

Study Guide

Committee: DISEC (Disarmament and International Security Committee)

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## **Introduction Letter**

Dear Delegates,

I'm Lara Aydur, and I'm a sophomore student at DITAL. I'm honored to be a part of this conference and to have written the study guide. I began participating in Model United Nations (MUNs) during my freshman year of high school and have thoroughly enjoyed them. I hope we can create a productive debate environment, share our ideas in a formal language, and improve our knowledges. I sincerely hope that this study guide will assist you in learning more about these topics.

Sincerely, Lara Aydur

## **Committee Introduction**

The First Committee is responsible for dealing with disarmament, global issues, and threats to peace that concern the international community, as well as finding solutions to the challenges that the international security regime faces.

It considers all disarmament and worldwide security matters within the scope of the Constitution or relating to the powers and capacities of any other organ of the United Nations; the common standards of participation within the upkeep of worldwide peace and security, as well as standards administering disarmament and the direction of weapons; advancement of agreeable courses of action and measures pointed at fortifying soundness through lower levels of combat hardware.

The Committee works closely with the United Nations Disarmament Commission and the Conference on Disarmament in Geneva. It is the only General Assembly Main Committee that has access to verbatim records.

The First Committee meetings are divided into three distinct stages:

- 1- General debate
- 2- Debates on specific topics
- 3- Action on drafts.

The Disarmament Commission meets yearly in New York for three weeks, hosting plenary sessions as well as working groups. The Commission's work is typically divided into two working groups, with each group tackling one topic from the entire range of disarmament issues for that session, one of which must include nuclear disarmament. At least once a year, the Commission reports to the General Assembly through the First Committee.

**The Committee's work is divided into seven thematic clusters:**

- Nuclear weapons
- Other weapons of mass destruction
- Outer space. (Disarmament aspects)
- Conventional weapons
- Regional disarmament and security
- Other disarmament measures and international security
- Disarmament machinery

## Topic-1

A chemical weapon is a substance with poisonous properties that is used to cause deliberate death or injury. Chemical weapons also include munitions, sensors, and other tools specifically designed to weaponize toxic chemicals. A toxic or precursor chemical is defined as a chemical weapon unless it has been developed, produced, stockpiled or used for purposes not prohibited by the Convention (convention on the prohibition of the development, production, stockpiling and use of chemical weapons and on their destruction)

**History of the chemical weapons:** Chemical weapons were first used in modern warfare during World War I (1914–18), with gas warfare accounting for more than one million of the war's casualties and killing an estimated people of 90,000. Chemical weapons have been used many times since then, most notably in the Iran-Iraq War (1980–88) and the Syrian Civil War.

Just like biological and nuclear weapons, chemical weapons are also labeled as weapons of mass destruction. The use of chemical weapons in combat, as well as their development, manufacture, procurement, stockpiling, and transfer, is prohibited under the Chemical Weapons Convention (CWC) of 1993.

The contracting parties to the 1899 Hague Convention declared their agreement to 'abstain from the use of projectiles, the sole object of which is the diffusion of asphyxiating or deleterious gases'. A second Hague Convention, in 1907, reiterated earlier bans on employing poison or poisoned weapons. Although nations signing the 1899 Hague Declaration promised not to use CW, during World War I these weapons, including, in order of use, tear gas, chlorine gas, phosgene and mustard gas were employed. Overall, 125000 tons of CW were used during World War I, resulting in 1.3 million casualties. One-quarter of all casualties in the American Expeditionary Force in France were caused by them.

The Chemical Weapons Convention (convention on the prohibition of the development, production, stockpiling and use of chemical weapons and on their destruction) was negotiated and adopted by the Geneva Conference on Disarmament in 1992, signed in Paris on January 13, 1993, and came into force in April 29, 1997.

The Geneva Gas Protocol (protocol for the prohibition of the use in war of asphyxiating, poisonous or other gases, and bacteriological methods of warfare) was signed in June 1925 after chemical weapons were used during World War I. The protocol, on the other hand, only banned their use, and chemical weapons have been on the table for disarmament talks since the 1960s.

