

Committee: Disarmament and International Security Committee

Issue: Assessing the Impact of Artificial Intelligence on Strategic Warfare in regards to Increased Civilian Casualties

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Position: Co-Chair

PERSONAL INTRODUCTION

Dear Delegates,

My name is Dorothea Bulgaropulos, and I am an 11th Grader at the Deutsche Schule Thessaloniki. It is my utmost honor to serve this year as a Co-Chair in the Disarmament and International Security Committee of this year's DSTMUN. I started my MUN career back in 2020, and since then I have participated in 8 conferences, with this one being my first time as a Student Officer.

First and foremost, I would like to welcome and congratulate you on participating in this year's conference, during which you will have the opportunity to not only enrich your English vocabulary but also to expand your knowledge on diverse ongoing political topics and to develop your critical thinking. From my experience as a delegate, I have learned that every MUN conference is unique and you will experience a combination of work and diplomacy, but also of fun and friendships.

The second topic of this committee refers to "Assessing the Impact of Artificial Intelligence on Strategic Warfare in regards to Increased Civilian Casualties". This guide will provide you with all the useful and necessary information you will need before continuing with your own research about your country's policies.

My goal is to help you better understand the topic and to find feasible and effective solutions. Of course, you are not encouraged to only rely on this study guide but to do your research as well, to get a better insight into the issues at hand. Thus, you will be well prepared for the conference and you will have the courage to speak up and raise your voice.

We hope you enjoy this conference and during these three days have fruitful debates by sharing your passion for MUN with other people from all around the world as well.

Should any questions and clarifications arise regarding this Study Guide and the topic as a whole, feel free to contact me any time via email at

enaportokali@gmail.com. I am looking forward to meeting you all to have an amazing time!

Kind regards,
Dorothea Bulgaropulos

TOPIC INTRODUCTION

Artificial Intelligence (AI) has become a major player in today's society and has changed every aspect of human life, including warfare. AI-controlled weapons can be referred to as “smart weapons” which perceive the surroundings, define the course and achieve the goal.¹ A new era in the strategy of war is being introduced by mechanizing social engineering attacks, increasing the scale of attacks, detecting vulnerability, influencing campaigns, repurposing commercial AI systems and manipulating information availability. Air defense systems integrated with AI processing capabilities will be able to properly detect and intercept incoming missiles¹. Data is being collected and analyzed making it easier to identify patterns of behavior, make recommendations for military operations, or even make predictions about future actions or situations². Strategic warfare based on AI has been used in recent wars, including the Russia-Ukraine war and the war in Gaza. Warfare based on Artificial Intelligence presents risks such as an increase in the dangers posed by autonomous weapons, greater harm to civilians and civilian infrastructure from cyber operations and information warfare and a negative impact on the quality of human decision-making in military settings.

By welcoming AI into the realm of military forces, human implication and performance are not directly suspended but boosted. AI raises some major concerns about the protection of civilians and compliance with international humanitarian law, including the need to preserve human judgment in legal decisions, especially given the opaque and biased nature of many of today's machine-learning systems.³ AI can have a positive impact on military operations, by enhancing the effectiveness of the decision-making process and being more efficient. AI systems, with their near

¹ International Committee Of The Red Cross. “What You Need to Know about Artificial Intelligence in Armed Conflict.” *Www.icrc.org*, 5 Oct. 2023, www.icrc.org/en/document/what-you-need-know-about-artificial-intelligence-armed-conflict.

² Richemond-Barak, Daphné. “Beyond Killer Robots: How AI Impacts Security, Military Affairs.” *C4ISRNet*, 30 Sept. 2022, www.c4isrnet.com/unmanned/robotics/2022/09/30/beyond-killer-robots-how-ai-impacts-security-military-affairs/.

³ “What You Need to Know about Artificial Intelligence in Armed Conflict.” *Www.icrc.org*, 5 Oct. 2023, www.icrc.org/en/document/what-you-need-know-about-artificial-intelligence-armed-conflict

infinite and faultless memory, lack of emotional investment and potentially unbiased analyses, may continue to complement future military leaders with competitive cognitive advantages⁴. AI could alter the nature of war itself because wars will be fought by robotic systems, not people⁵.

DEFINITION OF KEY TERMS

Algorithm

An algorithm is a systematic procedure that produces in a finite number of steps the answer to a question or the solution to a problem⁵. AI algorithms are the backbone of artificial intelligence, enabling machines to simulate human-like intelligence and perform complex tasks autonomously. These algorithms utilize computational techniques to process data, extract meaningful insights, and make informed decisions⁶.

Artificial Intelligence (AI)

Artificial Intelligence refers to computers that are controlled by human-made algorithms and are able to complete tasks independently by simulating the human intelligence itself. AI is based on the idea that robots think and act like humans. Tasks are perception, learning, action and reasoning.

