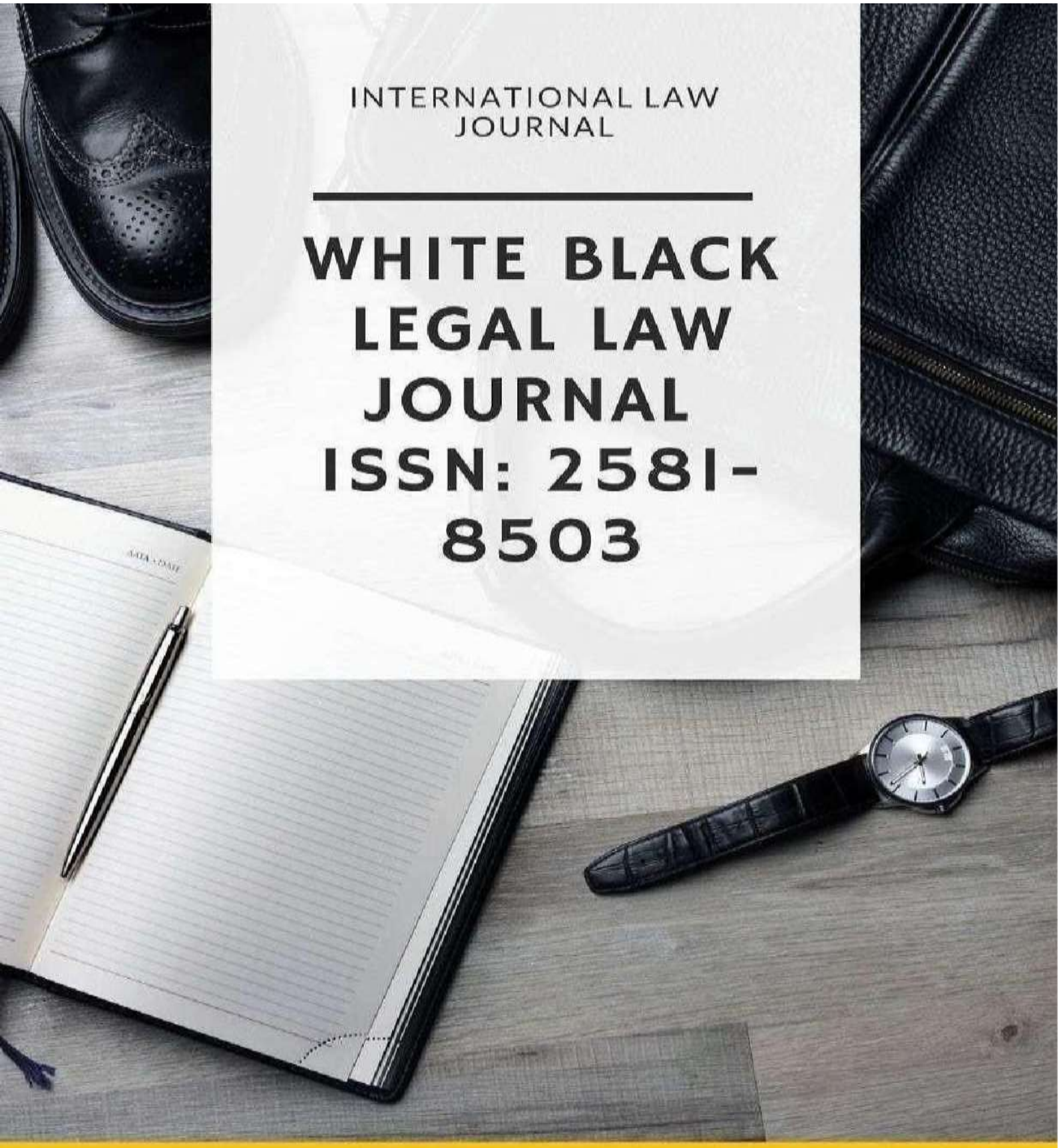

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THE UN'S ROLE IN SHAPING INTERNATIONAL HUMANITARIAN LAW FOR AI BASED AUTONOMOUS WEAPONS

AUTHORED BY - JEYAMURUGAN S

Abstract

Artificial intelligence in modern combat has created unprecedented challenges for international humanitarian law . There is significant moral, legal, and practical concerns with autonomous weapons systems capacity to select and strike targets without direct human intervention. The United Nations, a global peacekeeping agency, plays a key role in developing IHL to address these emerging concerns. The UN's efforts to regulate AI-driven warfare and ensure compliance with recognized humanitarian standards are examined in this article. It looks at significant initiatives, such the Group of Governmental Experts on Lethal Autonomous Weapons Systems under the Convention on Certain Conventional Weapons, that emphasize the necessity of human oversight and accountability in the deployment of AWS. The suitability of existing legal frameworks, like the Geneva Conventions and the UN Charter, to control AI-driven military technologies is also evaluated in the report.