During the Cold War's decades of conflict (1945–91), the United States and the Soviet Union gathered massive chemical weapons stockpiles. With the end of the Cold War, some former enemies were able to agree to ban all chemical weapons produced during World War I (first generation), World War II (second generation), and the Cold War (third generation).

## **Types of Chemical weapons:**

**Nerve agents;** The nerve agents are a group of particularly toxic chemical warfare agents. They were developed just before and during World War II and are related chemically to the organophosphorus insecticides. The principle agents in this group are:

- GA- tabun
- GB- sarin
- GD- soman
- GF- cyclosarin
- VX- methylphosphonothioic acid

## **How do the nerve agents act on the body?**

- Chemical signals are used by nerves to send messages to organs and tissues in the body. Nerve agents prevent these chemicals from performing their normal functions at nerve endings. The nerve then sends out an excessive number of signals. The nerve's constant signaling can trigger overload in various parts of the body.

## **What are the specific signs and symptoms of nerve agent poisoning?**

- Nerve agents are highly toxic, and even small quantities can harm the body if inhaled, swallowed, or come into contact with the skin or eyes. Inhalation and ingestion exposure has a faster onset of health effects (seconds to minutes) than skin or eye exposure. Minor skin exposures can take several hours to have an effect. Regardless of the route of exposure,

## **Nerve agents can cause the following characteristic effects:**

- Dilated pupils
- Excessive mucous, tears, saliva, and sweat production
- Headache
- Stomach pain, nausea, and vomiting
- Chest tightness and shortness of breath
- Loss of bladder and bowel control
- Muscle twitching
- Seizures
- Coma
- Death

## **Choking Agents**

Chemical agents which attack lung tissue, primarily causing pulmonary edema, are classed as lung damaging agents.

During World War I, choking agents were first used by the German army and then by the Allies. On April 22, 1915, at Ypres, Belgium, the Germans released chlorine gas from thousands of cylinders along a 6-kilometer (4-mile) front, forming a wind-borne chemical cloud that blew through the lines of the unprepared French and Algerian units.

The agents are listed below:

- CG- phosgene
- DP- diphosgene
- Cl- chlorine
- PS- chloropicrin

Choking agents are delivered to the target area as gas clouds, where individuals are killed by inhaling the vapour. The toxic agent activates the immune system, causing fluids to collect in the lungs, which can lead to death by asphyxiation or oxygen deficiency if the lungs are severely damaged. When a person is exposed to the chemical agent, the effect can be immediate or take up to three hours. The best defense against choking agents is a good protective gas mask.

Symptoms include conjunctival injection, abrasions, and corrosions in the eyes. Burns to the oronasal mucosa and trachea are possible. Dyspnea, bronchospasm, and possible erythema pain are common symptoms. Glottis edema and laryngospasm are both life-threatening conditions. Toxic pneumonitis, lung edema, and acute respiratory distress syndrome can all be caused by chlorine gas (ARDS).

**Blister Agents:** Blister agents were also developed and used during World War I. In that conflict, the most common blister agent was sulfur mustard, also known as mustard gas. Personnel were attacked and exposed to blister agents such as sulfur mustard or lewisite, which resulted in casualties. Such weapons, which are delivered in liquid or vapour form, burn the skin, eyes, windpipe, and lungs.

Chemicals known as blister agents (sulfur mustards, lewisite, and nitrogen mustards) cause severe skin damage. Their biological activity is complex and not fully understood, despite the fact that they were developed as chemical warfare agents. Most tissue can be injured by these vesicants, whether they are in liquid or vapor form.

Erythema and blistering occur when the substance comes into contact with the skin. Ocular and respiratory effects are produced by vapor exposure at levels lower than those that cause dermal effects. Systemic and long-term effects are possible, especially after severe injury from acute exposures.

The evidence for lewisite's carcinogenic potential in humans is mixed. For vesicants, data on animal toxicity is available. Sulfur mustard and lewisite have more information than nitrogen mustards. The results of tests with human volunteers, as well as information on occupational exposure, are also available.

**Current Situation:** International law prohibits the use and possession of chemical weapons. Nevertheless, despite a prevalent rule against the use of chemical weapons and international efforts to destroy existing stockpiles, several nations continue to maintain active chemical weapons programs. Not all states have signed on to the CWC, the use of chemical weapons has not entirely stopped, and the chemicals and technology that can be used to produce these weapons are still all around us.