Artificial General Intelligence (AGI)

AGI is the ability of an intelligent agent to accomplish every human possible task. It is well known to be very intelligent, where an agent far exceeds human-level intelligence⁷.

⁴ (PDF) Artificial Intelligence in armed forces-an analysis. (n.d.-a).

https://www.researchgate.net/publication/344436899_ARTIFICIAL_INTELLIGENCE_IN_ARMED_FORCE_S-AN_ANALYSIS

⁵The Editors of Encyclopaedia Britannica. "Algorithm | Mathematics | Britannica." Encyclopædia Britannica, 2019, www.britannica.com/science/algorithm

⁶ GeeksforGeeks. "Artificial Intelligence (AI) Algorithms." GeeksforGeeks, GeeksforGeeks, 19 Mar. 2024, www.geeksforgeeks.org/ai-algorithms/#:~:text=AI%20algorithms%20are%20the%20backbone%20of%20artificial%20intelligence%2C Accessed 8 Aug. 2024

⁷ Walsh, Toby. "The Problem with Artificial (General) Intelligence in Warfare." Centre for International Governance Innovation, 28 Nov. 2022, <http://www.cigionline.org/articles/the-problem-with-artificial-general-intelligence-in-warfare/>

Ballistic missiles

A ballistic missile is a rocket-propelled self-guided strategic weapons system that follows a ballistic trajectory to deliver a payload from its launch site to a predetermined target. They can carry conventional high explosives as well as chemical, biological, or nuclear munitions. Ballistic missiles can be launched from aircraft, ships, and submarines in addition to land-based silos and mobile platforms⁸.

Civilian Casualties

People who are not injured or killed by other civilians, but by terrorists or in the wars implicated groups. In modern armed conflicts, civilians usually fall prey to harm in densely urbanized areas. Civilians also suffer from destructed infrastructure, and lack of food, water, and medical aid.

Emerging and Disruptive Technology (EDT)

Emerging and disruptive technologies are technologies or scientific discoveries that are expected to have a major, or perhaps revolutionary, effect on defense, security or enterprise functions. The European Defence Agency (EDA) identifies six particularly disruptive technologies: quantum-based technologies; artificial intelligence (AI); robotics and autonomous weapons systems; big data analytics; hypersonic weapons systems and space technologies; and new advanced materials⁹.

Lethal Autonomous Weapons (LAWs)

Lethal Autonomous weapon systems are any weapons that select and apply force to targets without human intervention. A person activates an autonomous weapon, but they do not know specifically who or what it will strike, nor precisely where and when that strike will occur. This is because an autonomous weapon is triggered by sensors and software, which match what the sensors detect in the environment against a 'target profile'¹⁰. LAWs are being used in offensive and defensive warfare as well.

⁸ "Ballistic Missile | Definition & Facts | Britannica." *Encyclopædia Britannica*, 2019, www.britannica.com/technology/ballistic-missile.

⁹ Clapp, Sebastian. *AT a GLANCE*. 2022, [europarl.europa.eu/RegData/etudes/ATAG/2022/729370/EPRS_ATA\(2022\)729370_EN.pdf](http://europarl.europa.eu/RegData/etudes/ATAG/2022/729370/EPRS_ATA(2022)729370_EN.pdf)

¹⁰ International Committee of the Red Cross. "What You Need to Know about Autonomous Weapons." *Www.icrc.org*, 22 July 2022, www.icrc.org/en/document/what-you-need-know-about-autonomous-weapons

Small arms and light weapons (SALWs)

Small arms and light weapons can be portable by individuals in the armed forces and they are being utilized in authoritarian governments, gangs and terrorist organizations. Small arms are individual-service kinetic projectile firearms, while light weapons are designed for use by several persons serving as crew¹¹.

Strategic Warfare

Strategic Warfare refers to the strategy in war, which uses all available military, political and ethical means to wage war and eventually gain the upper hand. It relies on coordination, organization and execution.

BACKGROUND INFORMATION

Development of Technology in War

Throughout the years, war has undergone a huge evolution and has become even more modernized and equipped with emerging technologies that are being developed in this era. During the Industrial Revolution in the 19th century, engines and machines gained fertile ground in the world, introducing a new century to the world. As a consequence, the character of military and armed conflicts changed which became evident in the First World War. There were machine guns, airplanes and motorized vehicles for transportation.

This technology later expanded and improved during the vast world war from 1939-1945. Atomic bombs, radar systems and guided missiles were created. An example is the two Nuclear Bombs in Nagasaki and Hiroshima, created by Oppenheimer in the US. It was the first time atomic energy was used for destruction, and until now, scientists have not stopped developing new weapons based on nuclear energy. These days, artificial intelligence is also a major companion of strategic atomic warfare, increasing simultaneously the risk of massive disruption.

