

# Research Report - ABC Weapons

Forum: Disarmament & International Security

Issue: Realizing the potential threat of ABC weapons

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## **INTRODUCTION:**

Atomic, Biological, Chemical weapons, all three weapons of mass destruction, with the ability to destroy cities, topple governments and kill hundreds of thousands. ABC weapons, also known as WMD or NBCs, are highly destructive. The first recorded use of these was in the 14th century bc. And since then it has been frequently used. On the other hand, Atomic and Chemical weapons have been in use since the first and second world war, respectively. And now brought up as a topic of discussion in our committee is realizing the potential threat of them. And while most nations condemn the use of these, there are more than twenty that have some in their military arsenal. These member states often pose a threat to their neighboring countries, no matter if they have signed treaties controlling these weapons or not.

## **KEY TERMS**

### **ABC weapons:**

ABC weapons are Atomic, Biological, and Chemical weapons. These are often also referred to as WMDs (Weapons of mass destruction). They have historically been used to instill fear, weaken and even wipe out opposing powers.

### **NPT:**

Proliferation is defined by oxford languages as the Rapid increase in the number of something. Therefore, the NPT or Nuclear Non Proliferation Treaty is a UN created treaty signed in 1968 by member states such as the Russian Federation and the United States and many others nuclear and not nuclear capable member states. It aims to reduce the expansion and use of Nuclear Arsenals. It has been revised 10 times and is set for another revision in 2026. These revisions are meant to keep this treaty up to modern and changing standards on nuclear weapons.

### **Biological warfare:**

“Biological weapons disseminate disease-causing organisms or toxins to harm or kill humans, animals or plants.” says the UN office for disarmament affairs. Biological warfare is often a planned attack to weaken or kill multiple people with means that take advantage of the human immune system; they are thus sometimes called toxin or bacterial weapons. The Biological weapons convention has implemented many measures within 15 articles to prohibit and largely reduce the expansion and use of these weapons.

### **Chemical Warfare:**

Some examples of weapons used in chemical warfare are phosgene, mustard gas, chlorine and more. Due to these weapons being extremely harmful, they have been mentioned in multiple treaties, such as the Geneva convention or the chemical weapon convention. They were first

majorly used in World War 1 and were soon after outlawed internationally in the Geneva convention signed in 1925 and set into use in 1928.

## **GENERAL OVERVIEW**

### **A. Atomic Weapons**

#### **1. Dangers of Atomic Weapons**

When one speaks of the use of an atomic weapon, in most cases a nuclear bomb, also referred to as a nuclear detonation, is meant.

A nuclear detonation is the uncontrolled joining and/or splitting of atoms (fusion and fission) that produces an intense wave of heat, wind, light, radiation and fire.

A large fireball is created, and the center of it heats up to more than 5,600 Celsius, which is hotter than the surface of the sun. Everything (even water and soil) inside the ball vaporizes and is carried upwards. Now the so-called "Mushroom Cloud" can be seen. In there the vaporized materials mix with radioactive materials, that mix cools down, condenses and creates particles. These now radioactive particles are extremely light and can easily be carried by wind miles away from the actual explosion. The condensed mix eventually falls back to earth (the so-called "Fallout") and contaminates everything it lands on, including water, land, food, etc.

People can be harmed by a nuclear detonation by either external or internal exposure. External exposure means that people are exposed to radiation outside their bodies, by the blast or its fallout. External exposure can cause (severe) skin burns, eye damage (temporary blindness to severe burns on the retina of the eye) or death by fire. Internal exposure happens when people consume food or water or breathe air that has been contaminated by the fallout. Even consuming livestock that has eaten contaminated plants causes internal exposure. This can cause health issues even months after the detonation. Possible is for example the acute

radiation syndrome (ARS) and an increased risk to develop cancer. Both external and internal exposure can occur miles away from the fallout.

