world's first genetically edited babies.<sup>66</sup> He claimed to have successfully deactivated the CCR5 gene responsible for encoding a protein facilitating HIV entry into cells. His goal was to replicate a mutation present in approximately 10% of Europeans, offering protection against HIV infection to a set of newly born gene-edited twins — Lulu and Nana.<sup>67</sup> However, unintended mutations in other regions of the genome may have occurred during the gene-editing process, potentially resulting in unforeseen health consequences, although he claims to have detected no such mutations.<sup>68</sup> It's worth noting that CCR5 is believed to play a role in defending against various infections, including the West Nile virus.<sup>69</sup> Thus, disabling this gene could leave the girls susceptible to these infections. Consequently, Dr He Jiankui triggered a global ethical and scientific controversy with many experts arguing that the technology was not yet sufficiently advanced or understood for such experimentation on human embryos.<sup>70</sup>

In December 2019, the Chinese government took action in response to the scandal, condemning Dr. He's work and initiating investigations into the matter which resulted in a 3-year long prison

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<sup>65</sup> “History of the Biological Weapons Convention,” United Nations Office for Disarmament Affairs, <https://disarmament.unoda.org/biological-weapons/about/history/vhttps://disarmament.unoda.org/biological-weapons/about/history/>.

<sup>66</sup> David Cyranoski, “What CRISPR-Baby Prison Sentences Mean for Research,” Nature News, January 3, 2020, <https://www.nature.com/articles/d41586-020-00001-y>.

<sup>67</sup> David Cyranoski, “The CRISPR-Baby Scandal: What’s next for Human Gene-Editing,” Nature News, February 26, 2019, <https://www.nature.com/articles/d41586-019-00673-1>.

<sup>68</sup> Antonio Regalado, “Exclusive: Chinese Scientists Are Creating CRISPR Babies,” MIT Technology Review, October 20, 2021, <https://www.technologyreview.com/2018/11/25/138962/exclusive-chinese-scientists-are-creating-crispr-babies/>.

<sup>69</sup> Vera Lucia Raposo, “The First Chinese Edited Babies: A Leap of Faith in Science,” *JBRA Assisted Reproduction* 23, no. 3 (2019): 197.

<sup>70</sup> Cyranoski, “The CRISPR-Baby Scandal.”



sentence.<sup>71</sup> The incident prompted renewed discussions about the need for global ethical standards and regulations for the use of gene-editing technologies in a rapidly advancing field, particularly those with the potential to alter the human germline.

#### *Case Study: Sverdlovsk Leak*

The Sverdlovsk anthrax leak, also known as the Sverdlovsk anthrax incident, occurred in the Soviet Union in 1979 and remains one of the most significant incidents involving the accidental release of anthrax.<sup>72</sup> The outbreak originated from a military facility known as Compound 19, which housed a secret biological weapons production plant in the city of Sverdlovsk (now Yekaterinburg).<sup>73</sup> On April 2 of that year, a release of anthrax spores from the facility resulted in the contamination of the surrounding area. Although the Soviet government initially claimed that the outbreak was caused by contaminated meat, it was later revealed that the release had been due to a failure in the facility's air filtration system.<sup>74</sup> As a result, the incident is said to have at least 66 confirmed deaths, while the actual number may have been higher.<sup>75</sup>

The Sverdlovsk anthrax leak became a point of contention between the Soviet Union and the United States during the Cold War. The U.S. government, based on intelligence and later confirmed by Soviet defectors, accused the Soviet Union of violating the BWC; the incident significantly contributed to global awareness and concern about the potential dangers of biological weapons and led to increased scrutiny of bioweapons programs worldwide.<sup>76</sup>

It wasn't until the end of the Cold War and the dissolution of the Soviet Union that the Russian government officially acknowledged the true cause of the outbreak.<sup>77</sup> In the 1990s, Russia cooperated with international efforts to dismantle its biological weapons program, and the Sverdlovsk remains a prime example of the need for transparency and compliance with international agreements regarding the use of biological weapons.<sup>78</sup>

#### *Case Study: Covid-19 and the Lab Leak Theory*

The dual-use nature of SARS-CoV-2 research, and the lingering hypothesis of a lab leak exemplifies the intricate balance between scientific advancements and potential risks. Certain

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<sup>71</sup> Henry T. Greely, "CRISPR'd Babies: Human Germline Genome Editing in the 'He Jiankui Affair,'" *Journal of Law and the Biosciences* 6, no. 1 (2019): 112.