In the late 20th century, the world was at the cliff of a total catastrophe as the two world powers, the United States of America and the Soviet Union, competed against each other, posing a threat to the rest of the world by threatening with nuclear weapons that could destroy the whole planet. Not only nuclear weapons existed, but also ballistic missiles, missile defense systems and satellites for space exploration. The world has been immersed in a new era, where computer systems

¹¹ "Small Arms and Light Weapons – IPB – International Peace Bureau." *ipb.org*, ipb.org/small-arms-and-light-weapons/. Accessed 20 July 2024.

dominate and develop. Thus, Artificial Intelligence was also developed, which is directly applied in wars today. It can be referred to as a “Digital World War” with the US and China exploring new technology and applying it in the military.

Incorporation of Artificial Intelligence in Strategic Warfare

The use of AI-controlled systems or robots, which are used in wars such as those in Gaza and Ukraine, should not be reconsidered. There is talk of LAWs, which were first sighted in 2020 in Libya, where the initial instance of a deadly autonomous weapon being used occurred when it is believed that a Turkish drone independently attacked people with a weapon. Nearly 50 percent of all violent deaths between 2010 and 2015, more than 200,000 each year, involved small arms and light weapons¹².

In February 2020, the Defense Department formally adopted five principles of artificial intelligence ethics as a framework to design, develop, deploy and use AI in the military. The department stated that AI will be responsible, equitable, traceable, reliable and governable¹³.

¹² “Half of All Violent Deaths Involve Small Arms and Light Weapons | UN News.” *News.un.org*, 5 Feb. 2020, news.un.org/en/story/2020/02/1056762#:~:text=Nearly%2050%20per%20center%20of%20all%20violent%20deaths. Accessed 20 July 2024.

¹³ Phelps, Wayne. “The Ethical Use of AI in the Security, Defense Industry.” *Www.nationaldefensemagazine.org*, 21 Dec. 2021, www.nationaldefensemagazine.org/articles/2021/12/21/the-ethical-use-of-ai-in-the-security-defense-industry.



Figure 1: The seven patterns of AI Artificial Intelligence in the Military¹⁴

Case studies

Russian-Ukrainian War

In February 2022, Russia invaded Ukraine in the regions of Luhansk and Donetsk. Ever since, civilians have been undergoing major difficulties, including being forced to migrate to other countries. More than 70.000 people were killed by means including lethal autonomous weapons¹⁵. The Russian military and the country's defense industry are also considering other concepts for Russia's envisioned high-tech warfare—unmanned and Autonomous Ground Vehicles (UGVs) that work together with Unmanned Aerial Vehicles (UAVs) and numerous uncrewed maritime systems, as the Toloka TK-150, Marichka, Orkan, BEC-1000, and Vizir. These research and development efforts paint a picture of a military seeking to combine legacy and modern systems in a networked environment, where artificial intelligence is not intended to replace humans just yet, but to make a human operator's job more effective¹⁶.

War in Gaza

¹⁴ Adib Bin Rashid, et al. "Artificial Intelligence in the Military: An Overview of the Capabilities, Applications, and Challenges." *International Journal of Intelligent Systems*, vol. 2023, 6 Nov. 2023, pp. 1–31, <https://doi.org/10.1155/2023/8676366>.

¹⁵ "Dying by the Dozens Every Day" - Ukraine Losses Climb." *BBC News*, 29 Aug. 2023, www.bbc.co.uk/news/world-europe-66581217.

¹⁶ Massa, Mark. "The Ukraine War and Its Impact on Russian Development of Autonomous Weapons." *Atlantic Council*, 30 Aug. 2022, www.atlanticcouncil.org/content-series/airpower-after-ukraine/the-ukraine-war-and-its-impact-on-russian-development-of-autonomous-weapons/.

In October 2023, the Palestinian group Hamas attacked Israeli people near Gaza. This event was the beginning of the escalation, which resulted later in direct military confrontation. Artificial Intelligence has gained ground in this area, by enabling targeting with increased accuracy and by accelerating military operations. Israel is making use of these kinds of systems which can detect members of Hamas and minimize deliberation time. These systems are called "Lavender", "Where's daddy?" and "Gospel". "Lavender" is designed to attack the target when they are home and at night, which increases the chances that the target will be there, but also that their family members and neighbors will die with them. "Where is Daddy?" is used to track individuals marked as targets and bomb them when they are at home, and "The Gospel" is aimed at identifying buildings and structures where, according to the IDF, Hamas militants operate¹⁷. Statistics have shown a 10% inaccuracy rate for a system used to make 37,000 life-and-death decisions⁷. Thousands of unarmed and unprotected children and their families have lost their lives due to LAWs which cause collateral damage. Furthermore, Israeli aerospace industries are sending armed robots to the border of Gaza. These robots function as a substitution for soldiers that enforce the Israeli defense force, making it efficient and modern. Not only robots are used, but also drones.