A nuclear detonation would cause mass destruction and many deaths and injuries. The surrounding area would lose most of their infrastructure (electricity, transportation, supplies, phones) and Hospitals most likely wouldn't be able to treat the many victims. Additionally, they greatly harm the environment and animals all around the destruction site.

## **2. History**

The start of the nuclear warfare problem can be dated back to the "Manhattan Project" in 1945, which was the successful creation of the first nuclear weapon. It was later used to attack Hiroshima and Nagasaki and kill more than 200 thousand people.

During the Cold War, a huge increase of nuclear weapons in the world can be recorded, by its end, around 70 Thousand nuclear warheads were built, mostly by the USA and Soviet Union. *Today, that phase is referred to as the nuclear arms race.* In 1986, the first successful meeting considering an agreement about setting a limit to that race took place in Reykjavík between US President Reagan and the President of the Soviet Union, Gorbachev. After they both agreed at a previous discussion in Geneva that "a nuclear war cannot be won and must never be fought". They were not able to form an agreement in Reykjavík. However, only a year later, in 1987, the „Intermediate-Range Nuclear Forces (INF) Treaty was signed. Both the US and Soviet Union agreed on lowering their stock of midrange nuclear weapons by 1991. The INF Treaty was the first agreement to reduce nuclear arms.

Between 1989 and 1991 (end of the Cold War) the START treaty was signed by George H.W. Bush and Gorbachev by which they agreed to reduce their nuclear arsenals to well below six thousand by 2009.

## **3. Situation today**

Today, there are about 12 Thousand nuclear warheads in the world. Most of them belong to the United States and Russia (around 5044 and 5080 warheads). Apart from those, it has been proven that 7 other countries are in possession of nuclear weapons (UK, France, Israel, North

Korea, China, India and Pakistan).

Most of those countries have been increasing their stockpile over the last few years.

Since no country has to share their exact number of nuclear weapons internationally, the numbers of nuclear warheads in each country are only estimated and one can not be sure if any other countries possess nuclear weapons.

Even though there are a lot fewer nuclear weapons than in 1986, the risk has not declined.

Today, those weapons are capable of a way greater destruction than 40 years ago. Moreover, the risk of a nuclear attack is rising. There are still many wars and conflicts in the world, and a few of the states in possession of nuclear warheads are parties in those conflicts. Furthermore, there is the persistent threat of unauthorized use, theft of nuclear weapons or the materials to build such (more than 22 countries are in possession of needed materials), terrorism and cyberattacks on facilities or command-and-control systems.

## **B. Biological Weapons**

### **1. Dangers of biological weapons**

A biological weapon consists of a microorganism like a virus, bacteria, fungi or a toxic substance that is released to cause disease and death in humans, animals and plants. The diseases are often not only highly deadly but also very contagious. Treating the many victims of such attacks is incredibly challenging for the attacked state, not only because of the disease itself. The public health assessment and response is further complicated by the aim of an attack to mimic a natural event.

During war and conflict, Biological attacks can rather secretly weaken a whole country within a few weeks. Those weapons can be used to simply spread diseases among humans but can also infect livestock and agricultural products to cause food shortages and economic damage. But also to create environmental catastrophes and greatly harm the habitat of many humans and animals. Furthermore, they tend to spread fear among the public.

### **2. History**

So-called “Bioterrorism” already started 14 centuries bc, when the Hitties sent infected Rams to their enemies to spread illnesses and weaken them.

Over time, many more biological attacks were launched. For example, in 1155 when Emperor Barbarossa ordered to poison of water wells with human bodies in Italy. In 1762 when the British Army gave out blankets from smallpox patients to Native Americans. Another example is an order by Napoleon to flood the plains around Mantua (Italy) to ameliorate the spread of malaria.

In 1925, the Geneva Protocol was signed by 38 signatories and was supposed to prohibit the use of biological (and chemical) weapons during war. However, it did not prohibit countries from using them within their borders, for example during civil conflicts. Despite signing this protocol, numerous countries still used biological weapons against each other. Especially during the Second World War.