The study poses significant queries regarding the core IHL tenets of proportionality, distinction, and attack prevention. It also highlights the importance of open accountability frameworks and governmental accountability by talking about the potential for an accountability gap in the event that autonomous systems break the law. The argument for the establishment of contemporary international organizations to regulate the growing role of AI in armed conflict is made in the conclusion. The UN must lead international cooperation efforts to ensure that military technology innovations comply with humanitarian values in order to preserve human dignity and minimize civilian casualties in future conflicts.

Keywords: AI-Centric Warfare, International Humanitarian Law, Autonomous Weapons Systems , United Nations , Ethical and Legal Challenges, Global Security Governance

I. Introduction

The rise of artificial intelligence in military applications has generated extensive debate over its implications for international security and legal accountability. Autonomous weapons, which can choose and attack targets without human assistance, go against the core principles of international humanitarian law, including as accountability, proportionality, and distinction. To address these issues, the UN has worked to create regulatory frameworks through its many agencies and legislative measures. This essay evaluates the UN's influence on the ethical and legal discussion of AI in armed conflict.

International law becomes more complicated as a result of AI-driven combat, especially when it comes to establishing state and individual accountability for IHL crimes. Regulatory efforts are made more difficult by the absence of worldwide consensus and consistent definitions for AWS. While some states advocate for a complete ban on fully autonomous weapons, others support a more nuanced strategy that strikes a compromise between legal control and military necessity. The UN's participation in this discussion emphasizes the necessity of an all-encompassing, legally binding framework to control AWS and guarantee that its use complies with humanitarian norms. International legal frameworks must change to meet new dangers while maintaining the ideals of war as AI technology develops. The study deals with the significant threads posed by the AI in warfare and UN’s action to mitigate the risk.

II. The Evolution of AI in Warfare

From simple automated targeting systems to complex autonomous weapons with decision-making capabilities, the application of AI in warfare has advanced significantly. The majority of early AI uses in military technology were restricted to semi-autonomous devices that helped human operators with surveillance and targeting. However, these systems have become more autonomous as machine learning and computing capacity have increased, enabling them to process enormous volumes of battlefield data and react to threats in real time.

AI's capacity to improve operational effectiveness and lower human error is one of the main factors propelling its growing use in warfare. Real-time intelligence analysis, mission planning optimization, and precision strikes with low collateral damage are all possible with AI-powered systems. Due of this technological advantage, major world powers have made significant investments in AI research and development, making it a crucial part of contemporary military

plans[1]. However, this rapid evolution raises concerns regarding compliance with IHL, particularly in relation to accountability and ethical decision-making in combat scenarios.

The introduction of lethal autonomous weapons (LAWS) is a revolutionary development in combat. LAWS can independently evaluate threats and carry out deadly operations, in contrast to conventional weapons that need direct human direction. The accepted concepts of war, such as the duty to differentiate between combatants and non-combatants, are seriously challenged by this autonomy. Furthermore, proposals for more stringent legal control are sparked by the uncertainty of AI decision-making, which raises questions regarding proportionality and adherence to humanitarian values.

An AI arms race between countries is becoming more likely as AI-driven military technologies proliferate. States vying for technological supremacy might put military development ahead of morality, which would allow autonomous weapons to proliferate with little restrictions. States may be more likely to use AI-driven combat without suffering human deaths as a result of this unregulated growth, which might undermine international security and reduce the threshold for armed conflict.

The critical necessity to govern AI in conflict has been acknowledged by the international community. States have been pushed by the UN and other human rights organizations to enact legally binding policies that regulate the use of AWS. A legal structure that guarantees significant human control over AI-driven systems is proposed by certain countries, while others call for a total ban on fully autonomous weapons. Reaching an agreement on this matter is still extremely difficult and calls for concerted diplomatic efforts as well as legislative changes to guarantee that AI systems are in line with humanitarian ideals.

III. AI-Based Autonomous Weapons Systems

Advanced AI-based autonomous weapons systems have been deployed as a result of the progress of warfare; nonetheless, many of these technologies present serious ethical and legal issues under international humanitarian law. A variety of AI-integrated weapons that can function with varied degrees of human control have been developed by nations like the US,

[1]Beja LA, 'Tenuous Harmony: Criminal Liability in the Face of the Autonomy of Arms on the Threshold of Humanitarian Law' (2024) 91–110 https://doi.org/10.62140/lab912024 (last visited May 1, 2025).

Israel, Russia, China, South Korea, and Turkey.

