



# TrojMUN DISEC Study Guide

Topic: Setting standards for storing nuclear weapons

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# I. Letter from the chairs

*Distinguished delegates,*

We are honored to welcome you to the DISEC committee, where we will, upon undoubtedly other things, explore the topic of setting standards for storing nuclear weapons. As the chairs of the committee, we have written this study guide as an introduction to the problem, mainly to grasp the basic understanding of the issue at hand. We have also provided additional sources to read about the discussed topic for those who are interested in reading more and do not know where to start. With that, we would like to warmly welcome you to TrojMUN 2025.

- *Jakub Kubín & Evdokia Kondrakhina*

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## II. Key terms

**Nuclear Non-Proliferation:** The NPT is an international treaty whose objective is to prevent the spread of nuclear weapons, technologies and to promote cooperation in the peaceful uses of nuclear energy, with a final goal of achieving nuclear disarmament

**Nuclear Disarmament:** The act of reducing or eliminating nuclear weapons. Its end state can also be a nuclear-weapons-free world, in which nuclear weapons are completely banned.

**Comprehensive Nuclear-Test-Ban Treaty (CTBT):** This international treaty bans all nuclear explosion tests on Earth, this is banned for both military and civilian purposes. This treaty prevents the development of newer nuclear weapons and the enhancement of existing ones.

**Nuclear Weapons States (NWS):** Countries which have developed and tested their nuclear weapons.

**Non-Nuclear Weapons States (NNWS):** Countries that do not possess nuclear weapons. These countries are signatories to the NPT, meaning committing not to develop or acquire nuclear weapons.

**Nuclear Security:** Protocols and measures which work to secure or dispose of dangerous nuclear material, and detect and control the proliferation of related WMD technology and expertise.

**Nuclear Arms Race:** A competition that happens between countries, usually during the Cold War, to accumulate more powerful and advanced nuclear weapons.

**Strategic Arms Reduction Treaty (START):** Multiple agreements between the Russian Federation and the United States, with the aim of reducing the number of strategic nuclear weapons and improving transparency and trust between the two nations.

**Weapons of Mass Destruction (WMD):** refers to all chemical, biological, radiological, nuclear, or explosive weapons. These weapons can have a large-scale impact on people, property, or infrastructure.

**Preventive Diplomacy:** Diplomatic action taken to prevent disputes from escalating into conflicts and to limit the spread of conflicts when they occur, especially in regards to nuclear weapons

**Nuclear Safeguards:** A series of activities by which the IAEA can verify that a country is living up to its international commitments, especially in regards to nuclear weapons.

### III. Overview of the topic

The issue at hand stems from the Cold War era, specifically the rapid development of nuclear weapons during this time, which has led to unsafe manipulation and storage of these weapons and in return many accidents. Over the years, this has been combated by a series of national and

international treaties, protocols and conventions. Nowadays, storage facilities for nuclear weapons are one of the most secure places on earth, with the highest levels of security, like biometric authentication, AI-powered surveillance systems and many more. The technological advancement of nuclear weapons has been majorly halted by the non-proliferation treaties, mainly the NPT, however some development is still going on till this day, mainly to keep up with the trends of cybersecurity and combat the aging of the infrastructure of the remaining stockpiles. This committee should try to resolve connected issues with the aforementioned systems, like nuclear terrorism, cybersecurity attacks and the environmental impacts.

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#### **IV. History of the issue**

The history of storing nuclear weapons starts in the early Cold War period, when the United States of America and the Soviet Union (Russia) began to develop and later manufacture nuclear weapons as a threat to each other. This arms race has sparked a rapid development and research of nuclear energy, with which comes nuclear weapons. Initially, these weapons have been created as a showcase of power. With an increasing amount of nuclear weapons being researched and manufactured, a security concern of their storage has also risen, putting into question the storing of these weapons in a safe manner so that no unauthorized personnel could manipulate with them, there were no major accidents and there was no theft or spying from the enemies.

In the early stages of the Cold War (1940s-1960s), also known as the initial phase of the nuclear age, security standards were mainly made only when necessary and there were hardly any precautions taken. This meant each country could change their policy on storing such destructive weapons based on their military needs. The lack of secure storage and any laws to ensure the safe manipulation with nuclear weapons has resulted in multiple accidents across the world, mainly from the sides of the United States of America and the Soviet Union. An example of such accidents were the “Broken Arrows” accidents (1950, 1956, 1961) from the United States. In this series, several American

bombers have malfunctioned or crashed, causing radioactive contamination and the evacuation of multiple cities or areas. There were also some accidents from the Soviet side, mainly the Kyshtym disaster (1957), where improper storage of nuclear warheads led to a radioactive leak and contamination.