In 1972 “The Convention of the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction” opened signature and entered force in 1975.

### **3. Situation Today**

Today it is known as the “Biological Weapons Convention” (BWC) and mostly enhanced by the 1925 Geneva Protocol. The Text of the Convention consists of 15 articles, and a series of sentences were added over the years. The BWC prohibits the development, production, acquisition, transfer, stockpiling and use of biological and toxic weapons. By now the convention is signed by 185 States and has so almost reached universal membership. Furthermore, it was the first disarmament treaty that banned an entire category of weapons.

## **C. Chemical Weapons**

### **1. Dangers of chemical weapons**

A chemical weapon is a chemical that is used to cause harm or death through its toxicity. Under the definition of things, that are prohibited by the Chemical Weapons Convention (CWC) fall many things, for example fully developed chemical weapons and the parts of such (even when

stored separately), munitions and devices intended to spread chemicals, but also toxic chemicals used to produce chemical weapons or used to cause intentional death or harm. Multiple types of chemical agents can harm the human body in different ways. There are the choking agents which cause fluid build-up in the lungs and results in choking victims, the blister agents that burn skin and eyes, blood agents that impair the ability of cells to use oxygen and so damage vital organs (including those of the nervous system), the nerve agents that overstimulate the parasympathetic systems which results in many symptoms, for example salivation, blurred vision, headache, vomiting, difficulties while breathing and even seizures, unconsciousness or muscle paralysis (including the heart). The last category are the Riot control agents that irritate eyes, mouth, throat, lungs and skin and results in tears, coughing and constricted airways.

## **2. History**

The first major chemical attack occurred during the Battle of Ypres in 1915, where the German army used chlorine gas, which strongly irritates the lungs, which led to many victims among the British and Canadian forces.

Shortly after, the first anti-gas measures were taken.

After World War One, a few countries seemed to plan to bring even deadlier chemical weapons once the battlefield of World War Two. The public strongly urged for further negotiations on chemical warfare. Because of that, the “1925 Protocol for the Prohibition of the Use of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare”, also known as the Geneva Protocol, was set in place in 1925. It banned the use of chemical and biological weapons in war. The development, production and possession were not prohibited. However, several countries still used chemical weapons, especially after the discovery of a new powerful nerve gas in the late 1930s. Although chemical weapons were commonly used during the first half of the 20th century, they were never used on European battlefields. Until today, historians are not sure of the exact reason for this.

During the Cold War, the Soviet Union and the United States possessed tens of thousands of tonnes of chemical weapons. The approximate number would have been enough to destroy



much of human and animal life on Earth.

Overshadowed by the fear of a nuclear war, chemical warfare was considered way less until 1968 at the Disarmament Conference in Geneva, where both biological and chemical warfare were discussed. While the Biological Weapons Convention (BWC) quickly opened for signature, only four years later, the negotiations of Chemical Weapons took much longer. Over twenty years after the BWC, the Chemical Weapons Convention (CWC) opened for signature in 1993. After two days, 130 nations had signed the Convention.

The CWC entered force on the 29th of April 1997, thirty years after the Disarmament Conference in Geneva, and was the first multilateral disarmament agreement which eliminated an entire category of weapons of mass destruction within a fixed time frame.

The implementing body of the CWC, the Organization for the Prohibition of Chemical Weapons (OPCW), aims to achieve their version of a world free of chemical weapons, in which chemistry is only used for peace, progress and prosperity. Their work was awarded with the Nobel Peace Prize in 2013.

### **3. Situation Today**

Today, 193 states committed to the Chemical Weapons Convention. OPCW claims that all stockpiles of chemical agents have been destroyed and 72 of 97 Chemical Weapons Production Facilities have been destroyed and 23 are used for peaceful purposes now.

Furthermore, the Convention required their members to submit reports on their chemical weapons and chemicals, as well as materials and facilities that could be used to produce chemical weapons.

