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GA1- Disarmament

*The Proliferation of the Use of Chemical Weapons in
the MENA region*



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Forum: Disarmament and International Security Committee

Issue: The proliferation of the use of chemical weapons in the MENA region

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Introduction

Chemical weapons have long been a subject for international debate. Amongst nuclear and biological weapons, chemical weapons are also considered weapons of mass destruction. Since their first use in World War I, chemical weapons have taken the lives of millions of people, and despite the diplomatic efforts, are still used in most regions of conflict today. The developing technology of our age has also meant the advancement of military science and the introduction of deadlier chemical weapons. Extending horizontally from Morocco to Iran, the MENA region has a rigorous history of chemical weapons and saw significant uses of chemical weapons throughout the Iran-Iraq War, Persian Gulf War, and the Syrian Civil War. Since the Chemical Weapons Convention (CWC) many states have chosen to take a step towards disarming their military of chemical weapons, Iraq and Albania being such examples. The establishment of the Organization for the Prohibition of Chemical Weapons (OPCW), decided by CWC, allowed states to have technical guidance throughout the process. Still, there remains a great amount of space for improvement regarding the issue. To begin with, certain states have still not signed or ratified the CWC, and some have still not been able to completely dispose of their chemical weapons.

Definition of Key Terms

Chemical weapon: “a chemical used to cause intentional death or harm through its toxic properties” (OPCW)

Weapons of mass destruction (WMDs): “a class of weaponry with the potential to, in a single moment, kill millions of civilians, jeopardize the natural environment, and fundamentally alter the world and the lives of future generations through their catastrophic effects.” (UNRCPD)

Dual-use: used to describe a chemical that can be used for commercial purposes as well as for militaristic purposes by acting as a precursor for chemical weapons.

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MENA: abbreviation for the Middle East and Northern Africa. Includes approximately 22 countries, and covers the area extending horizontally from Morocco to Iran, down to Sudan. (There are no official lists for which countries are actually in the accepted region) The region plays a key role in the global energy market, making up 6% of the world's population, 60% of its oil reserves and 45% of the global natural gas resources.



Picture 1: MENA region (<https://www.unicef.org/mena/where-we-work>)

General Overview

The origins of chemical weapons

Although the French used tear gas in 1914, the first major use of toxic chemicals as weapons were by Germany during World War I. Germany released 170 metric tons of chlorine gas from 5,730 pressurized cylinders onto the enemy trenches near Ypres in Belgium, on 22 April 1915. Consequently, other major states started to develop chemical weapons programs throughout the war, and by 1917, the use of mustard gas on the battlefield had become commonplace. By the end of the war, chemical weapons were estimated to have killed 100,000 soldiers, injuring another 1 million.

Between the two world wars, chemical weapons were used in Morocco (1923-1926), Libya (1930), China (1934), Ethiopia (1935-1940) and Manchuria (1937-1942). During the Second World War chemical weapons were mainly used in Nazi concentration camps to kill civilians, and were also stockpiled by the Nazis. However, they were never used on the European battlefields. After World

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War II, chemical weapons were used in multiple cases such as the Vietnam War (the usage of Agent Orange) and the Iran-Iraq War, and many more were stockpiled during the Cold War. After 1993, when the CWC was signed, the most major use of chemical weapons was the Syrian Civil War that broke out in 2013.

Categories of Chemical Weapons

The chemical weapons are categorized according to the area they damage:

- *Choking agents:* They mainly harm the respiratory tract and when inhaled cause the air sacs in the lungs to secrete fluid, basically drowning the victim. Examples include chlorine, chloropicrin, diphosgene, phosgene
- *Blistering agents:* They act through inhalation or skin contact, and exposures can often cause the formation of burn-like blisters, blindness and even damage to the respiratory tract. Examples include sulfur mustard, nitrogen mustard, lewisite, and phosgene oxime.
- *Blood agents:* They generally enter the body through inhalation and damage the red blood cells' ability to carry oxygen, essentially suffocating the body.
- *Nerve agent:* They block the impulses between nerve cells and across synapses. They usually act through absorption through the lungs or contact with the skin. They were developed during the Cold War era. Nerve agents are divided into two sub-groups:
 - *G-series:* persist in the environment for short to moderate amounts of time. Examples include sarin gas, tabun gas, soman gas, and cyclosarin.
 - *V-series:* persist in the environment for long periods of time. Usually, they are deadlier than G-agents. The most known example is VX.
- *Riot control agents:* The main aim in use is to temporarily incapacitate a person. They cause irritation in the lungs, skin, eyes, mouth, and throat. They are not considered chemical weapons if used in domestic law enforcement but are considered weapons if used on the battlefield. The most common examples are tear gas and pepper spray.