The United States and the Soviet Union, having the largest nuclear arsenals at the time, focused mainly on safe storage and securing against the espionage from the other enemy countries, and did not have many laws or implementation of security that would prevent accidental detonation or other forms of accidents, like aforementioned leaks of radioactive materials. At the time, there were also hardly any international norms or treaties to combat this issue, mainly because of the rapid rise of the technology with which the governments could not keep up. This has raised many security concerns from the developers and owners of nuclear weapons themselves, as well as the international conventions, which have looked into the issue through a closer scope and realised precautions have to be taken.

With that, around the 1960s and 1970s, all sides have introduced formalized protocols to combat the security concerns. The United States of America have developed a series of systems to increase the security of nuclear weapons in both the concerns of accidents and theft. They have adopted conventions such as highly secure storage facilities and the use of advanced surveillance in these facilities, for example by building multiple-layered physical barriers, armed guards and regular check-ups on the weapons to ensure that only authorized personnel had access to these facilities and that there were no imminent accidents to happen. It was assumed that the Soviet Union has taken similar steps, although it has never been confirmed due to the nature of their regime's rules on transparency of their protocols.

International treaties have also played a major role in increasing the security of these measures. One of the major treaties has been the 1968 Nuclear Non-Proliferation Treaty (NPT). Although this treaty has not addressed the safe storage of nuclear weapons directly, it has created an environment where non-proliferation became a priority. This

has indirectly affected the safety of the storage of nuclear weapons, with more emphasis on developing safety measures, which became more prominent in the international treaties and many protocols and systems for storage practices. This treaty mainly led to the international scrutiny of nuclear weapons, which ensured the safe development, manipulation and storage of these weapons. In general, countries have focused more on regulating access to the weapons and regular routine check-ups on nuclear warheads to ensure higher measures of safety, mainly with more advanced surveillance systems and more sophisticated lock-and-key mechanisms.

During the 1990s and 2000s, after the fall of the Soviet Union, there has been a greater emphasis put on securing the nuclear weapons from accidental detonations more than espionage, as the Cold War has ended and the security of the people has become a greater priority. Because of this, efforts to secure nuclear materials, such as highly enriched uranium or plutonium. The 1991 START treaty has led to the reduction of nuclear arsenals, but the remaining stockpiles still needed safekeeping measures to be improved, like more robust storage systems, in order to ensure higher safety levels of remaining nuclear weapons. Because of this, the era after the Cold War saw the introduction of technological advancement in terms of safe-keeping nuclear weapons, like tracking, identification and safeguarding these weapons, including advanced digital encryption systems and better remote surveillance monitoring.

After the 9/11 attacks on September 11, 2001, and subsequent global security concerns pushed countries to collaborate and enhance the security of nuclear weapons, mainly to prevent nuclear terrorism as a precaution in response to the 9/11 attacks. The Nuclear Security Summits (initiated in 2010) played a key role in this development, fostering better practices for nuclear material protection, mainly through standardized storage protocols and conventions. These efforts have sought to prevent nuclear terrorism and address vulnerabilities posed by the aging stockpiles and their storage systems, mainly from the Cold War era.

In the modern days (2010s-2020s), nuclear weapon storage systems have become one of the most advanced structures in the world, with measures like biometric authentication, AI-driven surveillance and tamper-evident systems, ensuring the highest levels of security. Countries with nuclear weapons have also become way more transparent with their protocols for storage, although some information is still kept private to ensure national security. The issue still remains linked to broader geopolitical dynamics, with countries like North Korea having faced great criticism for lacking transparency of their measures and storage systems and for potential violations of international security norms.

In summary, the development of safekeeping storages for nuclear weapons have developed greatly since their creation during the Cold War era, however they are far from perfect, with occasional nuclear codes being leaked by hackers or accidents, mainly minor leaks of radioactive material, happening in the world. It is an issue that has to be resolved with national collaboration and through multiple layers, like physical security, control, manipulation with the weapons, environmental effects and transparency of practices.

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## **V. Current state**

The current state of the issue of safe storing of nuclear weapons is mainly characterized by high levels of security, increasing international cooperation and ongoing concerns about the safety of nuclear weapons as well as prevention of nuclear terrorism. The main focus remains on ensuring the safety of storing nuclear weapons, improving transparency and accountability and preventing proliferation of nuclear weapons.