The OPCW also takes care of Abandoned Chemical Weapons (ACW), which are weapons that have been abandoned by a state on the territory of another State without consent after 1925. The recovery and destruction of such is really difficult due to the fact that those weapons are often mixed with other hazardous munitions. Any approach or contact with any components of AWCs is seriously dangerous.

Despite all the work OPCW has done to eliminate chemical weapons, chemical warfare stays one of the biggest threats of humanity. Which is not only proven by many events in the worlds'

history but also by some heinous crimes of the past year. In August 2020 a military grade nerve agent (Novichok) was used in attempted to kill a Russian opposition politician (Alexi Navalny). In 2017 a chemical weapon was used in Malaysia to kill Kim Jeung-On's half brother Kim Jeung-Nam.

A British citizen died in 2018 due to the attempted assassination of Sergei and Yulia Skripal in the United Kingdom using a chemical weapon.

## **TIMELINE OF KEY EVENTS**

### **First Use of Chemical Weapons in World War I:**

- Date: 1915 (Battle of Ypres)
- German forces used chlorine gas as a chemical weapon, marking the first large-scale use of chemical weapons in warfare and highlighting their devastating effects. Using poisonous gases proves to be effective in a trench war.

### **Manhattan Project:**

- Date: 1942-1945
- The Manhattan Project was a research and development undertaking during World War II that produced the first nuclear weapons, leading to the realization of the destructive power of atomic bombs.

### **Atomic Bombings of Hiroshima and Nagasaki:**

- Date: August 6 and 9, 1945

- The United States dropped atomic bombs on the Japanese cities of Hiroshima and Nagasaki, demonstrating the catastrophic consequences of nuclear weapons and escalating concerns about their proliferation.

#### **Cold War:**

- Date: 1947-1991
- The Cold War between the United States and the Soviet Union intensified concerns about the potential use of ABC weapons as part of the arms race between the two superpowers, leading to increased efforts to control the spread of nuclear, biological, and chemical weapons.

#### **Vietnam War:**

- Date: 1955-1975
- During the Vietnam War, the United States used herbicides such as Agent Orange, which contained toxic chemicals, as part of its military strategy. This raised awareness about the long-term health and environmental impacts of chemical warfare agents.

#### **Biological Weapons Convention (BWC):**

- Date: 1972
- States Parties to the Biological Weapons Convention undertook “never in any circumstances to develop, produce, stockpile or otherwise acquire or retain:
  - a) microbial or other biological agents, or toxins whatever their origin or method of production, of types and in quantities that have no justification for prophylactic, protective or other peaceful purposes;
  - b) weapons, equipment or means of delivery designed to use such agents or toxins for hostile purposes or in armed conflict.”

#### **Chemical Weapons Convention (CWC):**

- Date: 1997

- The Chemical Weapons Convention entered into force, banning the development, production, acquisition, stockpiling, retention, and use of chemical weapons. (Like BWC, but tackles the use of chemical weapons)

#### **September 11 Attacks:**

- Date: September 11, 2001
- The terrorist attacks on the United States raised concerns about the potential use of ABC weapons by non-state actors, leading to increased security measures and international cooperation to prevent their proliferation.

#### **Resolution 1540**

- Date: 2004
- The Security Council decided that all States shall refrain from providing any form of support to non-State actors that attempt to develop, acquire, manufacture, possess, transport, transfer or use nuclear, chemical or biological weapons and their means of delivery, in particular for terrorist purposes. The resolution requires all States to adopt and enforce appropriate laws to this effect as well as other effective measures to prevent the proliferation of these weapons and their means of delivery to non-State actors, in particular for terrorist purposes.