Some important chemical weapons and their side effects

Chlorine gas: Chlorine gas was first employed as a chemical weapon during the Battle of Ypres (World War I) in Belgium by Germany. It is a yellow-green colored gas that acts as a choking agent. Its ability to be easily pressurized and cooled into a liquid makes it feasible for transportation. It's also heavier than air, which makes it spread fairly quickly and allows it to stay closer to the ground. This property allowed the chlorine gas to sink down to the trenches, drawing out the French soldiers from the trenches during the battle of Ypres. The side effects of chlorine exposure include irritation of the eyes, nose, and throat, as well as difficulty in breathing and excretion of fluid from

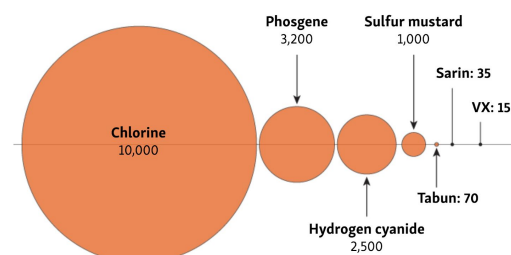
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the lungs (drowning the victim). High concentrations (over 10,000 ppm) can be lethal for the victim. Though not the most effective compared to the amount of gas employed, chlorine gas is still used today due to its relatively low cost and easy attainability.

Mustard Gas: Mustard gas gets its name from its rotten mustard or garlic/onion odor. Compared to others, it acts more slowly, meaning victims start showing symptoms hours after exposure. It first irritates the eyes, skin and the respiratory tract before poisoning the cells. After exposure, the skin turns red before it starts to form gruesome and burn-like blisters. Eyes can turn blind after a few hours if subject to high concentrations. The fact that mustard gas is six times heavier than air makes it very employable for ending trench wars. It has readily-found precursors and maintains its quality after long periods of time. It remains toxic for one or two days under average weather conditions and can stay toxic up to two weeks under cooler conditions.

Sarin: While being an odorless and colorless liquid at room temperature, sarin can be heated to rapidly evaporate. Contrary to mustard gas, its effects are immediate and short-lived. Essentially it exaggerates every bodily function by damaging the enzymes that would inhibit the overexpression of neurotransmitters (neurotransmitters are essentially phones of the brain cells, its how they communicate with one another). This means that if there is a neurotransmitter that would cause your eyes to water since it is not stopped, it will cause uncontrollable watering in the eyes. It basically makes the muscles go crazy before they are gradually paralyzed. Sarin was used during the Halabja Attack in 1988 and became a center of global attention after the 1995 Tokyo subway attack.

Median lethal concentration, milligrams per cubic meter (LD₅₀)



VX: Currently, VX is the deadliest and the most toxic chemical weapon. Incredibly small doses of the compound can result in death. Being a nerve agent like sarin, it affects the enzymes that act as the stop signs for neurotransmission. When registered into the body, VX puts the muscles into a spasm, which then tires them and forces them to fail. Usually, death is caused by suffocation and heart failure.

Major Parties Involved and Their Views

Organization for the Prohibition of Chemical Weapons (OPCW)

OPCW was established via the 1997 Chemical Weapons Convention and has helped countless states get rid of their chemical weapons. It received the 2013 Nobel Peace Prize “for its extensive efforts to eliminate chemical weapons”.

Iraq

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Iraq started to develop its chemical weapons program in the 1960s, using tear gas, tabun, and mustard gas against Iranian troops during the Iran-Iraq war (1980-1988). On March 16, 1988, Iranian jets dropped mustard gas and other nerve agents onto the city of Halabja, under Saddam Hussein's orders, killing 2,500-5,000 people and injuring another 7,000-10,000. The Halabja attack was one of the deadliest chemical attacks on civilians. After being defeated in the Gulf War, Iraq cooperated with UN Special Commission (UNSCOM) to dismantle its chemical weapons and deemed the mission successfully completed, leading to UNSCOM's withdrawal in 1998. However, there remained concerns amongst other states that Iraq hadn't completely dismantled its chemical weapons, and was flourishing another chemical weapons industry. With such belief, a coalition led by the US invaded Iraq in 2003, overthrowing Saddam Hussein. However, their claims were not evidence-backed.

Iran

Iran suffered greatly due to the Iraqi chemical weapons during the Iran-Iraq war, with an estimated 60,000 casualties. Since 1988, there have been various instances of different companies and states selling chemical weapons and dual-use chemicals to Iran. Some of these transactions can be backed up by pieces of evidence, which goes to show that Iran has a strong basis to build a chemical weapons program. Still, Iran is yet to officially declare to starting a chemical weapons program, with Iranian representatives saying that "the Islamic Republic of Iran, as a State party to all international legal instruments banning WMD, does not possess WMD and considers these kinds of weapons as inhumane, immoral, illegal, and against its very basic principles."