AI-equipped drones utilize machine learning algorithms to collect and interpret data, enabling them to make informed decisions during flight. They can scan areas, detect anomalies, and even engage in complex tasks like thermal imaging or monitoring. The development of AI algorithms has enabled drones to operate autonomously, transforming them from simple flying machines into intelligent autonomous drones capable of executing intricate tasks. Drones equipped with AI can also adapt to changing battlefield conditions, making them invaluable assets in modern warfare¹⁸. Civilians in Gaza are not only undergoing harm and violence from the use of AI. More than 34.000 dead and over 766.000 injured people have been reported since October 2023 in Gaza and more than 60% of the buildings in Gaza have been

¹⁷ Pascual, Manuel G. "Lavender, Israel's Artificial Intelligence System That Decides Who to Bomb in Gaza." *EL PAÍS English*, 17 Apr. 2024, english.elpais.com/technology/2024-04-17/lavender-israels-artificial-intelligence-system-that-decides-who-to-bomb-in-gaza.html.

¹⁸ Koen.dejong@live.nl. "AI and Drones: Advancements and Applications in Unmanned Aerial Vehicles." *Visionplatform*, 27 Jan. 2024, visionplatform.ai/artificial-intelligence-drones/.

destroyed causing a lack of accommodation, electricity, nutrition and medical aid in this area¹⁹.



Figure 2: Israeli killer Robot in an operation in Gaza ²⁰

Problems faced by AI

Ethical implications of the usage of Artificial Intelligence in Wars

AI weapons have been intrinsically evident in wars these days, allowing concerns to be raised about their ethical implications and about the right to end a human life with a robot without human oversight. The capabilities of AI in wars are immense and pose a risk to every population. Machines lack the interpersonal skills and courage that a human being possesses. There is always the question of whether ending a human life is worth it or not or if the decision-making process relies on the International Humanitarian Law. The UN Secretary-General António Guterres claims that “machines with the power and discretion to take lives without human involvement are politically unacceptable, morally repugnant, and should be prohibited by international law”²¹. Moreover, it is crucial to establish who is responsible for the multiple losses made by a robot, when they are a result of the obedience of a pre-programmed command instead of human judgment. The rise of autonomous weapons could impact the traditional cycle involved

¹⁹ Gould, Lauren, et al. “Gaza War: Artificial Intelligence Is Changing the Speed of Targeting and Scale of Civilian Harm in Unprecedented Ways.” *The Conversation*, 23 Apr. 2024, theconversation.com/gaza-war-artificial-intelligence-is-changing-the-speed-of-targeting-and-scale-of-civilian-harm-in-unprecedented-ways-228050.

²⁰ Bing.com, 2024, th.bing.com/th/id/OIP.I9X5VZoPZDVFV3D4Wt4MNgHaE2?w=1500&h=984&rs=1&pid=ImgDetMain. Accessed 20 July 2024.

²¹ “Autonomous Weapons That Kill Must Be Banned, Insists UN Chief.” *UN News*, 25 Mar. 2019, news.un.org/en/story/2019/03/1035381

in the initiation, plateauing, and conclusion of conflicts by making leaders less willing to consider diplomatic and political means to resolve crises²².

Cybervulnerability

The weaknesses of AI systems are being exploited by criminals, allowing them to access the systems. The risk of hijacking and hacking an AI-controlled defense system is very high, making it therefore more likely to be a danger for the defense side. By hacking the algorithm and the code by the opponent, the robot can turn against the owner and cause collateral disruption²³. For example, cybercriminals may develop new orders or alter the old ones to make AI systems execute the opponent without their consciousness. Being able to effectively manage vulnerabilities not only enhances security programs but also helps limit the impact of successful attacks. This is why having an established vulnerability management system has become a necessity for organizations²⁴.

MAJOR COUNTRIES AND ORGANIZATIONS INVOLVED

Russian Federation

Russian President Vladimir Putin quoted back in 2017 in regards to Artificial Intelligence that “whoever becomes the leader in this sphere will become the ruler of the world”²⁵. Since February 2022, Russia has used AI-controlled forces and emerging technologies against Ukraine. This war has introduced a new revolution to the battlefield, with both sides testing new weapon systems. Due to sanctions imposed on Russia, which reduce its dependence on Western technology, China is providing Russia with emerging technologies, including AI technology. Russia emphasizes AI and selected emerging and Disruptive Technology (EDT) programs, with them being a source both of potentially rapid military modernization and of

²² “Will COVID-19 Hasten the Rise of Lethal Autonomous Weapons?” *Middle East Institute*, www.mei.edu/publications/will-covid-19-hasten-rise-lethal-autonomous-weapons

²³ “The Ethical Use of AI in the Security, Defense Industry.” www.nationaldefensemagazine.org, 21 Dec. 2021, www.nationaldefensemagazine.org/articles/2021/12/21/the-ethical-use-of-ai-in-the-security-defense-industry.

²⁴ “What Is a Cybersecurity Vulnerability? Definition and Types.” SecurityScorecard, securityscorecard.com/blog/what-is-a-cybersecurity-vulnerability-definition-and-types/.