With technologies like the **MQ-9 Reaper**, a drone that can conduct semi-autonomous strike missions using artificial intelligence for target collection and navigation, the US has taken the lead in this field. Though it hasn't been completely weaponized autonomously, Northrop **Grumman's X-47B** exhibits autonomous takeoff, landing, and aerial refueling. For long-range surveillance and even offensive operations in the future, DARPA created the **Sea Hunter**, an autonomous surface vessel that functions without a human on board. The Harpy/Harop hovering munition, which Israel has deployed, is arguably the most sophisticated autonomous weapon. It is capable of independently detecting and eliminating targets that emit radar. These **"kamikaze drones**" operate without human interaction in real time, which raises major issues about attack preparations under Article 57 of Additional Protocol I.

AI is used in the Marker UGV and Russia's **Uran-9** ground combat vehicle to detect, identify, and engage targets. These systems continue to be improved, suggesting Russia's strategic goal to lessen the number of people on the battlefield, despite early reports from Syria suggesting operational constraints. The **Blowfish A3 drone**, an AI-powered armed helicopter unmanned aerial vehicle that can conduct autonomous surveillance and attack, was created in China and exported to a number of countries. One stealth UCAV under development is called the **Sharp Sword**, and it is thought to have deep-strike autonomous capabilities.

The **SGR-A1**, an automated sentry gun, is deployed by South Korea and placed in the DMZ. It can autonomously identify and engage targets using AI, albeit having a human override function. This raises ethical and legal questions around the automated use of deadly force. Although the government stresses a "human-in-the-loop" approach to lethal targeting decisions, the UK has built the **Taranis UCAV,** which incorporates autonomous technologies for navigation and threat avoidance.

The **Kargu-2 drone,** a loitering weapon with facial recognition and autonomous attack capabilities, has been deployed by Turkey[2]. It may have carried out assaults in Libya without human orders, according to reports, underscoring the need for legal systems. These changes

[2] Zachary Kallenborn, The World's Loitering Munitions Arms Race Is Here, MOD. WAR INST. (Oct. 26, 2021), https://mwi.usma.edu/the-worlds-loitering-munitions-arms-race-is-here/ (last visited May 1, 2025).

show how weapons systems are becoming more autonomous, frequently without explicit international agreement or enforceable regulations. There is a substantial accountability and compliance gap with IHL because to the absence of explicit conventions regulating AWS, especially with relation to the principles of distinction, proportionality, and precaution under Additional Protocol I of the Geneva Conventions.

IV. AI Violates International Humanitarian Law

International Humanitarian Law, sometimes referred to as the laws of war, which regulate armed conflict, is seriously threatened by the use of artificial intelligence in combat. Important concepts like difference, proportionality, necessity, and responsibility are established by the Geneva Conventions 1949[3] and their Additional Protocols 1977[4]. However, these values are broken by AI-powered autonomous weaponry, which presents significant moral, legal, and humanitarian issues.

A. Violation of the Principle of Distinction

To avoid needless harm, IHL mandates that parties to a conflict make a distinction between combatants and civilians. Autonomous weapons powered by AI, however, lack human judgment and might not be able to distinguish between military and civilian targets. AI systems, for example, rely on data algorithms and pattern recognition, which can misclassify non-combatants as threats or misread civilian actions. AI-powered drones have allegedly targeted civilian infrastructure in wars like the Russia-Ukraine war, in violation of Article 51(4) of Additional Protocol I of the Geneva Conventions, which forbids indiscriminate strikes[5]. Autonomous drones with AI-based facial recognition and object identification lack contextual awareness, which might result in civilian casualties when AI misidentifies non-combatants as hostile troops.

B. Violation of the Principle of Proportionality

According to IHL, military assaults must be proportionate, which means that the expected military benefit cannot be outweighed by civilian casualties. AI-powered weapons are

[3] Geneva Convention Relative to the Protection of Civilian Persons in Time of War (Fourth Geneva Convention), Aug. 12, 1949, 6 U.S.T. 3516, 75 U.N.T.S. 287.
[4] Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol I), June 8, 1977, 1125 U.N.T.S. 3.
[5] Siregar N, Aini DC, Rehulina R, Subandi AY and Mirza IMM, 'The Use of Artificial Intelligence in Armed Conflict under International Law' (2024) 10(2) Hasanuddin Law Review 189 https://doi.org/10.20956/halrev.v10i2.5267 (last visited May 1, 2025).

incapable of evaluating the proportionality of an attack in the same manner that human commanders or soldiers do, and they lack moral thinking. Without recognizing the high potential of civilian casualties, an AI-operated missile system might attack an enemy combatant inside a heavily populated region. Under Article 57 of Additional Protocol I[6], such attacks would be illegal since they cause a great deal of collateral harm. AI systems may also unnecessarily intensify disputes. Article 35(1) of Additional Protocol I[7], which forbids needless suffering, may be violated by autonomous weapons that are programmed to respond immediately to threats and launch retaliatory strikes without human participation.

