

Forum: Disarmament and International Security Committee (DISEC)

Issue: Discussing the Use of Autonomous Weapons Systems In Global Conflicts

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Introduction

Autonomous weapon systems (AWS) are a significant example of human ingenuity and achievement in technology. However, intertwined in the context of such progress is a key concern that has implications for international peace and security. The potential use of AWS during armed conflict raises significant ethical, legal, and strategic concerns that need immediate attention from the international community.

Commitment to the regulation of AWS will prevent their misuse. This means compliance with the International Humanitarian Law (IHL), international cooperation, and responsible innovation. Joint efforts are needed to create clear principles that can guide the operation of AWS within parameters considered ethical and that keep human judgment paramount. The militarization of such systems can threaten uncontrolled destruction, civilian casualties, and violations of international norms.

The technology related to AWS has significantly evolved over the last couple of years, driven mainly by research in artificial intelligence and robotics. In a world where countries are evermore reliant on technology for activities such as surveillance, reconnaissance, and defense, the uninhibited use of AWS could exacerbate existing tensions and erode trust among nations.

However, the key barrier to setting a broad framework for AWS relates to a lack of consensus on the ethics, legality, and operation of AWS. Until the international community is further seized with the issue, laying down rules and regulations to control the application of AWS is necessary in safeguarding world peace, ensuring that autonomous technologies will not be misused in conflicts.

Definition of Key Terms

- 1. Autonomous Weapon Systems (AWS):** Military systems capable of independently identifying and engaging targets without human intervention.

2. **Lethal Autonomous Weapon Systems (LAWS):** A subset of AWS specifically designed for lethal operations.
3. **Artificial intelligence (AI):** Artificial intelligence is a field of science concerned with building computers and machines that can reason, learn, and act in such a way that would normally require human intelligence or that involves data whose scale exceeds what humans can analyze.
4. **International Humanitarian Law (IHL):** A set of rules designed to limit the effects of armed conflict, ensuring the protection of civilians and humane treatment of combatants.
5. **Target Discrimination:** The ability to distinguish between combatants and non-combatants, a fundamental requirement under IHL.
6. **Swarming:** The coordinated use of multiple AWS to achieve a strategic objective, often through communication and collaboration among systems.

Background Information

As already mentioned in the introduction, the regulation of Autonomous Weapon Systems has been a long and complex process, considering the rapid development of these systems. Unlike other fields of military development, AWS is a unique challenge due to their autonomous decision-making capabilities and the blurred lines between peaceful and military applications. Many countries involved in developing such technologies often highlight their defensive intentions; however, the possibility of abuse and escalation remains a great concern.

Many countries view AWS as a means to gain military superiority and strategic advantages in conflicts. On the other hand, countries that support disarmament and peaceful resolution of conflicts see the proliferation of AWS as a threat to international stability and human rights. This gulf makes the establishment of cooperative international norms all the more urgent, in order to prevent the misuse of such systems and mitigate their consequences outside the traditional battlefields.

Geopolitical conditions, technological progress, and emerging patterns of war have all contributed to the evolution of Autonomous Weapons Systems (AWS). The Cold War (1947–1991) saw an arms proliferation – with the United States and the Soviet Union seeking to come up with missile guidance systems and unmanned aerial vehicles (UAVs) to compete technologically. The 1991 Gulf war served as a catalyst to the demand for precision target

weapons and reconnaissance which resulted in deploying Predator drones. Weapons of UAVs for targeted soldiers was highly prevalent in the war on terror in Operation Enduring Freedom due to an emphasis on counter-insurgency and protecting the soldiers. Beginning in the 21st century, alongside the growing emphasis on technology during warfare, AWS started expanding into land, naval, cyber, and space with growing autonomy ensured by the development of Artificial Intelligence. American, Chinese and Russian global power politics have ushered in a new era of multipolar competition as each superpower vies for worldwide strategic supremacy. In tackling new security challenges, bordering areas of power oscillated and new technologies emerged, in this case, a weapon in the form of AWS has turned out to be a useful resource.

