**Committee:** Environment Sub-Commission 1

**Issue:** Addressing the environmental effects and safety aspects of ammunition

**Student Officer:** Areti Moustaki

**Position:** Deputy President

---

## INTRODUCTION

Environmental impacts of ammunition

There is more to ammunition than just safety and security. The generation, storage, handling and conceivable annihilation of ammunition also include genuine natural and health aspects. Military activities can cause the intense and chronic exposure of human beings. Thus, the public administration must point legislative issues towards suitable environmental administration. The danger of a worldwide catastrophe is presently luckily farther. The nuclear weapons race among the various major powers has stopped and a massive nuclear conflict of destructive nature is not very likely in the near future. Be that as it may, nuclear weapons are still in existence in large amounts and their distribution to various nations persists as a major concern in the general population. Proceeding dread around destructive impacts on health is hence not unfounded.

Exceptional progress has been accomplished in the restriction of nuclear weapons and ammunition and such progress includes official accords by the two major nuclear powers to not only withdraw, but also to destroy most of their strategic weaponry and radically to diminish their strategic nuclear weapons stores. Moreover, many nations have consented to the Treaty on the Non-Proliferation of Nuclear Weapons. On the contrary, a handful of issues persist and more are emerging.

To begin with, a vast amount of nuclear weapons continue to exist and their manufacture around the world has not stopped yet. Furthermore, nuclear weapons are now found on the domains of more nations than before. The existence of the possibility of furtive production of nuclear weapons in some nations has made proliferation of significant concern to global safety. Lastly, an issue that remains an important one is the one concerning the

disposal and dismantling of nuclear weapons, as well as the places in which they are produced. Both of the aforementioned factors may pose dangers to the health, safety and security of the workers who contribute in the disposal of the weapons, as well as the population in general, and the environment. The cause for the increased demand for more radioactive-waste transfer facilities and more advanced administration is the disposal of nuclear weapons and decommissioning of production plants.

## DEFINITION OF KEY TERMS

### Ammunition

Ammunition is "objects that can be shot from a weapon, such as bullets or bombs".[1] They are substances harmful to the environment and are used to create chemical and nuclear weapons.

### Chemical weapons

Chemical weapons are weapons, whose purpose is to intentionally cause death or harm through their toxic properties. Examples of chemical weapons include: munitions, devices which are designed for the sole purpose of weaponizing toxic chemicals, etc.

### Nuclear weapons

Nuclear weapons are designed and intended to release energy through an explosion, resulting from nuclear fission or fusion, or even a combination of these two processes. Examples of nuclear weapons include: atomic bombs, ballistic missiles, etc.

### Environmental impact

An environmental impact is characterized as any alter to the environment, whether unfavorable or useful, and is a result of a facility's activities, products, or administrations.

### Safety aspects

Safety aspects are precautionary measures that are taken so as to guarantee that something is secure and not dangerous. Some safety aspects regarding the use of ammunition in order to ensure the protection of the environment and of the population include the close and careful observation and monitoring, as well as the prevention of their use.

[1] "AMMUNITION: Meaning in the Cambridge English Dictionary." Cambridge Dictionary, dictionary.cambridge.org/dictionary/english/ammunition.

### Nuclear proliferation

The spread of nuclear weapons or their technology to nations that don't already have them in their possession is called nuclear proliferation. This term is additionally used to allude to the conceivable acquisition of nuclear weapons by terrorist groups.

## BACKGROUND INFORMATION

### Environmental effects

In the past years and for a long time, concern over the disastrous effects of nuclear conflict for human health has been expressed by the World Health Organization (WHO) and its Member States. From past WHO reports on the impacts of nuclear war on health and health services, as well as from various other examinations and reports, it is obvious that other than the disastrous impacts in terms of casualties and material harm, the use of nuclear weapons has the ability to cause human suffering and natural disturbance on an unnatural scale.