C. Absence of Human Control and Accountability

The foundation of IHL is the idea that states or individuals may be held responsible for war crimes. However, autonomous weaponry powered by AI raise legal questions about who is liable for illegal actions taken by AI. Mens rea, or criminal intent, is a prerequisite for war crimes prosecutions under the Rome Statute of the International Criminal Court 1998 (ICC)[8]. It becomes challenging to hold someone accountable since AI lacks mind and intent. The Geneva Conventions, which place a strong emphasis on personal responsibility for war crimes, run counter to this legal loophole.

D. Risk of Autonomous Weapons Violating the Ban on Unnecessary Suffering

IHL prohibits weapons that cause unnecessary suffering or superfluous injury (Article 35(2) of Additional Protocol I)[9]. Because autonomous weapons are incapable of making moral decisions, they may commit cruel murders, torture, or cause severe damage. If compromised or broken, deadly autonomous robots could carry on assaulting unchecked and causing random damage. The Martens Clause (1899 Hague Convention), which states that war must be governed by moral and ethical standards, is violated in this way. Furthermore, killing may become less humanitarian as a result of AI-powered automated decision-making in conflict, which would go against the 1949 Third and Fourth Geneva

[6] Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol I), art. 57, June 8, 1977, 1125 U.N.T.S. 3, https://treaties.un.org/pages/showDetails.aspx?objid=08000002800f3586 (last visited May 1, 2025).
[7] Ibid
[8] Rome Statute of the International Criminal Court, July 17, 1998, 2187 U.N.T.S. 3, https://treaties.un.org/doc/publication/unts/volume%202187/volume-2187-i-38544-english.pdf (last visited May 1, 2025).
[9] Gevorgyan MH, 'Crossing Boundaries: Autonomous Weapon Systems and the Challenge of IHL Compliance' (2023) 2023(3) International Journal of Law, Ethics, and Technology 21–45 https://doi.org/10.55574/fhze9018 (last visited May 1, 2025).

Conventions' values of dignity and compassionate treatment.

E. Cyber Warfare and AI: Unregulated Destruction

Article 54 of Additional Protocol I, which forbids assaults on items essential to civilian survival, could be violated by AI-powered cyberattacks on civilian infrastructure (such as hospitals, water supplies, or energy networks), which could indirectly kill thousands of people. It would be a war crime under IHL if an AI-controlled cyberattack on a power grid in a conflict area disabled hospitals and killed a large number of civilians. However, there is a risky legal gap because current legislation does not specifically address AI's involvement in cyberwarfare.

V. Challenges Posed by Autonomous Weapons

A. Lack of Accountability and Legal Ambiguity

The question of accountability is one of the main problems with autonomous weapons. Determining legal liability for AWS's acts becomes challenging because they function with little to no human intervention. It is unclear who is responsible if an autonomous system violates international humanitarian law the state using the weapon, the operator, or the creator. The core concepts of justice and compensation in combat are compromised by this legal ambiguity. There are now insufficient procedures in place in international courts and legal organizations to adequately handle these accountability gaps. It is still difficult to hold any business accountable for AWS misbehavior in the absence of defined legal frameworks. The UN has underlined how important it is to close these gaps with stricter laws.

B. Challenges in Compliance with International Humanitarian Law

Another major issue that AWS presents is ensuring compliance with IHL. Combatants must distinguish between military objectives and civilians in order to adhere to the principles of differentiation and proportionality. Autonomous weapons, however, might not have the sophisticated judgment needed to adhere to these guidelines. AI systems can find it difficult to correctly assess complicated battlefield conditions, in contrast to human soldiers. Concerns regarding possible breaches of humanitarian law are raised by the incapacity to use ethical reasoning. Attempts to guarantee compliance with the norms of war are made more difficult by the unpredictable nature of AWS's reactions. AWS could do indiscriminate harm in the absence of adequate controls, undermining international efforts to reduce civilian mortality in armed conflicts.

C. Risk of Escalation and Global Arms Race

There is a greater chance that international hostilities will intensify as autonomous weapons proliferate. Nations may engage in an arms race to create better AWS as a result of the rapid advancement of AI-driven military technologies. Unintended wars could become more likely as a result of this competitive pursuit of military AI, which could decrease the thresholds for armed conflict. These risks are made worse by the lack of thorough international laws. Because AWS is automated, decisions may be made quickly without human review, which could limit the number of opportunities for amicable solutions. The UN has issued numerous warnings about the risks of an unbridled weapons race in artificial intelligence. Global security depends on the creation of international accords to stop the spread of AI weapons.

D. Ethical and Humanitarian Concerns

There are serious moral and humanitarian issues with the use of autonomous weapons. AI's capacity to decide life-or-death situations without human input calls into question core moral precepts. Human dignity is diminished, according to critics, when machines are allowed to decide a person's destiny. Whether AWS should ever be allowed to function autonomously in combat is another ethical concern. Lethal force could become more acceptable if AWS is used to desensitize military decision-making. Concerns over the psychological and societal effects of AI-driven combat have been voiced by humanitarian organizations. States have been asked by the UN to give ethical issues first priority when developing and implementing AWS.