The Geneva Conventions form the cornerstone of International Humanitarian Law, emphasizing the protection of civilians and the need for humane conduct in armed conflicts. These principles are being challenged in the face of unprecedented risks of indiscriminate harm and gaps in accountability presented by AWS. In response to these challenges, nations have participated in discussions at international forums, such as the United Nations, where initiatives to regulate or prohibit AWS encounter varying degrees of support and opposition.

The foundation of The Convention on Certain Conventional Weapons (CCW) in 1981 marked an important milestone in the regulation of military technology. While discussions on autonomous weapon systems have been developed under this framework, their progress has been slow in particular due to disagreements about definitions and means of control. Meanwhile, the advances in AI and robotics have taken a fast pace beyond regulatory proposals, thus making it possible for lethal systems to be built which have minimal human control or oversight.

Current Situation

Currently, there are a few existing types of Autonomous Weapon Systems, which include the following: land-based (autonomous tanks, unmanned ground vehicles); aerial (combat drones); naval (autonomous vessels, smart torpedoes); hybrid/swarm systems (drone swarms and robotic sentinels for collaborative missions), and cyber/space (autonomous cyber systems and satellites for surveillance or warfare).

The face of warfare is rapidly changing with the induction of Autonomous Weapon Systems, which are already capable of carrying out a range of complex tasks, including reconnaissance, targeting, and lethal engagement. Technological strides in Autonomous Weapon Systems have taken great strides with development in artificial intelligence and robotics. These systems can engage in independent operations in diversely different terrains and, hence, become versatile tools for any military operation.

In addition to Unmanned Aerial Vehicles (UAVs), there is an increase in autonomous naval drones for securing maritime security and mine detection. The ability to navigate complex maritime environments to carry out tasks without direct human control includes patrolling territorial waters and detecting submerged threats. One such example is the US Navy's Sea Hunter: an autonomous surface vessel designed for anti-submarine warfare and reconnaissance that can operate for months without a crew. Land-based robots play a major role in today's modern military operations. Fitted with artificial intelligence-controlled systems, these robots are capable of neutralizing threats within both urban and battlefield environments. For example, the U.S. Army has developed the Tactical Autonomous Combatant (TAC) robot, which is capable of conducting reconnaissance missions and engaging targets autonomously, or under human control. These are clear illustrations of the increasing reliance on autonomous weapons systems to enhance operational efficiency and reduce the number of human fatalities in conflict zones. The use of AWS has already been reported in some recent conflicts, showing their potential to affect the character of modern warfare. In its current conflict in Ukraine, Russia has deployed semi-autonomous drones with AI capabilities in order to conduct surveillance and precision strikes against Ukrainian troops. According to reports, these drones have contributed heavily to the shaping of battlefield dynamics, raising concerns over compliance with international humanitarian law (IHL).

Israel has widely used Autonomous Weapons Systems (AWS) in counter-terrorism and measures for border security. The Israeli Defense Forces (IDF) have integrated different unmanned systems into their military doctrine to gain better situational awareness and react quickly to adversaries. During hostilities with Hamas, Israel has allegedly employed armed UAVs, thereby hitting targets accurately with a reduced number of civilian casualties—the assertion indicates some of the claimed advantages of AWS within the perspective of accomplishing objectives militarily. Despite the increasing occurrence of AWS in contemporary armed conflicts, attempts to regulate their use have been stymied. The UN Convention on Certain Conventional Weapons (CCW) is the main forum for international discussion on

autonomous weapons; however, progress has been slow due to divergent national interests and a lack of consensus over definitions and rules related to AWS.

The main challenge to the regulation of AWS is the rapid advancement of technologies, especially the inclusion of artificial intelligence and machine learning. Many countries argue that these technologies have dual-use features, meaning that they can be used for both civilian and military purposes. This makes it difficult to provide clear regulatory frameworks, as countries can develop AWS for apparently civilian purposes. The various investments by private companies in artificial intelligence and robotics have further blurred the lines between military and commercial use, thus creating disruptions in international security.