## Summary

Respiratory toxicants, vesicants, nerve agents, metabolic toxins, rodenticides, and both inorganic and organic arsenicals are examples of chemical weapons. The skin, lungs, and eyes are common sites of injury after exposure to these agents. This chapter gives an overview of chemical hazard agents, with an emphasis on previously used vesicants and nerve agents, as well as other chemical threats (e.g., metabolic poisons, arsenicals, rodenticides, pulmonary agents, and halogenated gases). Organophosphate molecules, such as nerve agents, have a strong affinity for the serine hydroxyl residue in the esteratic or active site of acetylcholinesterase, causing activity inhibition and acetylcholine accumulation. Cytotoxic blistering agents include sulfur mustard (bis(2-chloroethyl) sulfide), nitrogen mustard, and lewisite. The degree of injury caused by these agents is also determined by the route of exposure, the concentration of the blistering agent, the period between exposures, and the surrounding environment.



## **Questions a resolution must answer**

- What are chemical weapons and how are they used throughout the history?
- Which countries actually benefited from using chemical weapons?
- What were the consequences of using chemical weapons?
- Why isn't it ethical to use chemical weapons?
- What else we can do about mass destructive weapons?
- How can we alternate the usage of chemical weapons?
- How can we stop the chemical weapon programmes of countries?
- How can we make CWC signed worldwide?

## TOPIC 2

### **Introduction to the topic-2**

Nuclear weapon is a device that uses nuclear fission, nuclear fusion, or a combination of the two methods to unleash energy in an explosive manner. Atomic bombs are the common name for fission weapons. Fusion weapons are also known as thermonuclear bombs or, more generally, hydrogen bombs; they are nuclear weapons that release at least some of their energy by nuclear fusion. Nuclear bombs have a tremendous amount of explosive capacity. The invention of the terms kiloton (1,000 tons) and megaton (1,000,000 tons) to characterize their blast energy in equal weights of the standard chemical explosive TNT exemplifies their prominence.

The atomic bomb is made possible by nuclear fission, a weapon of mass destruction that uses the energy produced by the splitting of atomic nuclei. When a single free neutron collides with the nucleus of a radioactive atom such as uranium or plutonium, two or three more neutrons are released.

When those neutrons break free from the nucleus, energy is released, and the newly released neutrons strike other uranium or plutonium nuclei, breaking them in the same way, releasing even more energy and neutrons. This chain reaction spreads in a matter of seconds.

The first nuclear weapons were bombs dropped from the sky. Later, warheads for strategic ballistic missiles, which have become the most important nuclear weapons, were produced. Smaller tactical nuclear weapons, such as those for artillery projectiles, land mines, antisubmarine depth charges, torpedoes, and shorter-range ballistic and cruise missiles, have also been produced.

## **History of the nuclear weapons**

**1938-62:** For the first time in history, scientific breakthroughs in the late 1930s made nuclear weapons a reality. Fearing that their adversaries would acquire nuclear weapons first during World War II, the United States and its allies launched the Manhattan Project in 1942, a covert research program led by the US government to develop nuclear weapons. The development and use of nuclear weapons ushered in the nuclear era, and rising tensions between the United States and the Soviet Union, both of which were armed with nuclear weapons, made the threat of nuclear war a real possibility during the Cold War.

**Aug 6, 1945 – Aug 9, 1945:** First Atomic Bombs Are Dropped on Hiroshima and Nagasaki. The United States dropped the first atomic bomb used in action on Hiroshima, Japan, on August 6, 1945, in its fourth year of fighting Japan in World War II. An estimated 140,000 people were killed. On August 9, 1945, the United States dropped the second atomic bomb on Nagasaki, killing over 70,000 civilians. Japan's Emperor Hirohito declared the country's surrender six days later. Those are the only atomic bombs that have ever been used in a war.

**Sep 29, 1957:** The Kyshtym Nuclear Disaster Begins In Secret

A hastily stored tank of radioactive waste exploded on September 29 in Ozyorsk, Russia, the birthplace of the Soviet nuclear weapons program. The disaster released more radioactive radiation than the Chernobyl disaster of 1986, further polluting an already heavily contaminated environment. Since this nuclear accident happened at a nuclear weapons facility rather than an energy plant, the Soviet government attempted to conceal it. In reality, the tragedy was not widely publicized until 1976, when an exiled Soviet scientist published a report on it.