E. Technological Limitations and Security Risks

AWS is still vulnerable to technological issues and failures despite advances in AI technology. Unintentional attacks brought on by malfunctions or hacking situations could cause serious damage. Because adversaries could influence AWS systems for malicious reasons, cybersecurity attacks represent a serious danger. Security precautions are made more difficult by the unpredictable nature of AI activity in intricate conflict situations. AWS could turn into a problem rather than an asset in the absence of strong protections. The UN has emphasized the need to put strong security measures in place to stop the abuse of AI weapons. Maintaining international peace and confidence in AI-powered defense systems requires addressing these technical threats.

F. Difficulty in Establishing Global Regulations

Reaching a global agreement on AWS legislation is still quite difficult. The usage and

limitations of autonomous weapons are seen differently by different countries. While some support a complete prohibition, others put military benefits ahead of moral considerations. Negotiations for legally binding treaties have halted as a result of this disagreement. Although the UN has been instrumental in promoting dialogue, things are still moving slowly. Regulatory initiatives are further undermined by a lack of enforcement measures. The establishment of globally recognized standards necessitates consistent diplomatic collaboration. AWS may continue to operate in morally and legally dubious areas in the absence of clear and binding legislation.

VI. UN Conventions and Legal Frameworks

The United Nation has proposed various conventions and protocols to prevent and prohibit the usage of AI based autonomous weapons. The significant protocols addressed below:

A. Convention on Certain Conventional Weapons 1980[10]

In international law, the regulation of AI-based autonomous weapons systems is still a crucial and developing topic. The 1980 Convention on Certain Conventional Weapons (CCW), which attempts to limit or outlaw weapons deemed to cause excessive harm or have indiscriminate effects, is the main multilateral forum addressing these issues. AI-enabled autonomous weapons have been a topic of discussion for the CCW's Group of Governmental Experts (GGE) on Lethal Autonomous Weapons Systems (LAWS) since 2014. The GGE focuses on identifying autonomous weapons, evaluating the hazards of weakened human control, and stressing adherence to international humanitarian law concepts including distinction, proportionality, and precaution even though no legally enforceable regulations have been formed as of yet. India actively participates in these debates, promoting real human oversight and responsibility in the use of these weapons.

B. Geneva Conventions and Additional Protocols (1949, 1977)[11]

IHL's core concepts, such as protecting civilians and the need for distinction, proportionality, and prudence in attacks, were established by the 1949 Geneva Conventions and their 1977 Additional Protocols (Articles 48, 51, 54, 57 of Additional Protocol I). Although AI and

[10] Convention on Certain Conventional Weapons (CCW), opened for signature Oct. 10, 1980, 1342 U.N.T.S. 137, https://treaties.un.org/doc/Publication/UNTS/Volume%201342/v1342.pdf (last visited May 1, 2025).
[11] Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol I), June 8, 1977, 1125 U.N.T.S. 3, https://treaties.un.org/pages/showDetails.aspx?objid=08000002800f3586 (last visited May 1, 2025).

autonomous technologies were not yet developed, these treaties' tenets apply to all forms of warfare, including AWS.

C. United Nations Charter, 1945[12]

The use of force in international relations is also governed by the 1945 United Nations Charter, which mandates that all military operations including those employing AWS abide by its ban on the threat or use of force, with the exception of self-defense or UN Security Council authorization**.**

D. UN Secretary-General's Report on Lethal Autonomous Weapons Systems (2018)[13]

In order to solve the legal, moral, and security issues raised by AWS, international collaboration is essential, according to the United Nations Secretary-General's 2018 Report on Lethal Autonomous Weapons Systems. In order to preserve human dignity and guarantee adherence to international law, the paper highlights the significance of preserving "meaningful human control" over military systems.

E. UN Human Rights Council (HRC) Resolutions[14]

the UN Human Rights Council has passed resolutions highlighting the implications of AWS for human rights and urging accountability, openness, and adherence to human rights legislation in both its creation and application. There are still many unanswered ethical and legal questions. One of the main issues is the accountability gap, which occurs when it's unclear who is accountable for illegal actions taken by autonomous systems the manufacturer, the operator, or the programmer. Additionally, concerns remain about AWS's capacity to consistently adhere to IHL standards, namely with regard to identifying combatants from civilians and implementing proportionality and prudence. The legal environment is further complicated by the possibility of proliferation to non-state actors and the moral repercussions of giving robots the ability to make life-or-death decisions.