In other words, as AWS becomes more integral to modern military operations, there is a need to understand their technological capabilities, deployment in conflicts, and regulatory challenges in order to address the ethical implications they present. With such complexities being negotiated by nations, it becomes more important for stakeholders to have constructive dialogue that ensures such military technological advances do not come at the cost of humanitarian principles or international law.

Major Parties Involved and Their Views

United States of America

The United States calls for human oversight of AWS operations, opposing any complete ban on these systems. U.S. military officials have testified before Congress on the strategic advantages that AWS will afford, with major benefits expected in efficiency and reduction in risk for human soldiers. The United States Department of Defense has invested over \$7 billion annually to research AI-powered AWs, putting in evidence a commitment to blend AI into its current military frames. For example, the MQ-9 Reaper drone has been quite instrumental in combat operations, conducting over 1,000 drone strikes globally in the year 2023 alone.

The Russian Federation

Russia gives much priority to the fast development and deployment of autonomous weapon systems (AWS), regarding them as necessary to maintaining military superiority against potential adversaries. There have been reports that Russia used semi-autonomous drones in its

military operations in Ukraine, thus giving rise to significant ethical and legal concerns over compliance with international humanitarian law (IHL). Among the drones used by the Russian military are the Orion-E and Forpost-R, used for reconnaissance and strike operations. A report by the Royal United Services Institute (RUSI) noted these drones have taken part in more than 200 confirmed strikes against Ukrainian forces since being deployed in early 2022.

People's Republic of China

China encourages the establishment of regulations regarding Autonomous Weapon Systems (AWS) while simultaneously advancing its military modernization plan through the development of such systems. The Chinese government has invested heavily in artificial intelligence-driven weaponry, with its defense budget estimated at around \$293 billion in 2023. This budget includes significant allocations directed toward the research and development of autonomous systems. In 2024, China announced plans to deploy AI-powered drones capable of conducting surveillance along its borders with India and Taiwan.

State of Israel

Israel uses AWS in many areas of national security, underlining its role in counter-terrorism and border security. The Israeli Defense Force (IDF) has integrated many autonomous systems into its military doctrine, including armed drones such as the Hermes 900 and SkyStriker. In 2023 alone, Israel carried out over 150 drone strikes in Gaza for protection against Hamas forces using AWS technology, which raised questions of accountability and civilian harm.

The United Kingdom of Great Britain and Northern Ireland

The UK has taken a cautious approach on AWS: though pushing for strict regulations in this regard, it also pursues the potential of such systems for national defence. The UK Ministry of Defence announced £1 billion (\$1.3 billion) in funding for researching artificial intelligence technologies relevant to the armed forces over a five-year period starting in 2022. British officials insisted, however, that human presence, judgment, and decision in all operational decisions involving the AWS must be retained for full compliance with international humanitarian and humanitarian law.

Republic of Korea

South Korea is actively developing AWS as part of its broader defense strategy amid rising tensions with North Korea. The South Korean government has allocated approximately \$2 billion toward the development of autonomous systems capable of conducting surveillance along its borders. In 2023, South Korea revealed its first indigenously produced armed drone, the “KUS-FT,” designed for precision strikes against hostile targets while minimizing collateral damage.

Republic of Türkiye

With its Bayraktar TB2 drones, Turkey has been at the forefront of both the development and deployment of AWS. The drones are being followed by the entire world, most particularly due to their great effectiveness during conflicts, as seen lately in Syria and Libya. In 2023 alone, over 100 Bayraktar TB2 drones have been exported by Turkey to multiple countries. This again reflects commitment to drone technology improvement, a very crucial component underpinning its military doctrine.