**Oct 15, 1962- Oct 28, 1962:** A US military plane discovered Soviet nuclear missiles being built in Cuba on October 15, just a hundred miles from the Florida coast. President John F. Kennedy surrounded Cuba with the US Navy and requested that Soviet leader Nikita Khrushchev uninstall the missiles. After several tense days, Khrushchev decided to withdraw the missiles in return for a public promise from the US not to attack Cuba, a Soviet ally. In addition, the US secretly decided to withdraw some missiles from Turkey, putting them out of Soviet Union range. The crisis has brought the world the nearest it has ever been to nuclear war.

**May 18, 1974:** India Participates In The Nuclear Club

In May 1974, India conducted its first nuclear test, codenamed Smiling Buddha. India's nuclear program is now seen as critical to the country's stability and reputation as a rising world power, despite the government's denials at the time that it was developing a nuclear weapons program and that the explosion was for peaceful purposes. This was the first nuclear test by a nation other than the initial five NPT-recognized nuclear-armed nations. Pakistan, a neighbor and competitor, conducted its first nuclear test in 1998.

**May 23, 1992:** Belarus, Kazakhstan, and Ukraine Have Abandoned Nuclear Weapons

Three former Soviet republics (Belarus, Kazakhstan, and Ukraine) were left with nuclear weapons after the collapse of the Soviet Union. All nuclear weapons in the three former territories had to be dismantled or moved to Russia for destruction under an international agreement between the three former territories and Russia. The three former Soviet republics have agreed to join the Nuclear Nonproliferation Treaty as “non-nuclear-weapon” countries, making them the only countries in the world to do so, along with South Africa.

## **Past Actions taken about this topic**

**Jul 29, 1957:** IAEA is established.

The International Atomic Energy Agency (IAEA) was established with the aim of promoting and regulating nuclear technology for peaceful purposes. President Dwight D. Eisenhower's "Atoms for Peace" speech in December 1953 is credited with providing the inspiration for the establishment of the institution. Eisenhower said that an international body was required to avoid the spread of nuclear technology, warning that if it went unchecked, it might lead to the "annihilation of mankind's irreplaceable heritage."

**1968–75:** Nuclear Nonproliferation Goes Global

Nuclear nonproliferation progressed and regressed in the late 1960s and early 1970s around the world. On the one side, the Nuclear Nonproliferation Treaty formed the first mechanism relating to nuclear weapons (NPT). In addition, the world's two most powerful nuclear powers, the United States and the Soviet Union, have taken preliminary measures to reduce their nuclear arsenals. India, on the other hand, has nuclear weapons.

**Jun 12, 1968:** First International Treaty to Prevent Spread of Nuclear Weapons Is Signed

The United Nations General Assembly passed a resolution in June 1968 supporting the draft text of the Treaty on the Nonproliferation of Nuclear Weapons, and countries began signing it. Countries without nuclear weapons agreed to never acquire them under this historic international agreement; they can, however, use atomic energy peacefully. The five nuclear-weapons-wielding countries at the time—China, France, the Soviet Union, the United Kingdom, and the United States—all signed the deal, promising to disarm eventually, but none have done so yet.

**May 26, 1972:** SALT I Treaty Is Signed

The interim Strategic Arms Limitations Talks agreement (SALT I) was signed by US President Richard M. Nixon and Soviet leader Leonid Brezhnev during the Cold War, and it was the first agreement between the US and the Soviet Union to restrict their nuclear arsenals. This agreement marked a nonproliferation victory ten years after the nuclear-armed rivals' Cuban missile crisis. Brezhnev and US President Jimmy Carter signed SALT II seven years after SALT I, further limiting nuclear capabilities.

### **1986–2000: End of the Cold War Improves Nonproliferation Efforts**

The threat of nuclear war was still present during the Cold War, a time marked by tensions between the United States and the Soviet Union. However, after the Soviet Union fell apart in 1991 and the Cold War ended, real progress was made in strengthening the Nuclear Nonproliferation Treaty, enlisting former Soviet countries to join the treaty, and ending nuclear weapons use.