<sup>72</sup> Thomas I. Faith, review of *American Biodefense: How Dangerous Ideas about Biological Weapons Shape National Security*, by Frank L. Smith III, *Technology and Culture* 57, no. 2 (2016): 496-497.

<sup>73</sup> Robert Wampler and Thomas Blanton, "US Intelligence on the Deadliest Modern Outbreak," The National Security Archive, November 15, 2001, <https://nsarchive2.gwu.edu/NSAEBB/NSAEBB61/>.

<sup>74</sup> Ibid.

<sup>75</sup> Anton Troianovski, "Soviets Once Denied a Deadly Anthrax Lab Leak. U.S. Scientists Backed the Story," *The New York Times*, June 20, 2021, <https://www.nytimes.com/2021/06/20/world/europe/coronavirus-lab-anthrax.html>.

<sup>76</sup> Wampler and Blanton. "US Intelligence on the Deadliest Modern Outbreak."

<sup>77</sup> Troianovski, "Soviets Once Denied a Deadly Anthrax Lab Leak."

<sup>78</sup> Faith, review of *American Biodefense*, 497.



scientists proposed that the Covid-19 virus might have accidentally escaped from the Wuhan Institute of Virology (WIV), a Chinese laboratory specializing in coronaviruses that had received research funding from the National Institutes of Health.<sup>79</sup> Research on coronaviruses, including SARS-CoV-2, aims at understanding viral dynamics, transmission, and developing countermeasures, such as vaccines; provided the horrendous consequences of a global pandemic came out of a WIV leak, many questions are raised about safety protocols and the potential for unintended consequences.<sup>80</sup> However, there is no publicly available evidence suggesting that the institute was housing any pathogen capable of evolving into the the COVID-19 pandemic.<sup>81</sup> Although this theory remains to be proven, the dual-use dilemma in SARS-CoV-2 research thus highlights the need for robust biosafety measures, transparent international cooperation, and ethical considerations to harness the benefits of scientific inquiry while mitigating the risks associated with the accidental release of potentially dangerous pathogens. Clarifying the virus's origins remains crucial for understanding the ongoing effects of the pandemic and guiding future research practices.

While the promise of dual-use biotechnological research unfolds in various fields, the stark reality emerges as we confront the haunting prospect of bioweapons, highlighting the need for vigilant oversight and international cooperation in managing these dual-edged advancements. The use of biological agents as instruments of warfare introduces a chilling dimension to armed conflicts. Unlike conventional weaponry, bioweapons leverage the power of living organisms — bacteria, viruses, or toxins — to inflict harm on both military forces and civilian populations.<sup>82</sup> The dual-use nature of the life sciences, with their potential for both healing and destruction, raises grave ethical and security concerns when deployed in conflict zones. As advancements in biotechnology progress, the specter of bioweapons looms larger, prompting the international community to grapple with the urgent need for effective regulation, surveillance, and countermeasures to prevent the catastrophic consequences that could arise from the malevolent use of biological agents in the theatre of war.

#### *Case Study: Syria*

The use of biological and chemical weapons in Syria represents a deeply troubling dimension of the ongoing conflict, highlighting the devastating consequences when warfare intersects with the potential of biological agents. While specific and verifiable information is challenging to obtain due to the complex nature of the conflict, there have been credible reports and allegations of the

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<sup>79</sup> Benjamin Mueller and Sheryl Gay Stolberg, “Lab Leak Fight Casts Chill over Virology Research,” *The New York Times*, October 16, 2023, <https://www.nytimes.com/2023/10/16/science/covid-lab-leak-research.html>.

<sup>80</sup> Amy Maxmen and Smriti Mallapaty, “The COVID Lab-Leak Hypothesis: What Scientists Do and Don’t Know,” *Nature News*, June 8, 2021, <https://www.nature.com/articles/d41586-021-01529-3>.

<sup>81</sup> Dacre Knight, “Covid-19 Pandemic Origins: Bioweapons and The History of Laboratory Leaks,” *Southern Medical Journal* 114, no. 8 (2021): 466.