²⁵ CNN, Radina Gigova. “Who Putin Thinks Will Rule the World.” CNN, 2 Sept. 2017, edition.cnn.com/2017/09/01/world/putin-artificial-intelligence-will-rule-world/index.html

new vulnerabilities that enemies can exploit²⁶. Russia's military encompassed many AI-enabled vehicles, such as the S-350 Vityaz mobile surface-to-air defense missile system to shoot down a Ukrainian aircraft while operating in autonomous mode – that is, the system detected, tracked and destroyed a Ukrainian air target without human assistance¹⁷.

Ukraine

After Russia invaded Ukraine in 2022, Ukraine has been a victim of AI-enabled weapons, causing many fatalities among civilians. Since then, Ukraine has commenced developing AI-driven air and land drones, which will help it overcome increasing signal jamming by the Russians as well as enable unmanned aerial vehicles (UAVs) to work in larger groups²⁷. In March 2022, Ukraine's defense ministry started using facial recognition software. This allows Ukraine to identify dead soldiers and uncover Russian assailants, and combat misinformation²⁸.

People's Republic of China

China is creating a new concept of warfare, which they call "intelligentized warfare". Since the launch of the Wing Loong-1 combat UAV in 2009, the People's Liberation Army (PLA) has been continuously developing intelligent and independent systems for aerial and marine warfare. The Center of Security and Emerging Technology has looked at more than 343 AI equipment contracts (PLA), out of which 35% were about intelligent or autonomous vehicles²⁹. China's AI policy was first described in "The Development Plan on the New Generation of Artificial Intelligence," issued by the State Council in 2017, the plan named using military-civilian fusion (MCF) as one of the "Main Duties" for AI development. MCF is being used as an approach to develop AI based on China's belief that it can

²⁶ "Struggling, Not Crumbling: Russian Defence AI in a Time of War." *Rusi.org*<https://www.rusi.org/explore-our-research/publications/commentary/struggling-not-crumbling-russian-defence-ai-time-war>.

²⁷ Ukraine rushes to create AI-Enabled War drones | Reuters. (n.d.-c).
<https://www.reuters.com/technology/artificial-intelligence/ukraine-rushes-create-ai-enabled-war-drones-2024-07-18/>

²⁸ Fontes, Robin, and Jorrit Kamminga. "Ukraine a Living Lab for AI Warfare." *Www.nationaldefensemagazine.org*, 24 Mar. 2023,
www.nationaldefensemagazine.org/articles/2023/3/24/ukraine-a-living-lab-for-ai-warfare.

²⁹ Arul, Akashdeep. "How China Is Using AI for Warfare." *Center for Security and Emerging Technology*, 22 Feb. 2022, cset.georgetown.edu/article/how-china-is-using-ai-for-warfare/.

accomplish “corner-overtaking” to surpass the United States³⁰. China believes that being at the forefront of AI technology is critical to the future of global military and economic power competition, and it should pursue global leadership in AI technology and reduce its vulnerable dependence on imports of international technology³¹.

United States of America

The U.S. Defense Department (DoD) has adopted five principles for ethical AI use in the military, emphasizing responsible, equitable, traceable, reliable, and governable AI³².

In the first phase, the DoD will create a more intelligent force, using AI to enhance platforms, munitions and decision processes. As these technologies mature, the DoD aims to create a more autonomous force, pairing AI-enabled systems with human military personnel to accentuate the strengths of each, enabling faster decisions and better combat outcomes. In the more distant future, “swarms” of advanced cognitive robots may redefine combat operations in the battle space³³.

The Department of State, in collaboration with the Department of Defense, convened the inaugural plenary meeting of States endorsing the Political Declaration on March 19-20, 2024. This plenary meeting was the first step to working with endorsing States to operationalize and implement this groundbreaking initiative. The United States will convene a regular dialogue among endorsing States to further promote international support for and implementation of these responsible practices. Thus, the United States encourages all states to support the Declaration and join with other endorsing States to promote responsible military use of AI and

³⁰ Jing, Yuan-Chou. “How Does China Aim to Use AI in Warfare?” *The Diplomat.com*, 28 Dec. 2021, thediplomat.com/2021/12/how-does-china-aim-to-use-ai-in-warfare/.

³¹ Allen, Gregory C. “Understanding China’s AI Strategy.” *Cnas.org*, 2019, www.cnas.org/publications/reports/understanding-chinas-ai-strategy

³² “The Ethical Use of AI in the Security, Defense Industry.” *www.nationaldefensemagazine.org*, 21 Dec. 2021, www.nationaldefensemagazine.org/articles/2021/12/21/the-ethical-use-of-ai-in-the-security-defense-industry

³³ (PDF) Artificial Intelligence in armed forces-an analysis. (n.d.-a). https://www.researchgate.net/publication/344436899_ARTIFICIAL_INTELLIGENCE_IN_ARMED_FORCE_S-AN_ANALYSIS

autonomy³⁴. U.S. policy does not prohibit the development or employment of LAWS. Although the United States does not currently have LAWS in its inventory, some senior military and defense leaders have stated that the United States may be compelled to develop LAWS in the future³⁵.