India stresses adherence to current IHL standards and upholds the idea of meaningful human

[12] United Nations Charter art. 2(4), June 26, 1945, 59 Stat. 1031, 1 Bevans 15, https://www.un.org/en/about-us/un-charter/full-text (last visited May 1, 2025).
[13] UN Secretary-General, Report on Lethal Autonomous Weapons Systems, UN Doc. A/73/544 (2018), https://undocs.org/A/73/544 (last visited May 1, 2025).
[14] UN Guiding Principles on Business and Human Rights, UN Doc. A/HRC/17/31 (2011), https://www.ohchr.org/documents/publications/guidingprinciplesbusinesshr_en.pdf (last visited May 1, 2025).

control and accountability, despite the fact that it has not ratified any treaties pertaining to autonomous weapons. In order to reach an international consensus on regulation, it promotes a cautious approach and continual discussion within the framework of the CCW. The UN Guiding Principles on Business and Human Rights (2011), which address the obligations of corporations creating conflict-related technologies, and the International Covenant on Civil and Political Rights (ICCPR), 1966[15], which safeguards the right to life and other human rights that may be impacted by autonomous systems, are additional international instruments that are indirectly related to AI and AWS. In addition, the Open-ended Working Group (OEWG) on Emerging Technologies in the Area of LAWS is still working on guidelines for regulation and transparency.

VII. Case Studies on the Use of AI in the Russia-Ukraine Conflict

A. AI-Driven Drone Warfare

Artificial intelligence has been used in military operations during the Russia-Ukraine conflict, especially in drone warfare. By developing automated "killer robots," Ukrainian troops have improved drone technology and eliminated the need for trained pilots. In order to combat Russian disinformation tactics, AI has also been employed in information operations and cyberwarfare. While Russian military fatalities may surpass 90,000, Ukrainian President Zelensky announced approximately 43,000 soldier dead as of December 2024[16]. Attacks are now more accurate and deadly because to the use of AI-enabled weapons, such self-governing drones.

B. Ethical and Legal Implications

There are serious moral and legal concerns with the application of AI in combat. Existing international humanitarian laws are put to the test by autonomous weapons systems that can decide life-or-death situations without human participation. It becomes difficult to assign blame for AI-driven behavior, particularly when these systems malfunction or inadvertently do harm. The war between Russia and Ukraine highlights the urgent need for international laws controlling the application of AI in combat settings in order to guard against potential misuse

[15] International Covenant on Civil and Political Rights, opened for signature Dec. 16, 1966, 999 U.N.T.S. 171, https://www.ohchr.org/en/instruments-mechanisms/instruments/international-covenant-civil-and-political-rights (last visited May 1, 2025).

[16] Sam Bendett and Ainikki Riikonen, 'Roles and Implications of AI in the Russian-Ukrainian Conflict' (Center for a New American Security, 2023) https://www.cnas.org/publications/commentary/roles-and-implications-of-ai-in-the-russian-ukrainian-conflict (last visited May 1, 2025).

and guarantee adherence to moral principles.

C. Lessons for Future Conflicts

Important lessons for future combat can be learned from the application of AI to the Russia-Ukraine conflict. It illustrates how artificial intelligence may revolutionize military capabilities, from waging complex information warfare to increasing operational efficiency. But it also draws attention to the problems that come with it, such as increased casualty rates and moral quandaries. These lessons highlight the need for strong international frameworks to control the military applications of AI, making sure that advances in technology don't surpass the creation of appropriate legal and ethical standards[17].

VIII. UN Role on preventing AI in Warfare

By improving military operations' accuracy and efficiency, artificial intelligence has revolutionized contemporary warfare. However, questions concerning the moral, legal, and humanitarian ramifications of using autonomous weapons systems have been raised. In order to guarantee adherence to International Humanitarian Law and stop the abuse of AI in armed conflicts, the UN has acknowledged the need for a regulatory framework.

A. Establishing a Legally Binding Treaty on Autonomous Weapons

The creation of a legally enforceable international agreement that forbids or restricts the employment of fully autonomous weapons is one of the most important steps toward stopping AI warfare. AWS regulation has been discussed by a number of UN entities, notably the Convention on Certain Conventional Weapons (CCW). Nevertheless, no legally binding agreement has been made. The capabilities of AI weapons, explicit prohibitions, and accountability procedures should all be outlined in a new treaty. Similar to the 1997 Ottawa Treaty on Anti-Personnel Mines, a number of countries have called for a prohibition on deadly autonomous weapons[18], but opposition from major military powers has hindered progress.

B. Strengthening International Humanitarian Law for AI Warfare

[17] Josh Taylor, 'AI Is Reshaping Drone Warfare in Russia and Ukraine' (New York Post, 29 September 2024) https://nypost.com/2024/09/29/world-news/ai-is-reshaping-drone-warfare-in-russian-and-ukraine/ (last visited May 1, 2025).