<sup>82</sup> “Biological Weapons,” World Health Organization, [https://www.who.int/health-topics/biological-weapons#tab=tab\\_1](https://www.who.int/health-topics/biological-weapons#tab=tab_1)



use of chemical weapons, including nerve agents and chlorine gas, by various parties involved in the Syrian conflict.<sup>83</sup>

These allegations extend to the Syrian government, led by President Bashar al-Assad, who has been accused of deploying chemical and bioweapons against his own citizens, including the infamous 2013 Ghouta chemical attack.<sup>84</sup> Chemical agents, strapped to rockets and used in the attack, were identified as sarin, a nerve gas; the symptoms exhibited by the victims, such as convulsions, respiratory distress, and foaming at the mouth, were consistent with exposure to sarin.<sup>85</sup> The attack drew international condemnation and heightened concerns about the use of chemical and biological weapons in the Syrian conflict. This incident prompted international condemnation and led to Syria joining the Chemical Weapons Convention, an arms control treaty that prohibits the use of chemical weapons. Furthermore, various international organizations, including the Organization for the Prohibition of Chemical Weapons (OPCW), have been involved in investigating allegations of such weapon use in Syria.<sup>86</sup> The OPCW's fact-finding missions have identified instances of chemical weapon use, attributing some to the Syrian government and others to non-state actors.<sup>87</sup> However, establishing accountability and identifying specific individuals involved in these incidents has proven challenging.

Syria has signed but not yet ratified the Biological Weapons Convention; however, limited information is available regarding Syria's capabilities in this domain. While the existence of a Syrian chemical weapons capability is generally assumed, references to a Syrian biological weapons program primarily originate from U.S. sources.<sup>88</sup> In 1990, then-Defense Secretary Dick Cheney listed Syria among the ten countries suspected of having or developing biological warfare programs; the U.S. Arms Control and Disarmament Agency's 1996 Annual Report asserted that Syria was actively developing an offensive biological warfare capability.<sup>89</sup> It is crucial to note that information about the Syrian conflict is subject to change, and developments continue to occur as the international community investigates civilian damage and accountability.

The challenges posed by the use of biological weapons in Syria serve as a stark reminder of the deficiencies in our collective efforts to establish and enforce comprehensive international

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<sup>83</sup> “Security Council Deems Syria’s Chemical Weapon’s Declaration Incomplete, Urges Nation to Close Issues, Resolve Gaps, Inconsistencies, Discrepancies | UN Press,” United Nations, <https://press.un.org/en/2023/sc15220.doc.htm>,

<sup>84</sup> “Timeline of Syrian Chemical Weapons Activity, 2012-2022,” Arms Control Association, February 2022, <https://www.armscontrol.org/factsheets/Timeline-of-Syrian-Chemical-Weapons-Activity>.

<sup>85</sup> “Timeline of Syrian Chemical Weapons Activity, 2012-2022.”

<sup>86</sup> “Syria and the OPCW,” OPCW, November 30, 2023. <https://www.opcw.org/media-centre/featured-topics/opcw-and-syria>.

<sup>87</sup> Ibid.

<sup>88</sup> Michael C. Horowitz and Neil Narang, “Poor Man’s Atomic Bomb? Exploring the Relationship between ‘Weapons of Mass Destruction,’” *The Journal of Conflict Resolution* 58, no. 3 (2014): 510.

<sup>89</sup> Ibid.





agreements addressing both the misuse of biological weapons and the ethical governance of cutting-edge biotechnological advancements. In the absence of universal participation and agreement on the control of biological weapons and the regulation of biotechnological advancements, a complex and challenging international landscape emerges. While international treaties, such as the BWC, seek to prohibit the development and use of biological weapons, not all nations are party to these agreements. Divergent national interests, concerns over sovereignty, and varying ethical considerations contribute to the lack of consensus on how to address the dual-use nature of many biotechnological breakthroughs. As a result, the international community grapples with the urgent need to foster cooperation, bridge gaps in understanding, and develop inclusive mechanisms that can effectively regulate both the peaceful and potentially harmful applications of biotechnology on a global scale.

