FORUM:	Disarmament Commission
ISSUE:	Developing Strategies to effectively regulate the Autonomous Weapons Systems
STUDENT OFFICER:	Mi Na Son
POSITION:	President of Disarmament Commission

Introduction

These days, development is occurring not only on land but also at sea and in the air. Weapons are being developed both in visible and hidden locations. Therefore, the functionality of these systems has become more essential than their form. With the aid of sensors and advanced calculations, machines can determine the presence and location of an enemy within a minute. Today, there are weapons equipped

with multiple sensors that can even predict the possible movements of a target. These dangerous machines are built to fulfill human objectives, making it crucial for people to take responsibility for their use. Non-human controlled weapons also refers to autonomous weapons where they attack a target without human intervention. According to Sipri in 2017, it is estimated that there are 12 countries that

Autonomous Robots

have access to 130 autonomous weapon systems. Some of the examples of autonomous weapon systems are air defense system, loitering munitions, and sentry weapons. Though these systems can process greater information than human can do, they cannot understand or evaluate human thoughts, which causes them to operate solely based on reductionist data. As a result, even if they take the wrong action and brings a huge casualty to the society, they are not held legally or morally responsible. This lack of accountability makes it easier for humans to initiate attacks, as the regulations governing these autonomous weapons are insufficient to protect innocent civilians. Without developing strategies to effectively regulate the autonomous weapons, wars would not be fought humanely and responsibly anymore.

Background

The U.S. military's adoption of autonomous weapon systems began with the Mk24 "Fido" torpedo, which saw combat in World War II. This torpedo used passive acoustic homing to locate and target German U-boats attacking Allied shipping. After the war, the U.S. military began incorporating autonomous features into larger systems due to evolving threats like kamikaze attacks and the potential for atomic bombings. The development of the SAGE and NTDS systems in the late 1950s marked significant advancements in air defense, allowing automated tracking and engagement of targets. With the advent of digital microprocessors, the 1960s and 1970s saw the proliferation of advanced fire-and-forget munitions, such as the AIM-9 heat-seeking missile and the SWOD-9 BAT, which could independently seek and engage targets. The 1980s introduced bounded search weapons like the Tomahawk Anti-Ship Missile (TASM) and Low-Cost Autonomous Attack System (LOCAAS), designed to search and attack target groups with minimal human intervention. Additionally, human-supervised autonomous systems, such as the Patriot and Aegis air defense systems, allowed for autonomous operations but included mechanisms for human oversight to mitigate risks of unintended engagements. Despite their effectiveness, the deployment of fully autonomous weapons remained cautious due to concerns about potential unintended consequences. This led to the establishment of guidelines of Autonomy in Weapon System in 2012, which outlined strict parameters for the use of autonomous weapon systems, emphasizing the need for human oversight and controlled operational environments to ensure safety and compliance.

In 2013, the United Nation Human Rights Council (UNHRC) held the first international debate on autonomous weapons. During this debate, UN Special Rapporteur Christof Heyns submitted a report that highlighted the legal and ethical challenges posed by lethal autonomous robotics (LARs). The report recommended the formation of a High-level Panel to develop a framework to address these critical issues. Moreover, the first international debate on autonomous weapons and the submission of Christof Heyns' report, the 2013 event at the UN Human Rights Council (HRC) marked a

The UN conference

significant moment in the global discussion on lethal autonomous robotics (LARs). The debate brought international attention to the potential dangers and ethical concerns surrounding these new technologies. While the formation of a High-Level Panel was recommended, the event also set the stage for ongoing discussions and further action at various international forums, including the shift of the debate to the UN Convention on Certain Conventional Weapons (CCW) the next year. This 2013 debate was a critical

starting point for what would become a broader, ongoing global conversation about the regulation and control of autonomous weapons systems.

In October 2022, significant developments occurred at the UN regarding the regulation of autonomous weapons. During the 77th UN General Assembly (UNGA), Austria, speaking for 70 states, addressed the urgent need for an international framework to regulate autonomous weapons systems. This statement highlighted the concern of these nations about the potential threat posed by the technologies. Simultaneously, the UN HRC adopted a resolution that called for a comprehensive study on the human rights and responsibility implications of new and emerging military technologies, including autonomous weapons.

Problems Raised

Society dominated by technology

The rise of artificial intelligence is influencing not just the military sector but civilian life as well. As technology becomes increasingly integrated into defense systems, the question arises: who can people turn to for genuine human insight? Unlike humans, technology lacks the ability to perceive and understand human nuances and emotions.

Autonomous weapon in LIC

Therefore, it cannot make decisions with the same depth of empathy and judgment that humans can. If there is a slight inaccuracy of autonomous weapon system, a lot of innocent civilians may end up in death.

Violation of Human rights

Currently, there is no internationally binding legal framework that ensures effective human control over autonomous weapons systems. This lack of regulation creates significant issues: first, it permits the unchecked development and use of weapons that can independently make decisions about targeting and engagement; second, it makes it challenging for victims—such as those affected, their families, and their communities—to seek justice, obtain guarantees that such incidents will not recur, or receive compensation for damages. To address these concerns, it is essential to establish a new, legally binding international instrument. This framework should regulate the autonomy of weapons systems in

accordance with International Human Rights Law, International Humanitarian Law, and International Criminal Law.