Nuclear explosions can often cause climatic changes on developed land and can essentially result to the production of a worldwide “nuclear drought,” and the starvations resulting from this event could kill billions, which would most likely influence those communities that are already in food-insecure situations within the developing world, especially in Sub-Saharan Africa, South Asia, and the Middle East. Noteworthy changes in precipitation would likely moreover increase struggle in developing regions, in spite of the fact that worldwide temperature decreases may reduce social violence within the United States and other created nations.

### Production, storage and disposal of ammunition

In the process of the generation of ammunition and nuclear weapons in general, a huge amount of dangerous substances are used and disposed of. These substances include plutonium, uranium, benzene, polychlorinated biphenyls, strontium, cesium, mercury and cyanide. The effects of the release of the aforementioned substances on the environment impact the wildlife nearby negatively, as they usually end up in seas, rivers and soil.

Ammunition should always be stored and organized in safe and secure storage rooms, especially when it needs to be stored for a long time. It is crucial that it is kept indoors and in dry places where the temperature remains the same at all times. If ammunition gets exposed to really high temperatures, it is possible that an imbalance is caused inside the ammunition, which can lead to extreme and significant inaccuracy upon

firing. On the other hand, really low temperatures can lead to the alteration of the performance of ammunition.

Ammunition that is not safe, unstable or degrading needs to be disposed of and destroyed safely in order to prevent it from exploding and thus prevent large scale human injuries resulting from ammunition explosions. International standards have been established by organizations such as the North Atlantic Treaty Organization (NATO), regarding the safe and secure disposal of ammunition and should be used in the process of their disposal.

## Safety aspects

There are many measures that could be taken aiming to prevent the use of ammunition and thus, reduce the effect they have on the environment. Using alternative materials, such as replacing lead, is a very effective and essential option and it is also the less harmful to the environment one. Another measure that should be taken is thorough research for the possible impact before the use of ammunition. Moreover, the limited use of weapons for exercises should be implemented, as well as limited use of weapons for personal reasons.

Although many of these solutions are theorized as effective and could really make a change, their use has been neglected by almost all member-states. Especially when it comes to limited use of weapons for exercises or personal safety, many nations are extremely unwilling to do so, mainly due to the fact that it contradicts their respective policies and it threatens the government's and the peoples' feeling of safety, something that could cause damage ranging from mild anarchy to fully organized revolutions, especially in small government nations.

It's safe to say that although we may believe that safety aspects are universal matters, the entire concept is way more layered than that. There are personal, governmental, national, international and then global safety aspects. Due to the utopic nature of aligning all of the aforementioned together, the UN has mostly tried to align them in groups. Most of the time, the UN is involved in international ones, while the nations themselves manage personal, governmental and national ones. Of course, we are left with one last layer of the concept. Global ones are extremely rare and when they do appear, extremely difficult to address.

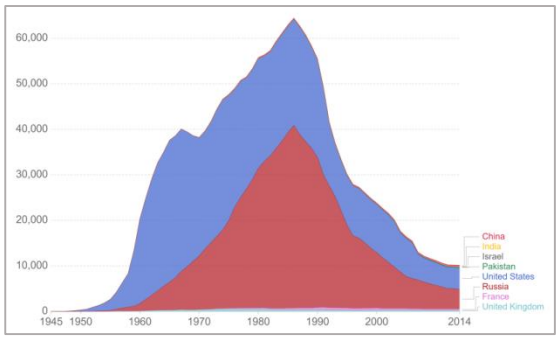
## Ammunition regulations

The artifact in weapons that renders them truly lethal is ammunition. Ammunition deals, however, are not subject to the same government regulations as the guns themselves

and it is quite possible and common for them to be purchased on the web or in person with no oversight in most states. Ammunition background checks and other similar approaches controlling the deal and exchange of ammunition are vital measures to keep dangerous power far from those who undermine the safety and security of the people around them.