International Committee of the Red Cross (ICRC)

The International Committee of the Red Cross is a Non-Governmental-Independent organization with the purpose of helping and supporting people in armed conflicts by providing them with humanitarian aid. The ICRC is well aware of the rise of autonomous weapon systems and their use in wars. Since 2015, it has urged States to establish internationally agreed limits on autonomous weapon systems to ensure civilian protection, compliance with international humanitarian law, and ethical acceptability³⁶.



Figure 3: Lethal Autonomous Weapon in a form of a Drone which is used by the US Air Force³⁷

³⁴ “Political Declaration on Responsible Military Use of Artificial Intelligence and Autonomy - United States Department of State.” *United States Department of State*, 16 Feb. 2023, www.state.gov/political-declaration-on-responsible-military-use-of-artificial-intelligence-and-autonomy/.

³⁵ “Defense Primer: U.S. Policy on Lethal Autonomous Weapon Systems.” *USNI News*, 17 Nov. 2022, news.usni.org/2022/11/17/defense-primer-u-s-policy-on-lethal-autonomous-weapon-systems.

³⁶ ICRC. “ICRC Position on Autonomous Weapon Systems.” *Www.icrc.org*, 12 May 2021, www.icrc.org/en/document/icrc-position-autonomous-weapon-systems.

³⁷ Bing.com, 2024, th.bing.com/th/id/OIP.opWRPPQdH-Jct0KR5D08awHaE1?w=2902&h=1892&rs=1&pid=ImgDetMain. Accessed 20 July 2024.

BLOCS EXPECTED

The bloc supporting the use of Artificial Intelligence in Warfare

Countries that have already implemented artificial intelligence in their military and in their military operations are expected to be part of this alliance. Moreover, these countries should recognize the potential and the positive effects of AI-driven systems and be in favor of their ethical implications. AI should be beneficial and revolutionary for them in the prospect of the evolution of wars in the future. Possible countries could be the United States, China, Russia, the United Kingdom, France, and Israel.

The bloc supporting the prohibition of Artificial Intelligence in Warfare

This bloc should mainly consist of countries that have already suffered and been affected by the negative impacts of AI weapons. Additionally, countries with high numbers of civilian casualties due to AI should be included, as well as countries that believe that the negative impact of AI outweighs its benefits. The interests of these countries should rely mainly on the humanitarian aspect and the establishment of a new treaty or legislation upon LAWs. Possible countries may be Argentina, Brazil, Chile, Egypt, Iraq, Mexico, Pakistan, and South Africa

TIMELINE OF EVENTS

Date	Description of event
2014-2018	Multilateral Meetings by the UNCCW
2015-2021	ICRC urges the establishment of regulations for LAWs
24 February 2020	Defense Department adoption of ethics of AI
March 2020	LAWs were first sighted in Libya
27 April 2021	S/RES/2573
22 October 2021	NATO's 2021 Strategy
24 February 2022	Russia's Invasion of Ukraine
March 2022	Development of facial recognition software for Ukraine
14 November 2022	Convention on Certain Conventional Weapons
16 February 2023	Political Declaration on Responsible Military Use of Artificial Intelligence and Autonomy

20 July 2023	New Agenda for Peace
7 October 2023	Hammas' attack on Israeli people near Gaza
December 2023	A/C.1/78/L.56
19-20 March 2024	Endorsement of the Political Declaration by the Department of State and Department of Defense

RELEVANT RESOLUTIONS, TREATIES AND EVENTS

Lethal autonomous weapons systems A/C.1/78/L.56, 2023

The draft resolution A/C.1/78/L.56³⁸ concerning lethal autonomous weapons systems affirms that international law, including the Charter of the United Nations, international humanitarian law, and international human rights law, applies to autonomous weapons systems. It was adopted in December 2023.

Protection of Civilians in armed conflict S/RES/2573, 2021

The resolution adopted on 27th April 2021 strongly condemned attacks directed against civilians in armed conflict, as well as attacks on other protected persons that deprive them of objects indispensable to their survival.³⁹

Convention on Certain Conventional Weapons (CCW)-Group of Governmental Experts on Lethal Autonomous Weapons Systems, 2022

The Group of Governmental Experts on Lethal Autonomous Weapon Systems refers to a group of experts created by the United Nations to study legal, ethical, societal and moral questions that arise from the increased use of autonomous weaponized robots to be programmed to engage in combat in various situations that

³⁸ General, UN. "Lethal Autonomous Weapons Systems :: Resolution /: Adopted by the General Assembly." United Nations Digital Library System, UN, 28 Dec. 2023, digitallibrary.un.org/record/4033027. Accessed 21 Aug. 2024.

