The Republic of Korea’s views on the opportunities and challenges posed to international peace and security by the application of artificial intelligence in the military domain, with specific focus on areas other than lethal autonomous weapons systems (A/RES/79/239)

As an enabling technology, artificial intelligence (AI) holds extraordinary potential to fundamentally transform multiple dimensions of military affairs — from decision-making and intelligence gathering to logistics, surveillance, and command and control systems. With the rapid development of AI, there is a growing interest among states to leverage this technology in the military domain. The application of AI in the military domain has significant implications for international peace and security.

AI capabilities and AI-enabled systems, as they become increasingly integrated into military operations, present both opportunities and challenges, particularly for international peace and security. These developments raise important questions across a set of dimensions, including humanitarian, legal, security, technological, and ethical perspectives.

For the purpose of the present submission, the views set out below specifically focus on areas other than lethal autonomous weapons systems.

Opportunities of AI in the Military Domain

AI capabilities and the systems integrated with AI, including those used in Intelligence, Surveillance and Reconnaissance (ISR) and Decision Support Systems (DSS), enable increased situational awareness and understanding of the environment, enhanced precision and accuracy, and improved efficiency by processing large-scale data, supporting optimization, and generating predictive insights. These capabilities and systems can contribute to maintaining and promoting international peace and security.

1. Enhancing the implementation of international humanitarian law (IHL) and assisting the protection of civilians and civilian objects in armed conflicts

AI-enabled ISR and DSS systems can enhance the implementation of IHL’s fundamental principles—distinction, proportionality and precautions in attack—by enabling more accurate battlefield assessments and improving situational awareness.

AI can help distinguish between combatants and non-combatants, and assess the potential collateral damage, using timely and well-informed information. By improving the battlefield awareness, including the presence of civilians, AI also assists the necessity and appropriateness of taking precautionary measures to protect civilians and civilian infrastructure.

2. Supporting peacekeeping operations

AI can support the monitoring of ceasefire agreements and peace accords. It can also facilitate early warning mechanisms to detect potential violations, thereby strengthening mission effectiveness and safety. The Republic of Korea has launched a Smart Camp pilot project in UNMISS Hanbit unit to enhance safety, efficiency, and operational capabilities of UN peacekeeping camps through the application of AI and other emerging technologies.

3. Enhancing verification and monitoring capabilities for arms control and compliance regimes

AI can enhance the capabilities of international verification mechanisms to monitor compliance with arms control and nonproliferation agreements. For example, organizations such as the International Atomic Energy Agency (IAEA) may leverage AI to increase the efficiency of safeguards processes, in particular for those that involve classifying data, finding patterns, and identifying outliers in the data. AI-enabled systems can also help identify early indicators of chemical or biological weapons use and uncover increasingly sophisticated sanctions evasion tactics, thereby reinforcing the integrity of international nonproliferation regimes.

In addition to the three opportunities outlined above, AI can also help mitigate strategic risks—such as miscalculation, misunderstanding, and unintended escalation—by improving the analysis of actors' behavior and enhancing the capacity to detect and respond proactively. Furthermore, AI capabilities can facilitate the development of capacities to enhance cyber defense posture, protect critical national infrastructure, and combat terrorism, among others.

Challenges of AI in the Military Domain

The military application of AI could give rise to novel challenges or exacerbate existing ones if not developed, deployed, and used responsibly.

Challenges may stem from the technical and operational characteristics of AI. For instance, the “black-box” nature makes it difficult to understand how and why specific outputs are generated, resulting in limited explainability and traceability. Design flaws and unintended biases in data, algorithms or system architecture can lead to malfunctions or outputs that deviate from intended objectives. Furthermore, over-reliance on AI systems, such as automation bias, or insufficient training for relevant personnel may raise issues related to the lack of appropriate human judgment and involvement. These factors could increase the likelihood of miscalculation, misinterpretation or unintended escalation in conflict, thereby posing a challenge to international peace and security.

In addition, the dual-use nature of AI technologies could increase the risk of misuse or abuse by irresponsible actors with malicious intent. For example, in the cyber domain, AI-driven disinformation campaigns and cyberattacks such as data poisoning and spoofing may be accelerated. Furthermore, irresponsible actors may exploit AI technologies to facilitate the development of novel chemical or biological weapons, raising serious proliferation concerns and amplifying risks to international peace and security.

Implementation of Responsible AI in the Military Domain

In order to harness the benefits and opportunities of AI while addressing its associated risks and challenges, AI capabilities and the systems enabled by them in the military domain must be developed, deployed, and used in a responsible manner throughout their entire life cycle.

The Republic of Korea is committed to ensuring and promoting responsible application of AI in the military domain. This includes the following key principles and measures:

- AI should be ethical and human-centric.
- AI capabilities in the military domain must be applied in accordance with applicable international law, including international humanitarian law and international human rights law.
- Humans remain responsible and accountable for their use and effects of AI applications in the military domain, and responsibility and accountability can never be transferred to machines.

- The reliability and trustworthiness of AI applications need to be ensured by establishing appropriate safeguards to reduce the risks of malfunctions or unintended consequences, including from data, algorithmic, and other biases.

- Appropriate human involvement needs to be maintained in the development, deployment and use of AI in the military domain, including appropriate measures that relate to human judgment and control over the use of force.