### Nuclear weapons

Nuclear weapons possess extreme destructive power and they have long-term catastrophic effects. Only one weapon is enough and more than capable of destroying a whole city, killing millions, harming the environment in the process and even affecting the lives of future generations. The threats from such weapons emerge from their very existence. In spite of the fact that nuclear weapons have previously been used only twice in warfare – in the bombings of Hiroshima and Nagasaki in 1945 – around 14,500 nuclear weapons allegedly exist in today's world and over 2,000 nuclear tests have been conducted thus far. Demobilization is the leading assurance against such threats, however accomplishing such an objective has been quite the challenge. The world's nuclear powers have more than 10,000 nuclear warheads in their arsenals.




Number of nuclear warheads in the inventory of the nuclear powers, 1945 to 2014

## MAJOR COUNTRIES AND ORGANISATIONS INVOLVED

### United States of America (USA)

The first country to make nuclear weapons is the United States of America. It is the only nation that has used them, during World War II in the bombings of Hiroshima and Nagasaki. Before and during the Cold War, the United States conducted over one thousand nuclear tests, of which some where considered harmful to the environment.

### Russian Federation

Russia's new nuclear weapons policy allows the use of nuclear weapons against a non-nuclear strike which targets the country's government and military infrastructure. Accordingly with Russian military convention, the new document ensures that the nation has the ability to use nuclear weapons as a reaction to a nuclear assault or hostility including ordinary weaponry, which threaten the exceptionally presence of the state.

## France

France depends on nuclear discouragement as an extreme guarantee of the country's sovereignty. It is undergoing the process of upgrading sea and air-based nuclear forces, compatible to a new Military Programming Law passed in December 2013. In February 2015, the president of France reported that Paris would use 12.3% of its annual defense budget to improve its nuclear obstruction capabilities until 2019.

## Germany

German support for nuclear energy was exceptionally solid within the 1970s after the oil cost shock of 1974 and there was recognition of vulnerability when it came to energy supplies. Be that as it may, after the Chernobyl accident in 1986 this policy wavered, and in 1989 the last nuclear power plant was commissioned. While in 1979 the Social Democratic Party (SPD) had asserted nuclear power, it passed a resolution to desert nuclear power within a decade in August 1986.

## People's Republic of China

The first time China exploded a nuclear device was October 16th 1964. Since then China consistently declared that its nuclear tenet is based on the concept of no-first-use, and the country's nuclear weaponry has been characterized as a minimum obstruction against nuclear attacks by many Chinese military leaders. In spite of the fact that the precise estimate of China's nuclear stockpile has not been freely uncovered, reports demonstrate that since 2011 China has delivered around 200 to 300 atomic warheads.

## Iran

Since 1970, Iran has been a non-nuclear weapon state party to the Non-Proliferation of Nuclear Weapons Treaty (NPT) and it has a progressed nuclear program that was from 2002 until the execution of a comprehensive nuclear bargain, the Joint Comprehensive Plan of Action (JCPOA) which was adopted in 2016, the subject of worldwide arrangements, negotiations and sanctions.

## Democratic People's Republic of Korea (DPRK)

The Republic of Korea is the only nation that has withdrawn from the Nonproliferation of Nuclear Weapons Treaty (NPT) to seek after a program regarding nuclear weapons, and has a progressively advanced nuclear weapons store. The DPRK remains exterior of the Comprehensive Nuclear Test-Ban Treaty (CTBT), and has abused the

international norm against nuclear testing by conducting tests repeatedly. The United Nations Security Council has passed various resolutions and has additionally forced cruel sanctions on the North Korean military and economy, with the aim of condemning the country's nuclear activities.

### Organization for the prohibition of chemical weapons (OPCW)

The Organization for the prohibition of chemical weapons aims to implement the provisions of the Chemical Weapons Convention which will lead to a world without chemical weapons and free of the threat their use poses. The organization's aim is to "contribute to international security and stability, general and complete disarmament and global economic development".[2]

### Nuclear Threat Initiative (NTI)

The Nuclear Threat Initiative has been engaged in creating, forming, and executing nuclear security ventures. In addition to building worldwide awareness, NTI locks in in show programs to rouse private and legislative endeavors toward atomic, natural, and chemical danger decrease. NTI works on Global Nuclear Policy to create worldwide momentum among governments to decrease the dangers postured by nuclear weapons and materials.