The main advancement in terms of security have been the security measures and technological advancement of storages for nuclear weapons. The physical security of these facilities is on a very high level, with them being one of the most secure and inaccessible places in the world. They are protected by multiple layers of physical

security, like armed guards, surveillance systems and high-tech detection systems. One security concern this raises is cybersecurity, with the global threat increasing and hackers getting more advanced, this issue is imminent to cause accidents. Because of this, security protocols now include encryption, biometric authentication, multi-factor authentication and AI-powered security systems to detect any unusual activity and prevent nuclear terrorism. These facilities also include advanced sensors to detect any radiation leaks to ensure the safety of the public in terms of radiation contamination.

Another layer of the resolution for the issue is transparency and accountability. Due to some countries like the United States of America, Russia or China not adhering to the NPT, modernization of nuclear warheads is still going on to this day. These countries commonly keep their practises classified to ensure national security, however they have made efforts to show commitment to the international standard by publishing some of their practises or estimates of their nuclear arsenal. Some countries have also become fully transparent about their stockpile levels and security practices to ensure international security. On the other hand, some nations have decided to keep their practices and stockpile levels classified, like North Korea or Iran, where the transparency of nuclear weapons and associated protocols are kept a secret. Countries have also created Nuclear Risk Reduction Centers to ensure accountability, where they exchange information about the manipulation and development of nuclear weapons to prevent any confusion or miscommunication.

Lastly, an important part is played by the non-proliferation of nuclear weapons and reduction of the arsenal of countries. Countries like the United States of America or the Russian Federation have, since the Cold War, majorly decreased their nuclear arsenals. This has led to the consolidation of nuclear weapons on fewer, more secure sites, increasing stability and safety of the measures.

To summarize, the current state reflects a long history of international treaties and following accidents, they ultimately helped shape the most advanced places of security in



the world. Thanks to the work of this committee, this security should become even stronger and ensure the stability and safety of nuclear weapons in all layers necessary.

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## **VI. Main figures**

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### The Russian Federation:

The Russian Federation believes in maintaining sovereign control over its nuclear weapons storage and resists external standards or regulations. They recognise, but however resist involvement in international efforts to impose specific standards on storage, as it could potentially undermine security. While Russia participates in arms control agreements like the NPT, it prioritizes security and sovereignty, keeping details of its nuclear storage practices classified to avoid vulnerabilities.

### United States of America:

The United States strongly supports setting international standards for nuclear weapons storage. The USA advocates for transparency and accountability in nuclear weapons storage, especially through agreements like the Nuclear Non-Proliferation Treaty (NPT).

### United Kingdom:

The United Kingdom supports setting international standards for storing nuclear weapons. Furthermore, The UK prioritizes the security, safety, and transparency of its nuclear arsenal. The UK advocates for responsible management of nuclear weapons and is committed to reducing the global nuclear threat. However, the UK generally resists external interference which involves decisions which could affect national security.

### People's Republic of China:

China's view on setting standards for storing nuclear weapons is generally focused on maintaining its nuclear deterrence while safeguarding its sovereignty. It supports international arms control and non-proliferation efforts, particularly through the Nuclear Non-Proliferation Treaty (NPT). Although China is cautious about external influence on its nuclear practices, China is committed to reducing the global nuclear threat but typically resists intrusive external standards.

### India:

India views nuclear weapons as a crucial element for its national security and reserves the right to manage their storage and security independently. While India supports global non-proliferation efforts and has signed the Comprehensive Nuclear-Test-Ban Treaty (CTBT), it has not signed the Nuclear Non-Proliferation Treaty (NPT), since they view it as discriminatory.

### DPRK:

The DPRK is highly resistant to setting international standards for storing nuclear weapons. The country views its nuclear arsenal as essential for its national defense and sovereignty, and it insists on full control over its nuclear weapons storage, without any external interference. The DPRK often expresses its desire for recognition as a nuclear power and rejects external interference or international regulations that could constrain its nuclear capabilities.

## **VII. What this committee should try to answer**

1. What steps should be taken in order to ensure that states adhere to security commitments in regards to nuclear weapons?
2. How can international treaties ensure the safety against nuclear terrorism or theft of nuclear weapons?
3. What precautions can be taken to prevent accidents from happening due to the aging infrastructure of the storage systems?

4. How can we keep up with the ever increasing technological advancements, for example quantum computers which would be able to crack through cybersecurity precautions in a matter of hours?
  5. What steps should be taken to prevent environmental damage due to contamination of radioactive material?
  6. How can we combat the issue of nuclear terrorism to ensure international stability and safety of citizens and the public?
  7. Is the step of international demilitarization a viable option to combat the issue at hand?
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