[18] Vincent Boulanin, 'The Impact of Artificial Intelligence on Strategic Stability and Nuclear Risk' (2020) SIPRI https://www.sipri.org/publications/2020/impact-artificial-intelligence-strategic-stability (last visited May 1, 2025)

Existing International Humanitarian Law must be adapted to address the complexities introduced by AI in warfare. The Geneva Conventions and Additional Protocols emphasize distinction, proportionality, and necessity in military operations, but these principles are difficult to enforce when autonomous systems operate without human intervention[19]. In order to guarantee that AI-driven warfare complies with humanitarian norms, the UN ought to push for revisions to IHL that specifically control AWS. The scope of autonomous decision-making in conflict areas may be clarified by a new protocol.

C. Creating an AI Weapons Oversight Committee

A permanent oversight body should be established by the UN to keep an eye on the advancement and use of AI in military applications. Under the auspices of the UN Office for Disarmament Affairs (UNODA), this committee would evaluate adherence to new legal frameworks, look into infractions, and suggest changes to policy. The committee should be able to evaluate AI systems used in combat, carry out inspections, and guarantee accountability and openness among UN members. To prevent the misuse of AI warfare, similar control procedures as are in place for chemical and nuclear weapons must be extended.

D. **Establishing a Ban on Fully Autonomous Weapons**

A complete prohibition on fully autonomous weapons has been demanded by numerous experts and advocacy organizations, including Human Rights Watch and the Campaign to Stop Killer Robots. Although the UN has discussed this matter in a number of forums, no specific ban has been put in place. By ensuring that deadly decision-making is still controlled by humans, a ban would avoid the moral and ethical quandaries that arise from AI-driven murders. Examples like the 1972 Biological Weapons Convention (BWC) show that if diplomatic efforts are made, an international prohibition is possible[20]. Negotiations to establish a legally enforceable prohibition on fully autonomous weapons with lethal capability should be started by the UN.

E.Encouraging Transparency and Data Sharing on AI Military Use

Transparency measures that force countries to reveal their AI weapons development, testing,

[19] Michael N Schmitt, 'Autonomous Weapons Systems and International Humanitarian Law: A Reply to Critics' (2013) Harvard National Security Journal https://harvardnsj.org/wp-content/uploads/sites/13/2013/10/Schmitt-Autonomous-Weapons-Systems.pdf (last visited May 1, 2025)

[20] Human Rights Watch, 'Stopping Killer Robots: Country Positions on Banning Fully Autonomous Weapons and Retaining Human Control' (2023) https://www.hrw.org/report/2023/03/27/stopping-killer-robots (last visited May 1, 2025).)

and deployment should be mandated by the UN. Misuse, arms competitions, and the unapproved spread of AI military technologies can all be avoided with transparency. Reports outlining the safety precautions and ethical considerations included into AI-driven weaponry should be mandatory for nations developing such systems[21]. A UN-run worldwide AI registry would make data exchange easier and keep rogue states and non-state actors from obtaining AI weapons.

F. Implementing Ethical AI Guidelines in Military Research

The UN should create international ethical standards for AI development in defense industry to stop AI from being carelessly used as a weapon. These rules ought to be in conformity with the OECD AI Principles and the EU Artificial Intelligence Act. Safeguards include human override capabilities, fail-safe procedures, and ethical review boards should be incorporated into the design of military AI.[22]. Establishing ethical norms would reduce the risks of unintended escalation and unlawful use of AI weapons.

G. Accountability and Use of AI in Cyber Warfare and Misinformation

To ensure that state actors, developers, and commanders can be held accountable for war crimes involving artificial intelligence, the UN should revise the Rome Statute of the International Criminal Court to include such offenses. AI shouldn't be used as a cover for war crimes, and human operators should still be held accountable. In order to stop cyberattacks and false information, AI should also be incorporated into cybercrime treaties. AI is employed in disinformation operations and cyberwarfare in addition to physical assaults. AI-specific clauses should be incorporated by the UN into current cybercrime treaties, such as the Budapest Convention on Cybercrime[23]. It must be illegal for countries to use AI to carry out cyberattacks on vital infrastructure or to sway public opinion through deepfakes and propaganda produced by AI. Resolutions highlighting the moral and security threats posed by AI in cyberwarfare ought to be passed by the UN General Assembly.

[21] UNIDIR, 'Transparency in Military AI: A Necessary Step for Global Security' (2022) https://www.unidir.org/transparency-military-ai (last visited May 1, 2025).)
[22] OECD, 'Recommendation on Artificial Intelligence' (2019) https://www.oecd.org/going-digital/ai/principles/ (last visited May 1, 2025).)
[23] UN Cybercrime Treaty, 'Proposed Regulations for AI in Cyber Conflict' (2023) https://www.un.org/en/ai-cyber-regulations (last visited May 1, 2025).)