### **Sep 24, 1996: The Comprehensive Nuclear Test Ban Treaty Opens for Signatures**

The Comprehensive Nuclear Test Ban Treaty (CTBT) was signed at the United Nations after two years of negotiations. The treaty prohibited all nuclear blasts, including those used in missile tests. However, the CTBT is not yet legally binding since not all of the appropriate countries have signed or ratified it in their home countries, including China, India, Pakistan, and the United States. Even so, since the early 1990s, several nuclear-weapons states, including the Soviet Union and later Russia, the United Kingdom, and the United States, have not performed nuclear tests.

### **May 1997: The IAEA's Model Additional Protocol is Introduced**

The International Atomic Energy Agency's mission includes ensuring that countries are using nuclear technology for peaceful purposes, such as energy production, rather than for military purposes. Inspections of nuclear installations and power plants are part of this surveillance. Despite being subject to IAEA checks, it was discovered after the 1990–91 Gulf War that Iraq had undertaken an undeclared nuclear weapons program. The IAEA's board of governors responded by approving the Model Additional Protocol, which granted the organization more access to information and nuclear sites. Despite being an optional arrangement, the protocol has now been adopted by 136 countries and the European Atomic Energy Community, bolstering the IAEA's inspection capabilities.

## **Current Situation**

Despite the fact that many countries have worked to reduce or remove nuclear weapons, countries that continue to develop nuclear weapons, do not intend to completely disarm, or do not meet nuclear material safety requirements continue to pose a threat. One of the most difficult issues facing world leaders today is containing nuclear weapons and avoiding nuclear war.

Nuclear weapons are currently held by nine countries: the United States, the United Kingdom, North Korea, China, France, India, Pakistan, Israel, and Russia.

The NPT has been signed by 191 countries since 1970, including the United States, Russia, the United Kingdom, France, and China. These five countries are known as nuclear-weapon nations, and they are allowed to retain weapons because they developed and tested a nuclear explosive device prior to the Treaty's entry into force on January 1, 1967.

Even if these countries have nuclear weapons, they are required by the agreement to reduce their stockpiles and cannot hold them indefinitely.

The NPT has never been signed by Israel (which has never confirmed or denied the existence of its nuclear weapons), India, or Pakistan, and North Korea left in 2003.

According to the Federation of American Scientists, the United States, the United Kingdom, and Russia have all reduced their stockpiles, but China, Pakistan, India, and North Korea are thought to be producing more.

## **Summary**

The most serious terrorist threat is nuclear weapons. Terrorist groups may be able to procure and use nuclear weapons, or terrorist groups may be able to develop nuclear weapons from fissile materials collected from established nuclear weapons states. By separating the nuclei of atoms (fission) and/or fusing the nuclei of pairs of atoms, a nuclear device releases massive quantities of energy in an instant (fusion). Even a rudimentary nuclear bomb may have a 1000-fold greater explosive force than the most effective conventional explosive. Nuclear bombs were used twice, once over Hiroshima and once over Nagasaki, at the end of World War II, resulting in 200 000 immediate deaths and several more deaths later from cancer and other chronic diseases. Nine countries are thought to have about 27 000 nuclear weapons: the United States, Russia, France, China, the United Kingdom, Israel, India, Pakistan, and probably North Korea. The majority of these are nuclear missiles with intercontinental delivery capabilities. Others are short-range tactical arms that have a range of less than 310 miles (500 km). The US is estimated to have about 10,000 nuclear weapons, 5200 of which are strategic; Russia is estimated to have 16,500 nuclear weapons, 3500 of which are strategic. Nuclear weapons testing in the open air has contaminated the atmosphere, resulting in higher rates of leukemia and other cancers among people living near the tests.

## **Questions a resolution must answer**

- What actions can UN or other authoritative body can take to prevent nuclear weapons?
- What can we do about non-state terrorists and criminal organizations who have access to Nuclear-Explosive materials?
- How can we limit the access to the key Nuclear-Explosive materials which required to make nuclear weapons?
- How can we take a step forward towards completely eliminating Nuclear-Explosive materials?
- How can we eliminate the risk of another nuclear attack?



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