### *Case Study: North Korea's Biological Weapons*

Information on the Democratic People's Republic of Korea's (DPRK) biological weapons program has been limited and shrouded in secrecy as the North Korean government consistently denies its existence. Despite their signature on the Biological Weapons and Toxins Convention (BWTC) and the Geneva Convention, there have been longstanding concerns and allegations from the international community.<sup>90</sup>

Publicly available information offers a diverse array of assessments regarding the status of the DPRK's biological weapons capabilities, ranging from indications of a basic biological warfare program to the potential deployment of biological weapons.<sup>91</sup> Without additional information from Pyongyang, researchers are left to make educated estimates regarding the causative agents that may be part of North Korea's inventory. The analysis of North Korea's biological warfare program relies, in part, on defector testimony, leading to varying accounts of the country's capabilities and a notable level of uncertainty. According to Jane's Sentinel Security Assessments, the Korean People's Army inventory could potentially include causative agents such as anthrax, botulism, cholera, Korean hemorrhagic fever, plague, smallpox, typhoid fever, and yellow fever.<sup>92</sup> However, parliamentary audit documents from the Ministry of National Defense suggest that North Korea has developed more than 13 types of biological agents.<sup>93</sup> In addition to those identified by Jane,

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<sup>90</sup> "North Korea Biological Overview," The Nuclear Threat Initiative, October 14, 2021. <https://www.nti.org/analysis/articles/north-korea-biological/>.

<sup>91</sup> "Adherence to and Compliance with Arms Control, Nonproliferation, and Disarmament Agreements and Commitments - United States Department of State," U.S. Department of State, November 16, 2023. <https://www.state.gov/adherence-to-and-compliance-with-arms-control-nonproliferation-and-disarmament-agreements-and-commitments/>.

<sup>92</sup> "North Korea Biological Overview."

<sup>93</sup> Anthony H. Cordesman, "More than a Nuclear Threat: North Korea's Chemical, Biological, and Conventional Weapons," CSIS, March 22, 2018, <https://www.csis.org/analysis/more-nuclear-threat-north-koreas-chemical-biological-and-conventional-weapons-0>.





the list includes Crimean-Congo hemorrhagic fever virus, dysentery, staph, Rocky Mountain spotted fever, and alimentary toxic aleukia.<sup>94</sup>

Frequent assertions by the U.S. government maintain that the DPRK possesses significant biological weapons capabilities. However, these U.S. estimates are not consistently aligned internally, and recent versions tend to downgrade earlier assessments. According to the U.S. State Department's 2014 report, titled "Adherence to and Compliance with Arms Control, Nonproliferation and Disarmament Agreements and Commitments," it is noted that "North Korea may still consider the use of biological weapons as an option, contrary to the BWC".<sup>95</sup> In 2016, South Korea's National Defense White Paper added to this discourse by stating that "it appears that the North can independently cultivate and produce such biological weapons as the bacteria of anthrax, smallpox, and pest [plague]".<sup>96</sup>

Although there is widespread recognition that North Korea harbours the intention to develop biological weapons, the existence and developmental stage of a bioweapons program remain unclear. A 2017 assessment of North Korean biological weapons capabilities from Harvard's Belfer Center asserts that while the country probably possesses various pathogens and dual-use facilities capable of producing biological agents, the specific details regarding weaponization and delivery methods remain unknown.<sup>97</sup>

As scientific databases/knowledge continue to evolve, the dual-use nature of biotechnology unfolds as a potent force with both transformative potential and ethical dilemmas. As illustrated by the Chinese CRISPR scandal, the Sverdlovsk anthrax leak, and the COVID-19 lab leak theory, the delicate balance between innovation, responsible governance, and security demands careful navigation. Furthermore, the disturbing deployment of bioweapons in conflicts, as witnessed in Syria, and concerns about North Korea's biological weapons program further emphasize the urgency of comprehensive international agreements to regulate the peaceful and potentially harmful applications of biotechnology. As we confront the evolving landscape of dual-use biotechnological advancements, the imperative for global cooperation, ethical governance, and stringent oversight becomes increasingly clear to ensure that the promise of biotechnology serves the common good without unleashing unintended and catastrophic consequences.

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<sup>94</sup> Elisa Harris, "North Korea and Biological Weapons: Assessing the Evidence," Stimson Center, November 6 2020, <https://www.stimson.org/2020/north-korea-and-biological-weapons-assessing-the-evidence/>,

<sup>95</sup> "Adherence to and Compliance with Arms Control."