### Nuclear Suppliers Group (NSG)

The Nuclear Suppliers Group is a group that consists of nuclear supplier countries and its goal is to contribute to the non-proliferation of nuclear weapons. The organization hopes to achieve this through implementing two sets of guidelines for nuclear and nuclear-related exports.

## TIMELINE OF EVENTS

| Date | Description of Event |
|---|---|
| 1938–1962 | Nuclear weapons become a possibility for the first time in history. |
| August 6 - 9, 1945 | First atomic bombings on Hiroshima and Nagasaki |
| July 29, 1957 | The International Atomic Energy Agency (IAEA) is created |
| October 15 - 28, 1962 | Threats for nuclear war resulting from the Cuban missile crisis |

[2] "Mission." OPCW, www.opcw.org/about-us/mission.

| | |
|---|---|
| February 14, 1967 | First nuclear-weapon-free zone is established |
| 1968 - 1975 | Nuclear Nonproliferation Treaty (NTP) goes global |
| June 12, 1968 | The first international treaty to prevent spread of nuclear weapons Is signed |
| 1986–2000 | Nonproliferation efforts are improved with the end of the Cold War |
| May 23, 1992 | Belarus, Kazakhstan, and Ukraine give up their nuclear weapons |
| Jan 10, 2003 | North Korea withdraws from the Nuclear Nonproliferation Treaty |
| Jul 15, 2015 | Nuclear Agreement with Iran is reached by world powers |
| Jul 17, 2017 | The UN adopts Treaty on the prohibition of nuclear weapons (TPNW) |
| 2003–Present | Progress and Threats |

## UN INVOLVEMENT: RELEVANT RESOLUTIONS, TREATIES AND EVENTS

- The Arms Trade Treaty (ATT) was adopted on December 24th 2014 and is an international treaty that controls universal trade in conventional arms and looks to avoid and annihilate unlawful trade and preoccupation of conventional arms by establishing universal standards administering arms transfers.
- The Treaty on the Non-Proliferation of Nuclear Weapons (NPT) is a worldwide treaty defined with the following goals: to anticipate the spread of nuclear weapons and weapons innovation, to promote participation in peaceful uses of nuclear energy and to help in the fight in favor of nuclear demobilization and general, total demilitarization.
- The Convention on Nuclear Safety (CNS) aims to commit Contracting Parties operating land-based civil nuclear power plants in order to maintain the highest level of safety possible, by establishing essential security standards to which States would consent and agree.
- The Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction entered into force on 26 March 1975. The goal of this convention is to prohibit the improvement, generation, securing, exchange, maintenance, stockpiling and use of biological and toxin weapons.

- In 1946, the UN General Assembly adopted the Resolution A/RES/1(I)[3], which established a Commission whose purpose would be to deal with issues related to the revelation of nuclear energy, among others. This Commission was created so as to make recommendations for the control of nuclear energy to the degree essential in order to guarantee its use as it were for peaceful purposes. What was also decided by the resolution was that the Commission ought to make recommendations for "the disposal from national weapons of nuclear weapons and of all other major weapons adaptable to mass destruction."

## PREVIOUS ATTEMPTS TO SOLVE THE ISSUE

### Treaties and settlements

A number of multilateral treaties have been established aiming to anticipate nuclear proliferation and testing, while advancing progress in nuclear demilitarization. "These include the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), the Partial Test Ban Treaty (PTBT), the Comprehensive Nuclear-Test-Ban Treaty (CTBT), which was signed in 1996 but has yet to enter into force, and the Treaty on the Prohibition of Nuclear Weapons (TPNW), opened for signature in 2017 but has yet to enter into force."[4]

A number of bilateral and plurilateral settlements and arrangements look for to diminish or eliminate certain categories of nuclear weapons, as well as to avoid the proliferation of such weapons and the vehicles that deliver them. These agreements range from a few arrangements among the Russia and the USA, as well as various other initiatives, to the Hague Code of Conduct against Ballistic Missile Proliferation, the Nuclear Suppliers Group and the Missile Technology Control Regime.