³⁹ "Resolution 2573 (Protection of Civilians) S/RES/2573." *Global Centre for the Responsibility to Protect*, www.globalr2p.org/resources/resolution-2573-protection-of-civilians-s-res-2573/#:~:text=On%2027%20April%20the%20UN%20Security%20Council%20adopted. Accessed 20 July 2024

might arise, including battles between countries, or in patrolling border areas or sensitive areas, or other similar roles⁴⁰.

In the context of the objectives and purpose of the Convention, the Group is to consider proposals and elaborate, by consensus, possible measures, including taking into account the example of existing protocols within the Convention, and other options related to the normative and operational framework on emerging technologies in the area of lethal autonomous weapon systems, building upon the recommendations and conclusions of the Group of Governmental Experts related to emerging technologies in the area of lethal autonomous weapon systems, and bringing in expertise on legal, military, and technological aspects⁴¹.

The main purpose of this convention is to prohibit or restrict the use of certain conventional weapons, which may be deemed to be excessively injurious or to have indiscriminate effects in declared wars and other armed conflicts. It was adopted on 14th 14, 2022.

Political Declaration on Responsible Military Use of Artificial Intelligence and Autonomy, The Hague, February 16, 2023

The Political Declaration on Responsible Military Use of Artificial Intelligence and Autonomy provides a normative framework addressing the use of these capabilities in the military domain. Launched in February 2023 at the Responsible AI in the Military Domain Summit (RE AIM 2023) in the Hague, the Declaration aims to build international consensus around responsible behavior and guide states' development, deployment, and use of military AI. The Declaration provides a basis for exchanging best practices and building states' capacities, which will allow endorsing States to share experiences and ideas.⁴²

⁴⁰ Wikipedia contributors. "Convention on Certain Conventional Weapons – Group of Governmental Experts on Lethal Autonomous Weapons Systems." Wikipedia, 10 Apr. 2024, en.wikipedia.org/wiki/Convention_on_Certain_Conventional_Weapons_%E2%80%93_Group_of_Governmental_Experts_on_Lethal_Autonomous_Weapons_Systems#:~:text=Convention%20on%20Certain%20Conventional%20Weapons%20%E2%80%93%20Group%20of,areas%20or%20sensitive%20areas%2C%20or%20other%20similar%20roles.

⁴¹ "Convention on Certain Conventional Weapons - Group of Governmental Experts (2022) | United Nations." *Meetings.unoda.org*, meetings.unoda.org/ccw/convention-certain-conventional-weapons-group-governmental-experts-2022.

⁴² "Political Declaration on Responsible Military Use of Artificial Intelligence and Autonomy - United States Department of State." *United States Department of State*, 16 Feb. 2023,

PREVIOUS ATTEMPTS TO SOLVE THE ISSUE

NATO's 2021 AI Strategy

NATO's 2021 AI Strategy sets out a Strategic Vision endorsed by six Principles of Responsible Use (PRUs) for AI in Defence, i.e. Lawfulness, Responsibility and Accountability, Explainability and Traceability, Reliability, Governability and Bias Mitigation. Safety concerns arising from emerging AI technologies are significant, particularly for military use⁴³. The aim of this Strategy is to provide a foundation for NATO and its Allies to lead by example and encourage the development and use of AI in a responsible manner for Allied defense and security purposes; to accelerate and mainstream AI adoption in capability development and delivery, enhancing interoperability within the Alliance, including through proposals for AI Use Cases, new structures, and new programs; to protect and monitor our AI technologies and ability to innovate, addressing security policy considerations such as the operationalization of our Principles of Responsible Use, and to identify and safeguard against the threats from malicious use of AI by state and non-state actors⁴⁴. The 2021 version states, "Under the forthcoming Defense Innovation Accelerator for the North Atlantic (DIANA), national AI test centers could support NATO's AI ambition."⁴⁵. This strategy has been proven effective, as it regulates the AI strategy of NATO member states by fundamental responsibility and safety.

New Agenda for Peace of 2023

In his 2023 New Agenda for Peace, the Secretary-General reiterated this call, recommending that States conclude, by 2026, a legally binding instrument to prohibit lethal autonomous weapon systems that function without human control or oversight, and which cannot be used in compliance with international humanitarian

www.state.gov/political-declaration-on-responsible-military-use-of-artificial-intelligence-and-autonomy/

⁴³Nato. "Summary of NATO's Revised Artificial Intelligence (AI) Strategy." *NATO*, 10 July 2024, www.nato.int/cps/en/natohq/official_texts_227237.htm. Accessed 30 July 2024.