International Actions

UN and the International Committee of the Red Cross(ICRC)

In order to protect humanity, the UN and ICRC are working together to establish new international regulations on autonomous weapon systems. They are expected to complete the negotiation of these regulations by 2026. The UN and ICRC have stated that machines with the power and discretion to kill humans without human involvement should be restricted by international law. Additionally, they have expressed concerns about the increase in the availability and accessibility of robotics and artificial intelligence. While these technologies are significant for human development, they can also be integrated into the military sector.

2024 Vienna Conference

In April of 2024, thousand people from 140 countries participated in 2024 Vienna Conference, which targets to address Humanity at the Crossroads: Autonomous Weapons Systems and the Challenge of Regulation. The conference was hosted by the Austrian Federal Ministry of European and international affairs, and they are concerned about the growing use and misuse of AI technology in military. Not only the Vienna Conference, for the past few years, states have organized various conferences such as Caribbean Community (CARICOM) regional conference in 2023 to discuss the concern of autonomous weapon systems. Though these conference might end with a lot of disagreement, the action of participating and hosting such conference shows their awareness of the potential danger and the need to develop strategies to regulate autonomous weapon systems.

Key Players

International Committee for Robot Arms Control (ICRAC)

ICRAC was founded in 2009 and has been promoting to ban autonomous weapon systems. ICRAC believes it's important to consider the ethical, legal, and humanitarian issues that these weapons could cause. Their

ICRAC

essential aim is to stop the development and use of fully autonomous weapons that can make life-and-death decisions without human control. They are concerned that these weapons could break international laws and harm human rights.

International Committee of the Red Cross (ICRC)

ICRC is a key player that addresses the humanitarian implications of autonomous weapon systems. It supports international humanitarian law, emphasizing that such technologies must comply with principles of distinction, proportionality, and necessity. The ICRC participates in international dialogues, conducts research, and publishes reports to highlight the ethical and legal challenges of autonomous weapons, aiming for clear regulations to ensure human oversight and accountability in their use.

Possible Solutions

Promote Human Oversight and Accountability

Require autonomous weapons systems to have processes allowing human supervision and intervention for ethical decision-making and accountability purposes. This may involve the approval for critical decisions, like using lethal force. Creating technologies that enable significant human supervision will help reduce the dangers linked to completely autonomous systems and guarantee they follow legal and ethical guidelines.

Foster International Collaboration and Transparency

Promote global collaboration and openness in the advancement and deployment of autonomous weapon systems. Create platforms for exchanging information and successful methods between countries and groups and encourage collaborative research projects to target both technical and ethical obstacles. This will help to reduce autonomous weapon system arm race and competition of technological development of weapons. Through promoting transparent communication, the global community can work together to tackle the dangers linked to autonomous weapons and create unified regulatory plans.

Glossary

Autonomous

Operating independently without external control

Strategies

Plans to achieve specific goals

Accountability

Being responsible for one's action and decisions

Transparency

Openness and clarity in communication and actions

Sources

"Accept Terms and Conditions on JSTOR." *Www.jstor.org*, www.jstor.org/stable/pdf/resrep32146.4.pdf.

"AI and Autonomous Weapons Systems: The Time for Action Is Now." *Saferworld-Global.org*, 2024, www.saferworld-global.org/resources/news-and-analysis/post/1037-ai-and-autonomous-weapons-systems-the-time-for-action-is-now. Accessed 15 Aug. 2024.

Asaro, Peter. "On Banning Autonomous Weapon Systems: Human Rights, Automation, and the Dehumanization of Lethal Decision-Making." *International Review of the Red Cross*, vol. 94, no. 886, 1 June 2012, pp. 687–709, www.cambridge.org/core/journals/international-review-of-the-red-cross/article/on-banning-autonomous-weapon-systems-human-rights-automation-and-the-dehumanization-of-lethal-decisionmaking/992565190BF2912AFC5AC0657AFECF07, https://doi.org/10.1017/s1816383112000768. Accessed 15 Aug. 2024.

"Banning Lethal Autonomous Weapon Systems (LAWS): The Way Forward | ICRAC." *Icrac.net*, 2014, www.icrac.net/banning-lethal-autonomous-weapon-systems-laws-the-way-forward/. Accessed 15 Aug. 2024.

Click, BBC. "Autonomous Weapons." *YouTube*, 15 Dec. 2021, www.youtube.com/watch?v=xo4kFivp1i0. Accessed 15 Aug. 2024.

"Problems with Autonomous Weapons." *Stop Killer Robots*, 2021, www.stopkillerrobots.org/stop-killer-robots/facts-about-autonomous-weapons/. Accessed 15 Aug. 2024.

"Regulation and Prohibition of Autonomous Weapons Systems: A Future Outside the CCW? - AutoNorms." *AutoNorms - Weaponised Artificial Intelligence, Norms, and Order*, 3 Nov. 2022, www.autonorms.eu/regulation-and-prohibition-of-autonomous-weapons-systems-a-future-outside-the-ccw/. Accessed 15 Aug. 2024.

to, Campaign. "Autonomous Weapons Explained." *YouTube*, 4 Sept. 2023, www.youtube.com/watch?v=krEPSuhIM7U. Accessed 15 Aug. 2024.

"UN and Red Cross Call for Restrictions on Autonomous Weapon Systems to Protect Humanity." *UN News*, 5 Oct. 2023, news.un.org/en/story/2023/10/1141922. Accessed 15 Aug. 2024.

Vox. "Autonomous Weapons Could Change Battlefields of the Future [Advertiser Content from ICRC]."

YouTube, 8 May 2018, www.youtube.com/watch?v=e_DsE9f5gyk. Accessed 15 Aug. 2024.