[3] A/RES/1(I) - E - A/RES/1(I), undocs.org/en/A/RES/1(I).

[4] "Nuclear Weapons – UNODA." United Nations, United Nations, www.un.org/disarmament/wmd/nuclear/.

### Actions and initiatives

Most nations participate in universal initiatives and aimed to limit the proliferation of nuclear weapons. The international safeguards system has since 1970 effectively anticipated the diversion of fissile materials into weapons. The system's scope has been extended so as to handle any undeclared nuclear activities. The International Atomic Energy Agency (IAEA) embraces customary assessments of civil nuclear facilities and reviews the development of nuclear materials in the aforementioned.

### UN Secretariat efforts

Efforts pointed at the non-proliferation and complete elimination of nuclear weapons, have been and continue to be supported by the United Nations Secretariat. It is considered by the "Securing Our Common Future: An Agenda for Disarmament" that nuclear weapons within the framework of "disarmament to save humanity." The Secretary-General is using this agenda to call for negotiations and resuming dialogue for nuclear arms control and demobilization. He also supports the expansion of the standards against nuclear weapons, and on that note offers to member-states that possess nuclear weaponry to assert that a nuclear war has no winners and thus it's unreasonable to fight one. At last, the agenda proposes planning for a world that will be free of nuclear weapons, something that will be achieved through a number of measures that reduce potential risk, which include transparency in programs about nuclear-weapons, further diminishments in all sorts of nuclear weapons, commitments not to present new and destabilizing types of nuclear weapons, commitments for the non-use of nuclear weapons and decrease of the role of nuclear weapons in security tenets.

## POSSIBLE SOLUTIONS

### International standards for ammunition disposal

In the past years, many standards regarding the disposal of ammunition have been developed in order to ensure that the disposal process is safe and secure. However, these standards are not applied by all nations. Thus, the necessary and appropriate measures should be implemented with the goal of ensuring the enforcement of these standards.

### Production and storage of ammunition

It is also very important to take measures regarding the production and storage of ammunition. Such measures could include the appropriate management of the

manufacturing process. In order to ensure that ammunition is stored safely and in a stable manner, ammunition surveillance should be established, in order to evaluate the properties and characteristics that the ammunition type possesses.

### Non-proliferation of nuclear weapons and ammunition

The proliferation of nuclear weapons, and in this case of ammunition, is the root cause of many other problems and is a threat to both human lives, as well as the environment. It is a problem needs to be faced and solved immediately. Several attempts have been made in the past to properly address it, but it has not yet been solved. Since it is complicated to resolve, the best propositions would be massive international directives, which, due to its utopic nature as a proposal, would lead us to conclude that the best solution is to enforce past treaties, such as the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) or create new ones that serve the purpose of controlling the proliferation of ammunition and nuclear weapons.

## BIBLIOGRAPHY

"Ammo Storage Best Practices - Do's and Don'ts." Ammunitionstore.com, ammunitionstore.com/pages/news/ammo-storage-best-practices-dos-and-donts/.

"AMMUNITION: Meaning in the Cambridge English Dictionary." *Cambridge Dictionary*, dictionary.cambridge.org/dictionary/english/ammunition.

"Assault Weapons and High-Capacity Magazines Must Be Banned." Center for American Progress,www.americanprogress.org/issues/guns-crime/reports/2019/08/12/473528/assault-weapons-high-capacity-magazines-must-banned/.

"China." Nuclear Threat Initiative - Ten Years of Building a Safer World, www.nti.org/learn/countries/china/.

"Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction - Main Page." *United Nations*, United Nations, legal.un.org/avl/ha/cpdpsbbtwd/cpdpsbbtwd.html.

"Environmental Impact." Environmental Impact - Energy Education, energyeducation.ca/encyclopedia/Environmental_impact.

"Fact Sheets: Arms Control Association." Fact Sheets | Arms Control Association, www.armscontrol.org/factsheets/Nuclearweaponswhohaswhat.

"France." Nuclear Threat Initiative - Ten Years of Building a Safer World, www.nti.org/learn/countries/france/nuclear/.