<sup>96</sup> James Tobin, "North Korea: A Threat to Global Security?" House of Lords Library, December 7, 2023, <https://lordslibrary.parliament.uk/north-korea-a-threat-to-global-security/>.

<sup>97</sup> John V. Parachi, "Assessing North Korea's Chemical and Biological Weapons Capabilities and Prioritizing Countermeasures," United States House of Representatives: Committee on Foreign Affairs, 2018, [https://www.rand.org/content/dam/rand/pubs/testimonies/CT400/CT486/RAND\\_CT486.pdf](https://www.rand.org/content/dam/rand/pubs/testimonies/CT400/CT486/RAND_CT486.pdf).



## ***Bloc Analysis***

It is crucial to emphasize that these categorizations are generalized, and individual countries may have diverse approaches within their respective biotechnological landscapes. Additionally, geopolitical dynamics and national policies can evolve, impacting a country's position in these categories over time. International collaboration and adherence to ethical standards remain critical in addressing the challenges posed by the dual-use nature of biotechnological advancements.

*Global Leaders in Ethical Biotechnological Innovation: Austria, France, Germany, Japan, Netherlands, Norway, United Kingdom, United States, Switzerland.*

Countries in this group, such as the United States, United Kingdom, and France, are recognized for their advanced biotechnological research and a commitment to ethical governance. They have established robust regulatory frameworks to ensure the responsible application of biotechnology in various fields, including medicine, agriculture, and environmental sustainability. These countries prioritize transparency and ethical considerations; they are said to adhere to international standards set by the UN and international treaties, setting a global benchmark for the responsible advancement of biotechnological innovations.

*Emerging Biotechnological Powers with Ethical Governance: Australia, Canada, Denmark, Finland, Ireland, New Zealand, Singapore, South Korea, Sweden.*

This group, including countries like South Korea, Australia, and Sweden, represents emerging forces in biotechnological research with a strong emphasis on ethical considerations. These countries actively invest in cutting-edge biotechnology while maintaining stringent regulatory measures. They prioritize ethical governance to guide their advancements in biotechnology, contributing to a global landscape that values responsible and transparent scientific progress.

*Nations with Dual-Use Dilemmas and Ethical Concerns: Argentina, Brazil, China, India, Israel, Mexico, Russia, South Africa, Saudi Arabia, Turkey.*

Countries like China, Russia, and Brazil fall into this category, facing dual-use dilemmas and ethical concerns in their biotechnological endeavors. While they demonstrate significant advancements in biotechnology, there are instances where ethical considerations and potential dual-use applications raise concerns. Striking a balance between innovation and responsible governance becomes crucial in these nations as they navigate the complexities of the dual-use nature of certain biotechnological research.

*BWC Non-Compliant Countries: Egypt, DPRK, Iran, Syria, Pakistan, Libya.*

This group includes countries like North Korea, Syria, and Pakistan, where concerns about non-compliance with international agreements and potential threats related to bioweapons exist. These nations may face suspicions regarding their biotechnological capabilities and adherence to global norms. The international community closely monitors these countries due to historical instances



of non-compliance, emphasizing the need for enhanced cooperation, transparency, and regulatory measures to address potential threats associated with the misuse of biotechnology.



## ***Research and Preparation Questions***

1. How effective has the Biological Weapons Convention (BWC) been in discouraging the overt development and use of biological weapons, and what challenges has it faced in terms of enforcement and compliance?
2. Which ethical considerations should be considered when dealing with the aftermath of atrocities committed in the name of scientific research?
3. Which appropriate measures can the international community impose onto those deemed responsible for the unlawful/unethical use of biotechnology? How can countries evaluate accountability?
4. How do geopolitical dynamics and national policies impact a country's approach to biotechnological research, and what are the potential consequences of divergent national interests on international efforts to regulate biotechnology?
5. Considering the evolving landscape of dual-use biotechnological advancements, what initiatives and mechanisms can the international community implement to foster cooperation, bridge gaps in understanding, and regulate both the peaceful and potentially harmful applications of biotechnology?
6. In the absence of universal participation in international agreements related to biotechnology, what challenges and opportunities arise for countries seeking to establish and enforce comprehensive biotechnology/bioweapons standards?