VIII. Recommendations

A. **Establishing an AI Disarmament and Non-Proliferation Treaty**

The UN should draft an AI Disarmament and Non-Proliferation Treaty based on the Nuclear Non-Proliferation Treaty (NPT) to stop the unchecked proliferation of autonomous weapons. The manufacturing, storage, and transfer of lethal autonomous weapons (LAWs) between countries should be rigorously restricted under this convention, in contrast to current debates that center on AI governance. This would stop an arms race and lessen the possibility that autonomous weapons might end up in the hands of non-state actors or be utilized in asymmetric warfare. In order to guarantee compliance, the pact should include contain verification procedures, such as UN-supervised inspections of AI weapons. Trade limitations on military AI technologies or sanctions should be applied to nations that violate the treaty. The gradual removal of completely autonomous lethal weapons from military stockpiles should be a long-term objective, with an emphasis on defense-oriented AI applications rather than offensive ones.

B. **Creating an AI Warfare Risk Assessment and Prevention Council**

A dedicated AI Warfare Risk Assessment and Prevention Council made up of professionals in AI, military strategy, ethics, and international law ought to be established by the UN. This entity would function autonomously, offering early warnings about the abuse of AI in combat and suggesting countermeasures before hostilities worsen. To keep an eye on AI-related breaches of international humanitarian law, the council ought to cooperate with organizations like as the International Criminal Court (ICC) and the International Court of Justice (ICJ). The council's conclusions ought to direct international policymakers' decisions in real time, guaranteeing prompt diplomatic actions. It should also develop a grading system for dangers posed by AI weapons, classifying them according to their possible humanitarian implications. The international community might use this rating to prioritize the prohibition of the most deadly AI-powered weapons and create de-escalation plans for armed conflicts involving AI.3.

C. Promoting AI-Powered Peacekeeping and Conflict Resolution Mechanisms

Instead of permitting AI to be used as a weapon, the UN need to promote its application in diplomatic conflict resolution and peacekeeping. AI might be used to monitor ceasefire agreements, conduct autonomous surveillance for peacekeeping missions, and identify trends in military escalation to stop conflicts before they begin. Furthermore, AI might be included

into mediation systems, which would use machine learning to evaluate diplomatic discussions and recommend peaceful dispute settlement techniques. In order to take proactive diplomatic measures, the UN might spend money on AI-driven early warning systems that forecast future crises based on patterns in military, political, and economic data. With this strategy, AI would no longer be used as a weapon for conflict but rather as a tool for maintaining international peace and stability.

D. Establishing a Global AI Military Ban on Civilian Targeting

The protection of civilians is a core tenet of international humanitarian law , yet autonomous weapons raise the possibility of indiscriminate assaults. A worldwide AI military prohibition that forbids the creation or use of AI-powered systems that can attack civilians should be implemented by the UN. Autonomous drones, AI-powered missile weapons, and robotic ground forces without human supervision should be the main targets of this prohibition. To guarantee adherence to IHL, states should also be compelled to make their AI military initiatives publicly known. Regular audits of AI-based military technology should be carried out by an impartial UN compliance organization to stop the clandestine creation of systems that target civilians. The idea that AI-induced war crimes will not go unpunished should be reinforced by the idea that nations found in violation should be subject to international prosecution under the ICC.

E. Encouraging a Global Ethical AI Pact for Defense Industries

Since businesses create autonomous military technology for financial gain, the private sector is heavily involved in the weaponization of AI. A Global Ethical AI Pact should be established by the UN, mandating that tech companies and defense contractors pledge to do ethical AI research and reject the creation of autonomous killing machines. It is important to encourage businesses like Google, Microsoft, and defense contractors like Lockheed Martin to sign legally binding contracts guaranteeing that their AI advancements are only utilized for cybersecurity, defense, and humanitarian purposes. The UN might also offer financial rewards to businesses that follow moral AI guidelines, such tax breaks or international recognition. The implementation of fail-safe features in autonomous systems, which prevent their fatal use without express human authority, should be mandatory for AI developers. This agreement will drastically limit the commercialization and spread of deadly autonomous weapons by holding companies responsible.

IX. Conclusion

There are advantages and disadvantages of using AI in contemporary combat. The use of AI-driven technologies presents serious ethical, legal, and humanitarian issues even while they have the potential to improve military effectiveness and lower risks to human soldiers. Unresolved issues include accountability, IHL compliance, and the ethical ramifications of giving machines the ability to use fatal force. International regulatory frameworks must change as the use of autonomous weapons grows in order to fully address these concerns.

The UN has been instrumental in promoting the regulation of AI in combat, fostering dialogue among participating nations, and putting up legislative measures to reduce the risks linked with AWS. But reaching a universally recognized framework calls for persistent diplomatic efforts, reaching an agreement, and a dedication to humanitarian ideals. In order to ensure that AI-driven combat stays within the parameters of international law, the future of AI in armed conflict will depend on the international community's capacity to strike a balance between technological improvements and ethical and legal considerations.