Syria

Syria's desire to create a stockpile of chemical weapons began in the mid-70s. After 1979 Egyptian-Israeli Peace Treaty and the USSR backing of Iran during the Iran-Iraq War, weakened or destroyed Syria's ties with its key military allies, the state adopted a (militaristically) self-sufficient policy, especially regarding chemical weapons. The international concern over Syria's chemical weapons increased when the Syrian Civil War broke out in 2011. The first chemical attack was in the city of Homs, in December 2012. Over the next year (2013) various instances of chemical attacks on civilians occurred. Since 1997, the Syrian government had refused to sign the Chemical Weapons Convention, citing it as a security measure against Israel. However, in 2013, the government finally decided to sign the convention. After working with OPCW, the state announced the program complete in 2016, however, the continued chemical attacks drew the international community to another conclusion. Between 2012 and 2017, various medical aid groups estimate the occurrence of 198 chemical attacks. As a result of the heated discussion over Syria's chemical weapons capacity, in 2015, the UN and OPCW formed a new investigative body: Joint Investigative Mechanism (JIM), that specifically focused on Syria. In 2016 and 2017, JIM released numerous reports linking some of the past chemical attacks to ISIS and the Assad regime. Unfortunately, JIM was terminated in the November of 2017 when UN Security Council (UNSC) failed to extend its mandate. With its ongoing bloody civil war, Syria continues to be a scene of chemical attacks on civilians.

The delegates are encouraged to check their country's chemical weapons history and policy using the NTI's country profiles, which can be accessed here: <https://www.nti.org/learn/countries/>

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Timeline of Events

22 April 1915	First chemical weapons usage by the Germans during the Battle of Ypres.
17 June 1925	The Geneva Protocol is signed. (Entry into force 8 February 1928)
1962-1971	The Vietnam War - USA uses multiple chemical weapons most notably "Agent Orange"
1980-1988	The Iran-Iraq War
16 March 1988	The Halabja chemical attack
3 September 1992	The Chemical Weapons Convention is signed. (Effective 29 April 1997)
20 March 1995	The Tokyo Subway attack (sarin gas used)
September 2013	Syria signs the CWC
2011-ongoing	Syrian Civil War

Treaties and Events

Chemical Weapons Convention (CWC)

Entering into force on April 29, 1997, the convention prohibits the development, production, and stockpiling of chemical weapons and aims to regulate their dismantlement by working with each state one-on-one. The convention creates a new organization called the Organization for the Prohibition of Chemical Weapons (OPCW), mainly oversee and guide the states' dismantlement process. All signatories of this convention agree to declare all of their chemical weapons stockpiles and to dismantle them according to the schedule approved by OPCW. The convention also acts as an international guideline for key definitions and categories regarding chemical weapons and sets up a new inspection mechanism where states can be inspected if another state expresses suspicion over flourishing chemical weapons activity. The Chemical Weapons Convention has 193 signatories with Egypt, North Korea, and South Sudan refraining from signing the convention and Israel still not ratifying it.

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Evaluation of Previous Attempts to Resolve the Issue

The Geneva Protocol of 1925 proved to be fairly unsuccessful in restraining the use of chemical weapons. Although the protocol prohibited their use as an offensive war strategy, it failed to outlaw their stockpiling and use as a defense mechanism. The Geneva Protocol's replacement, the Chemical Weapons Convention was much more successful in tackling the previously mentioned issues. The CWC is widely recognized and has achieved to turn states chemical weapons-free. However, as seen by the example of Syria, the lack of transparency during the declaration stage can act as a loophole for the dismantlement process.

Possible Solutions

To tackle the problem efficiently, the definitions and regulations regarding dual-use chemicals and precursors should be specified further. The amounts which can An investigative team like JIM can be established (possibly not specific for Syria) to look into claims of chemical weapons use and their respective suspects. Signatories of CWC could also cooperate with OPCW, where OPCW would reassess the state of the countries' chemical weapons program every ten or so years. Negotiations with the non-signatories should be initiated to make CWC a truly global treaty.

There is also room for improvement in the medical care for those who were affected by a recent or previous attack(s). For this purpose, research hospitals could be opened in areas that were previously subject to a chemical attack. The hospitals could be aided in their need for medical supplies by WHO if necessary. These hospitals would not only deal with patients and their personal medical needs, but would also conduct research on the widespread and long-term effects of the chemical on the local community. To avoid opening too many institutions, which would not be cost-effective, this hospital could also house environmental research which focuses on the chemicals' effects on the soil. Alongside this, OPCW could launch a new project in order to clean the contaminated sites, mainly warehouses or basements, where the dense chemicals may still remain even though a long time has passed since an attack.

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