⁴⁴ "Summary of the NATO Artificial Intelligence Strategy." *NATO*, 22 Oct. 2021, www.nato.int/cps/en/natohq/official_texts_187617.htm

⁴⁵ Freedberg, Sydney J. "NATO Updates AI Strategy for the Age of ChatGPT." *Breaking Defense*, *Breaking Defense*, 10 July 2024, breakingdefense.com/2024/07/nato-updates-ai-strategy-for-the-age-of-chatgpt/. Accessed 21 Aug. 2024.

law, and to regulate all other types of autonomous weapons systems⁴⁶. The agenda has proved its effectiveness by protecting civilians in affected areas.

Multilateral Meetings by the UNCCW

In 2014, the UN CCW held the first multilateral meeting focused on challenges stemming from LAWS; this was followed by other informal meetings in 2015 and 2016. In 2017 and 2018, the UN CCW convened in a more formalized structure known as a Group of Governmental Experts (GGE). The GGE meetings are tasked with considering the definition of LAWS, the role of humans using lethal force, and possible options for addressing humanitarian and security challenges. One option up for discussion is whether there is a need for a new formal additional protocol that prohibits the use of fully autonomous weapons.

The Campaign to Stop Killer Robots claims that 26 countries have supported a ban on LAWS under the CCW process. At the August 2018 GGE meeting, Austria, Brazil, and Chile pushed to move discussions toward treaty negotiations. However, the United States, Russia, and the United Kingdom stated their opposition to new formal legal instruments. The United States has opposed any preemptive international regulation or interpretation of existing IHL that would preemptively ban autonomous weapons. They have pointed to the unpredictable pace of technological development, the anthropocentric spirit of IHL, the potential ability of LAWS to uphold IHL and save human life, and the dual-use benefits of LAWS enabling technologies as the main reasons for its current stance. China supported a ban on the use— but not development—of LAWS, which it defines to be indiscriminate, lethal systems that do not have any human oversight and cannot be terminated. However, China also acknowledges the dual-use benefits of the enabling technologies behind LAWS. Russia has continually emphasized the national security benefits that LAWS may provide and pointed out the dual-use benefits of LAWS enabling technologies.⁴⁷ Many governments, including the United States, Russia, and China, have also submitted official statements outlining their views on LAWS⁴⁸. These meetings have not been effective, as they prevented progress in negotiations about LAWS.

⁴⁶United Nations Office for Disarmament Affairs. "Background on LAWS in the CCW – UNODA." *United Nations*, 2023, disarmament.unoda.org/the-convention-on-certain-conventional-weapons/background-on-laws-in-the-ccw/.

⁴⁷ *CRS Reports*, crsreports.congress.gov/. [International Discussions Concerning Lethal Autonomous Weapon Systems \(congress.gov\)](https://crsreports.congress.gov/International-Discussions-Concerning-Lethal-Autonomous-Weapon-Systems/) Accessed 08 Aug. 2024.

⁴⁸ (PDF) *Artificial Intelligence in Military Application – Opportunities and Challenges*, www.researchgate.net/publication/352801264_Artificial_Intelligence_in_Military_Application_-_Opportunities_and_Challenges. Accessed 30 July 2024.

POSSIBLE SOLUTIONS

Collaboration with countries and international or regional organizations

The implementation of Artificial Intelligence in the military has been troubling the global community and has still not been tackled. For this matter to be resolved, cooperation and dialogue between countries and organizations (either international or regional) are needed for a more peaceful and effective outcome. The collaboration should be upon the establishment of specific norms and standards for the predominance of Artificial Intelligence in armed conflicts. Regulating rules should be adopted that rely on International Humanitarian Law (IHL) to prevent any civilian-related harm.

Measures taken upon AI systems themselves

An alternative approach could involve the development of AI systems that are more secure and precise and can distinguish between civilians and armed combatants. Therefore, civilian casualties may decrease drastically and more destruction will be avoided. These systems may also be improved to be more accurate in military operations. Programmed codes should be detected during the decision-making process and upon whether they stick to the IHL or not. If not, it should be altered immediately. Moreover, patterns that lead to harm should be identified and prevented. It is also substantial to refer to the fact that surveillance among civilians should be enhanced to have a better insight into their location to reduce any unpredictable harm. AI systems should undoubtedly not only evade areas with a high civilian presence by analyzing existing data but also be transparent

AI system alterations upon their ethical implication

In regards to AI system alterations, it should be taken into consideration where AI should be implemented. Specifically, AI systems should exist in sectors in the military where they help humans be more informed and faster when making decisions. Thus, any crucial delays that may be responsible for life-or-death decisions are being prevented. Moreover, artificial Intelligence in the form of robots may reduce the workload of a human-tiring task. This may help increase the effectiveness of a human being and put the focus on other more important tasks. It is also well known that AI-driven systems have a faster reaction time than humans who are too slow to react to a possible threat. AI should be implemented in order to protect civilians instead of harming them by focusing on targets. Last but not least, international military guidelines on the ethical implications of AI in armed conflicts

should be defined and enhanced. Human surveillance should be upheld on autonomous machines, to have control over the use of force.

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