- Relevant personnel should be able to adequately understand, explain, trace, and trust the outputs produced by AI capabilities in the military domain, including systems enabled by AI. Efforts to improve the explainability and traceability of AI in the military domain need to continue.

The Republic of Korea supports discussions and dialogues on further developing measures to ensure responsible AI in the military domain, including through international normative frameworks; rigorous testing and evaluation (T&E) protocols; comprehensive verification, validation, and accreditation (VV&A) processes; robust national oversight mechanisms; continuous monitoring processes; comprehensive training programs and exercises; enhanced cybersecurity; and clear accountability frameworks.

Establishing robust control and security measures is crucial to prevent irresponsible actors from acquiring and misusing potentially harmful AI capabilities in the military domain, including systems enabled by AI.

The Republic of Korea encourages the development of effective trust and confidence building measures and appropriate risk reduction measures, as well as the exchange of information and consultations on good practices and lessons learned among states.

The Republic of Korea stresses the need to prevent AI capabilities from being used to contribute to the proliferation of weapons of mass destruction by state and non-state actors and emphasizes that AI capabilities should not hinder arms control, disarmament, and non-proliferation efforts. It is crucial to maintain human control and involvement for all actions critical to informing and executing sovereign decisions concerning nuclear weapons employment, without prejudice to the ultimate goal of a world free of nuclear weapons.

AI capabilities and AI-enabled systems in the military domain should be developed, deployed, and used in a way that maintains and does not hamper international peace and security.

Future Governance of AI in the Military Domain

In envisioning future governance of AI in the military domain, it is critical to foster a common understanding of AI technology—its capabilities and limitations—and a shared understanding of the possible applications of AI in the military domain as well as on its implications for international peace and security.

Capacity-building is also important, especially for developing countries, to promote full participation of those countries in discussions on the governance of AI in the military domain and to facilitate the responsible approach to, and shared understanding of, the development, deployment, and use of AI in the military domain. The exchange of knowledge, good practices, and lessons learned can also facilitate and promote a common understanding among states.

Given the rapid advancement and constantly evolving nature of AI technology, governance mechanisms should be flexible enough to adapt to the advancement of AI technology. Also, the Republic of Korea supports a balanced approach, which addresses both opportunities and risks of the application of AI in the military domain. Overly risk-centric or restrictive governance discourses may stifle innovation and obscure the potential of AI in the military domain to support international peace and security. Future governance should not serve as a barrier to innovation, but rather support it and play a role as an enabler for the responsible development, deployment, and use of AI in the military domain.

As the international community is currently in the early stages of understanding the implications of AI in the military domain for international peace and security, and considering the current state of technological and policy development, it would be premature to narrowly define the trajectory of AI governance in this area or to establish legally binding instruments or norms without a common and shared understanding of what constitutes responsible AI in the military domain. The Republic of Korea is of the view that governance discussions should be realistic and proceed incrementally, guided by continued dialogue.

Recognizing that much of the innovation in AI is being driven by the private sector, the Republic of Korea believes that future governance efforts must adopt an open and inclusive approach engaging with multi-stakeholders, including industry, academia, civil society, regional and international organizations. The Republic of Korea further recognizes their contributions in supporting states in understanding and addressing the peace and security implications of the application of AI in the military domain.

The Republic of Korea acknowledges national, regional, and global efforts to address the opportunities and challenges of AI in the military domain, including the development of relevant national strategies, legislation, principles, norms, policies, and measures, and recognizes the importance of promoting dialogue at all levels.

To ensure the responsible application of AI in the military domain, the Republic of Korea is actively advancing its efforts by newly establishing the Data Policy Division and the Defense AI Policy team within the Ministry of National Defense in 2022 and 2025 respectively. In 2024, the Ministry also launched the Defense Data and AI Committee as the highest-level deliberative and decision-making body.

Furthermore, in order to promote dialogue, the Republic of Korea, together with the Netherlands, Singapore, Kenya, and the UK, hosted the 2nd REAIM (Responsible AI in the Military domain) Summit in September 2024 in Seoul. The REAIM Summit has played a significant role in promoting responsible AI in the military domain. The two summits—held in The Hague in February 2023 and Seoul in September 2024—as well as a series of REAIM regional consultations in 2024, have together served as an incubator for exchanging expertise, promoting inclusive dialogue, and fostering mutual understanding. The REAIM Summit provides an important forum where ideas are tested, perspectives are shared, and emerging principles are gradually refined. Looking ahead, the third REAIM Summit in Spain in September 2025, along with upcoming REAIM Regional consultations in 2025, will continue to guide the international community's collective efforts toward the responsible application of AI in the military domain.

The Republic of Korea believes that discussions on the responsible application of AI in the military domain within the UN framework, including the UN General Assembly First Committee and the UN Disarmament Commission (UNDC), should work in a synergistic and complementary manner with other relevant initiatives outside the UN, including the REAIM process, the Political Declaration on Responsible Military Use of Artificial Intelligence and Autonomy, and the Group of Governmental Experts on Emerging Technologies in the Area of Lethal Autonomous Weapons Systems (LAWS GGE) established under the Convention on Certain Conventional Weapons (CCW). The Republic of Korea holds the view that these initiatives are mutually reinforcing and complementary.

Data governance is also a crucial component of military AI governance. As data plays a central role in training, deploying, and evaluating AI systems, relevant stakeholders must engage in further discussion on adequate data governance mechanisms, including clear policies and procedures for data collection, storage, processing, exchange, and deletion as well as data protection.