The European Union (EU)

The European Union (EU) encourages proactive prohibition on fully autonomous weapons, referring to ethical and legal apprehensions linked to their use. Member states of the EU have conveyed their concern about the potential consequences of allowing machines to make life-and-death decisions without human oversight. In 2023, the EU called for international treaties to regulate the development and deployment of autonomous weapon systems, pointing out the need for intensive dialogues among member states and international partners. In the European Union, nations like Austria, France, Sweden, and Germany have been the most vocal about the use of Autonomous Weapon Systems.

UN Involvement, Relevant Resolutions, Treaties and Events

Numerous member states of the United Nations have signed international agreements, such as the 1980 Convention on Certain Conventional Weapons (CCW), in order to create a framework by which the ethical and legal challenges arising from new weapon technologies might be addressed; however, these treaties cannot fully address all aspects concerning the prevention of proliferation and misuse of Autonomous Weapon Systems (AWS).

The Geneva Conventions emphasize that there must be accountability with respect to situations of conflict, and such accountability lies with both states and individuals who have committed violations of international humanitarian law. Similarly, in the context of Autonomous Weapon Systems, questions of liability become especially relevant, particularly in scenarios where such systems cause incidental harm—for example, infrastructure damage to civilians or loss of life resulting from system failure.

In 2016, the United Nations General Assembly established its Group of Governmental Experts (GGE) on Lethal Autonomous Weapon Systems in order to facilitate dialogue on governance, accountability, and the role of human oversight in the use of Autonomous Weapon Systems (AWS). The meetings have consistently underlined the requirement for ethical and legal frameworks to guide research and development while preventing a global arms race in AWS.

- Discussion on Emerging Technologies in the Area of Lethal Autonomous Weapons Systems, 23 March 2023 (**CCW/GGE.1/2023/WP.2**)
 - This working paper presents recommendations for establishing guidelines and best practices for the development and use of AWS, emphasizing accountability and transparency in their deployment.
- Humanitarian Consequences of Lethal Autonomous Weapons Systems, 18 November 2020 (**A/RES/75/32**)
 - This resolution addresses the potential humanitarian impacts of AWS, emphasizing the need for regulations that ensure compliance with IHL and protect civilian populations during armed conflicts.
- United Nations Convention on Certain Conventional Weapons (CCW), 21 November 2019 (**CCW/GGE.1/2019/CRP.1**)
- Lethal Autonomous Weapons Systems: An Ethical Perspective, 12 December 2018 (**A/RES/73/31**)
 - This resolution calls for a comprehensive examination of the ethical implications of AWS, urging member states to consider the moral responsibilities associated with delegating lethal decision-making to machines.

Possible Solutions

- Advocate for a comprehensive international treaty that:
 - Clearly defines Autonomous Weapons Systems (AWS).
 - Sets guidelines and rules for the development and deployment of AWS.
 - Promotes adherence to ethical norms and international humanitarian law (IHL).
 - Includes regular review mechanisms to adapt to technological advancements.
- Establish a special international regulatory body under the United Nations to:
 - Oversee the development and deployment of AWS.
 - Monitor compliance with international regulations.
 - Provide recommendations on best practices to prevent an arms race in autonomous weaponry.
 - Ensure ethical considerations are prioritized.
- Develop norms and conduct guidelines for nations using AWS, emphasizing:
 - Preserving human oversight in decision-making processes involving lethal force.

Short-Term Solutions:

- Impose a temporary moratorium on fully autonomous weapons until:
 - Comprehensive regulations are developed.
 - Meaningful dialogue on AWS implications takes place.
- Promote bilateral or multilateral agreements to:
 - Share information on AWS technologies and best practices.
- Organize annual international conferences to:
 - Provide a platform for countries, NGOs, and industrial stakeholders to discuss AWS-related issues.
- Raise public awareness about AWS implications to:
 - Inform citizens and policymakers.
 - Build advocacy for responsible governance of military technologies.

Approach Summary:

- Address the challenges of AWS with a multi-pronged strategy:
 - Implement long-term regulatory frameworks.
 - Initiate short-term collaborative efforts.

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