"Gallery of U.S. Nuclear Tests". The Nuclear Weapon Archive. 6 August 2001.

"Javascript Required!" Information Library - World Nuclear Association, www.world-nuclear.org/information-library/country-profiles.aspx.

"Mission." *OPCW*, www.opcw.org/about-us/mission.

"New Mobile Game Challenges Players to Take Nuclear Weapons Off of Hair-Trigger Alert Before Facing Catastrophe." Nuclear Threat Initiative - Ten Years of Building a Safer World, www.nti.org/.

"North Korea." Nuclear Threat Initiative - Ten Years of Building a Safer World, www.nti.org/learn/countries/north-korea/nuclear/.

"Safety Precaution Definition and Meaning: Collins English Dictionary." Safety Precaution Definition and Meaning | Collins English Dictionary, HarperCollins Publishers Ltd, www.collinsdictionary.com/us/dictionary/english/safety-precaution.

"The Arms Trade Treaty: Home Page." *The Arms Trade Treaty | Home Page*, thearmstradetreaty.org/.

"The History of Nuclear Proliferation." *Council on Foreign Relations*, Council on Foreign Relations, world101.cfr.org/global-era-issues/nuclear-proliferation/history-nuclear-proliferation.

"Treaty on the Non-Proliferation of Nuclear Weapons (NPT) – UNODA." *United Nations*, United Nations, www.un.org/disarmament/wmd/nuclear/npt/.

"United Nations Official Document." United Nations, United Nations, www.un.org/ga/search/view_doc.asp?symbol=A%2FRES%2F1%28I%29.

"Weapons and Ammunition Disposal." The HALO Trust, www.halotrust.org/what-we-do/our-work/managing-weapons-and-ammunition/weapons-and-ammunition-disposal/.

"What Is a Chemical Weapon?" *OPCW*, www.opcw.org/our-work/what-chemical-weapon.

2014, Alessandro PiroliniJun 10. "How Nuclear Warfare Affects the Environment." AZoCleantech.com, 24 July 2017, www.azocleantech.com/article.aspx?ArticleID=381.

authors

All, et al. "Nuclear Weapons in a Changing Climate: Probability, Increasing Risks, andPerception."Taylor&Francis,www.tandfonline.com/doi/full/10.1080/00139157.2017.1325300.

Cochran, Thomas B., and Robert S. Norris. "Nuclear Weapon." Encyclopædia Britannica, Encyclopædia Britannica, Inc., 12 Dec. 2019,www.britannica.com/technology/nuclear-weapon.

Ff, Tk /. "Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction." Facing Finance, www.facing-finance.org/en/database/norms-and-standards/convention-on-the-prohibition-of-the-development-production-and-stockpiling-of-bacteriological-biological-and-toxin-weapons-and-on-their-destruction/.

Munro, André. "Nuclear Proliferation." Encyclopædia Britannica, Encyclopædia Britannica, Inc., 22 Nov. 2018, www.britannica.com/topic/nuclear-proliferation.

Nuclear Suppliers Group - Home, www.nuclearsuppliersgroup.org/en/.

Roser, Max, and Mohamed Nagdy. "Nuclear Weapons." Our World in Data, 6 Aug. 2013, ourworldindata.org/nuclear-weapons.

Vladimir Isachenkov, The Associated Press. "New Russian Policy Allows Use of Atomic Weapons against Non-Nuclear Strike." Defense News, Defense News, 2 June 2020, www.defensenews.com/global/europe/2020/06/02/new-russian-policy-allows-use-of-atomic-weapons-against-non-nuclear-strike/.

Photos

Mathiesen, Karl. “What's the Environmental Impact of Modern War?” The Guardian, GuardianNewsandMedia,6Nov.2014,www.theguardian.com/environment/2014/nov/06/whats-the-environmental-impact-of-modern-war.

Roser, Max, and Mohamed Nagdy. “Nuclear Weapons.” Our World in Data, 6 Aug. 2013, ourworldindata.org/nuclear-weapons.