



The Impact of Artificial Intelligence and ICTs on Global Nuclear Stability

Welcome delegates to the Disarmament and International Security Committee (DISEC) of SharkMUN 2026.

In this committee, delegates will debate one of the most complex and rapidly evolving threats to international security: the impact of artificial intelligence (AI) and information and communication technologies (ICTs) on global nuclear stability. As technological innovation accelerates, AI systems increasingly influence military decision-making, cybersecurity, surveillance, autonomous systems, and strategic defense operations.

While these technologies may improve efficiency and deterrence capabilities, they also introduce new risks regarding miscalculation, cyber warfare, accidental escalation, autonomous weapon systems, and the security of nuclear command and control structures.

Delegates must evaluate how emerging technologies affect strategic stability between nuclear powers and determine whether international regulation is necessary to prevent technological escalation and global insecurity.

DISEC serves as the primary United Nations forum for disarmament and international security issues. Delegates are encouraged to engage in realistic geopolitical debate, strategic diplomacy, and policy-oriented discussion throughout committee sessions.



Introduction

Since the Cold War, nuclear stability has relied heavily on deterrence, communication systems, and the principle of mutually assured destruction. However, advances in artificial intelligence and digital technologies are transforming the nature of military competition and strategic security.

Artificial intelligence systems are increasingly integrated into military operations, including surveillance analysis, missile defense, autonomous weapons, predictive algorithms, cyber defense, and strategic simulations. Simultaneously, ICTs such as cyber infrastructure, satellite systems, and digital communications have become essential components of nuclear command and control.

These developments create both opportunities and risks. AI technologies may improve early warning systems and reduce human error in some military processes. However, they may also accelerate military decision-making beyond human oversight and increase the possibility of accidental conflict escalation.

Cyberattacks targeting nuclear infrastructure represent another major concern. Hackers, non-state actors, or rival governments may attempt to disrupt communication systems, manipulate warning data, or interfere with military networks. Such actions could generate confusion, false alarms, or unintended escalation between nuclear powers.

Autonomous weapon systems and AI-assisted military technologies also raise ethical and legal questions regarding accountability, human control, and international humanitarian law.



The international community currently lacks comprehensive legal frameworks regulating AI use within nuclear security systems. Major powers continue investing heavily in military AI technologies while expressing growing concern regarding strategic instability.

DISEC must therefore examine how international cooperation, arms control, and technological governance can prevent emerging technologies from undermining global nuclear security.

ermine both public health gains and the livelihoods of vulnerable communities.

Key terms

Artificial Intelligence (AI)

Computer systems capable of performing tasks that normally require human intelligence, including analysis, prediction, and autonomous decision-making.

Information and Communication Technologies (ICTs)

Digital technologies used for communication, information processing, cybersecurity, and network operations

Nuclear Deterrence

A military strategy based on preventing conflict through the threat of nuclear retaliation.

Autonomous Weapon Systems

Weapons capable of selecting and engaging targets with limited or no direct human intervention.



Background Information

Artificial intelligence and ICTs increasingly influence military modernization strategies worldwide. Nuclear-armed states are investing heavily in AI technologies to strengthen surveillance, missile defense systems, cybersecurity capabilities, and strategic analysis.

One major concern involves the speed of AI-driven military decision-making. During a crisis, automated systems may pressure governments to respond rapidly before human verification is completed, increasing the risk of accidental escalation.

Cybersecurity threats pose another critical challenge. Nuclear command and control systems rely heavily on digital infrastructure vulnerable to hacking, malware, misinformation, and cyber sabotage. Even limited interference with warning systems could create catastrophic misunderstandings between nuclear powers.

Autonomous military technologies additionally complicate international security. AI-assisted drones, automated missile defense systems, and autonomous targeting technologies may reduce transparency and increase uncertainty regarding military intentions.

The issue is further intensified by geopolitical competition between major powers such as the United States, China, and Russia. These states increasingly view AI dominance



as a strategic priority linked to military superiority and national security.

International organizations and arms control experts have called for stronger regulation regarding military AI and autonomous weapon systems. However, states remain divided over the extent to which emerging technologies should be restricted.

Some countries advocate for legally binding international agreements limiting autonomous weapons and AI integration into nuclear systems, while others argue that technological innovation is essential for national defense and deterrence capabilities.

The challenge for the international community lies in preventing technological escalation while maintaining strategic stability and reducing the risk of nuclear conflict.

Main Countries Involved

China

China has rapidly expanded investment in artificial intelligence and military modernization as part of its long-term strategic objectives.





United States

The United States is a global leader in AI development and military technological innovation, including cybersecurity and nuclear modernization programs.



Russia

Russia actively develops AI-assisted military technologies and has repeatedly emphasized concerns regarding strategic balance and cybersecurity.



North Korea

North Korea's cyber capabilities and nuclear weapons programs contribute significantly to international concerns regarding digital security and military escalation.



Previous attempts to solve the issue

1. United Nations Discussions on Military AI and Cybersecurity

International discussions regarding military AI and cybersecurity have expanded significantly within the United Nations and other international forums.



2. The Role of the GGE and CCW in Regulating Emerging Technologies

The United Nations Group of Governmental Experts (GGE) has debated responsible state behavior in cyberspace and emerging technologies in military contexts. Additionally, discussions surrounding Lethal Autonomous Weapon Systems (LAWS) continue under the Convention on Certain Conventional Weapons (CCW).

3. Arms Control Agreements and Strategic Stability

Several bilateral arms control agreements between nuclear powers have attempted to reduce strategic instability and improve communication mechanisms. However, most existing treaties were developed before the rise of advanced AI technologies.

4. Calls for Transparency and Human Oversight

Think tanks, academic institutions, and international organizations have repeatedly called for greater transparency, confidence-building measures, and human oversight regarding AI integration into nuclear systems.

5. The Absence of a Comprehensive International Framework

Despite these efforts, no comprehensive international framework currently regulates the use of AI in nuclear command, control, and strategic decision-making.

Possible solutions to the issue

1. Establishing international regulations regarding AI integration into nuclear systems.
2. Strengthening cybersecurity protections for nuclear infrastructure.



3. Expanding diplomatic communication channels between nuclear powers.
4. Promoting transparency regarding military AI development.
5. Developing legally binding agreements on autonomous weapon systems.
6. Ensuring meaningful human control over nuclear decision-making.
7. Increasing international cooperation on cyber threat prevention.
8. Encouraging UN-led oversight and technological confidence-building measures.