## **MAJOR PARTIES AND THEIR VIEWS**

### **United States of America**

The USA is in possession of WMD and is the pioneer of creating and using nuclear weapons. The last nuclear test by the United States was on September 23, 1992; the U.S. has signed but not ratified the Comprehensive Nuclear-Test-Ban Treaty. At 7 different instances, USA accidentally dropped nuclear missiles, causing wide-spread damage, even on human lives, the number of lost nuclear missiles that the USA cannot locate can be as high as 6. Being one of the countries that used the most ABC weapons (for example Agent Orange in Vietnam or atom bombs in

Japan, USA has a strong non and counter proliferation policy, its primary focus has been on two categories of countries: "proliferators," such as Iran and North Korea, which are actively seeking to acquire WMD capabilities; and "leakers," notably Russia and Pakistan, – whose inadequate controls over weapons and sensitive technologies could lead to their diversion to another state or a non-state actor, both instances are met with sanctions.

### **Russia**

The Russian federation owns the most WMD in the world. Russia's predecessor, the Soviet Union was a part of the arms race during the Cold War, leading to the Cuban Missile Crisis. Today, most of these weapons (45000) are being dismantled or no longer exist. Despite being a signatory to the Chemical Weapons Convention, Russia has continued to hold and occasionally use chemical weapons. In 1997, Russia declared an arsenal of 39,967 tons of chemical weapons, which was officially declared destroyed in 2017. However, the poisoning of Sergei and Yulia Skripal in 2018 and the poisoning of Alexei Navalny in 2020, both carried out by Russia, revealed that the country maintained an illicit chemical weapons program. Like China, Russia attempted to develop space nuclear weapons and was forced to comply with the Outer Space Treaty. Russia does not admit to losing any nuclear weapons.

### **Israel**

Officially, Israel neither confirms nor denies possessing nuclear weapons. It is, however, speculated that Israel has an offensive biological warfare program alongside having undeclared chemical weapons. Israel is one of the four armed countries not recognized as a Nuclear Weapons State by the NPT. Israel was recently attacked by Iran and will seek support in UNSC.

### **China**

Since 1992, China has responded to U.S. and other pressures to participate in some parts of international nonproliferation regimes. China promised to abide by the Missile Technology Control Regime (MTCR), which is not a treaty, but a set of guidelines. China also acceded to the Nuclear Nonproliferation Treaty (NPT) and signed the Chemical Weapons Convention (CWC). Chinese missile-related transfers have not violated any international treaties, since the MTCR is

not a treaty, but have violated Chinese pledges and U.S. laws. To the West, it seems that China is planning a nuclear invasion in Taiwan and is rapidly building launch sites and developed the technology to shoot missiles from space.

## **DPRK**

The DPRK has officially admitted that they own numerous WMD and has accelerated the number of missile tests visible to the public and especially the international community. North Korea withdrew from the nuclear Non-Proliferation Treaty (NPT) in 2003, but its withdrawal is disputed. Beginning in 2006, the UN Security Council has passed several resolutions requiring North Korea to halt its nuclear and missile activities and imposing sanctions on Pyongyang for its refusal to comply.

## **Iran**

Iran is in possession of WMD. Specifically nuclear weapons. While they claim, that their nuclear arsenal serves only peace and defense purposes, the ambiguity of Iran's situation sparked international debate and controversy, Therefore, JCPOA – or the so-called Iran Deal set to allow Iran's government to own nuclear weapons with the possibility of enriching uranium until nuclear breakout in a short period of time. It is widely supported that Iran has provided terrorist organizations such as Hezbollah and other proxies with WMD. On April 14th 2024, Iran, specifically Iran's Islamic Revolution Guard Corps (IRGC) has launched ballistic missiles and aerial drones on Israel, a long anticipated attack. Israel wishes to deal with this issue in UNSC.

Note: it is vital that you know which side your country is going to be on in these various conflicts, please know this *prior* to the conference.

## **Questions to be asked**

- How has my state been impacted by ABC weapons?

- Does my state have ABC weapons? If so, what has it done with them?
- What benefits do ABC Weapons have?
- What are the Disadvantages of ABC weapons?
- What effects would it have on your member state if it was subject to an ABC weapon attack?

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