ISSUE BRIEF

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THE FUTURE OF ARMS CONTROL AND PROLIFERATION FOR LETHAL AUTONOMOUS WEAPONS

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(Views expressed in the brief are those of the author, and do not represent those of ISSI)

Autonomous weapon systems, drone-swarms, smart loitering munitions, fire and forget missile systems are no longer stuff of a science fiction novel but a living reality of the contemporary battlefield. The on-going wars in Syria, Yemen, Libya and conflict between Azerbaijan and Armenia over the Nagorno-Karabakh territory gives a brief glimpse of lethality and destructive capabilities of Lethal Autonomous Weapon Systems (LAWS) in the modern battlefield.[1]

The leaps of advancements in emerging technologies, mainly artificial intelligence (AI), machine learning and data mining have re-invigorated the revolution in military weapons. The introduction of autonomous weapon systems have broadened the magnitude, range and dimensions of operations to track, observe and engage the enemy from a safe distance. In the modern battlefield, the use of unmanned systems along with continuous enhancement in AI have given machines relatively more autonomy and little direct control or observatory role to the human operators. This dimension of maintaining and regulating effective control or keeping humans in the loop has been the major area of debate and a point of concern for international organizations and nation-states, which dread a near-future battlefield where lethal autonomous weapons would be operating on their own.

On August 10, 2020, Human Rights Watch (HRW) published a country-wise report titled *Stopping Killer Robots* documenting the stance of the nations towards stopping and banning the killer robots,

[1] Mike Eckel, "Drone Wars: In Nagorno-Karabakh, the Future of Warfare is Now," *Radio Free Europe Radio Liberty*, October 9, 2020, https://www.rferl.org/a/drone-wars-in-nagorno-karabakh-the-future-of-warfare-is-now/30885007.html

and calling upon formulating new laws for regulating binding states progress towards the development of LAWS.[2] The report highlighted the recent developments and events which had taken place during this year significantly to stop the killer robots and regularising the AI. The first event that took place was organized by Brazilian Foreign Ministry and Naval War College in Rio de Janeiro, Brazil on February 20, 2020, just a month before Covid-19 pandemic, highlighting the governance issues relating to LAWS.[3]The other major event included a webinar that was organized by the German Foreign Ministry titled "Berlin Forum on LAWS" highlighting the commitment of 63 states to devise binding principles for use of LAWS and implementing responsible human control over the autonomous platforms. The group concurred to formulate recommendations for the comprehensive operational and normative framework by 2021.[4]

The HRW document reflected the major cornerstones for arms control measures against LAWS to ban fully autonomous weapons while retaining the meaningful human control or humans in the loop over the use of force by autonomous weapons platforms.[5] The report highlighted the concerns raised in the Convention on Certain Conventional Weapons (CCW) meetings from 2014-2019 over the LAWS by 97 state members denouncing the use of LAWS based upon strong ethical, legal, moral, technological, operational and proliferation concerns. The 120 member states of non-aligned movement NAM have also called for a legally binding international instrument for prohibiting and regulating LAWS. The report highlighted the increasing global trends of development and investment in autonomous weapons systems and militarization of AI by major powers including the US, Israel, Russia, and China, with Australia, Turkey, South Korea and the United Kingdom also making considerable development in this field. The estimated investment and spending in lethal systems mainly drones by 2021 will increase by over US$17.5 billion in the US, US$4.5 billion in China, US$3.9 billion in Russia, and US$1.8 billion in South Korea.[6] The trend of development and investment indicates that the major powers would not settle for any normative mechanism binding the production, export control, and operationalization of LAWS. While the majority of states call for developing frameworks for ensuring responsible human control over the weapon systems as critical for the legality of the lethal autonomous systems, the major powers consider this debate as pre-

2 "Stopping Killer Robots Country Positions on Banning Fully Autonomous Weapons and Retaining Human Control," *Human Rights Watch*, August 10, 2020, https://www.hrw.org/report/2020/08/10/stopping-killer-robots/country-positions-banning-fully-autonomous-weapons-and

3 "Rio Seminar on Autonomous Weapons Systems," *FUNAG*, February 20, 2020, http://www.funag.gov.br/index.php/en/news/3072-registrations-open-for-the-rio-seminar-on-autonomous-weapons-systems

4 "Forum on Lethal Autonomous Weapons Systems," *Auswaertiges*, April, 2, 2020,https://www.auswaertiges-amt.de/en/aussenpolitik/themen/abruestung/forum-laws/2330682

5 "Stopping Killer Robots Country Positions on Banning Fully Autonomous Weapons."

6 Justin Haner and Denise Garcia, "The Artificial Intelligence Arms Race: Trends and World Leaders in Autonomous Weapons Development," *Wiley Online Library*, September 26, 2019,https://onlinelibrary.wiley.com/doi/full/10.1111/1758-5899.12713

mature and a hypothetical phenomenon, while blocking any binding proposal as put forward by CCW meetings.

The risks and consequences of adopting and operating LAWS is an enduring debate which revolves around the concepts of morality, principles of humanity, public conscience, rights and virtues. The consequences of deploying such weapon systems revolve around the aspects of magnitude based upon the potential damage, range of the weapons and time for human reaction against any malfunction. The LAWS also pose a range of narrow and wide consequences. The narrow consequences include the aspects of distinction between combatant and non-combatants along with possibilities of fratricide and vulnerability to hacking. While the wide consequences include the challenges of unintended initiation and escalation along with threats of arms race with horizontal and vertical levels of proliferation. The other major issues prevail around the debate of meaningful exercise of human moral agency over the machines with positive controls, option to maintain a constant oversight over the autonomous weapons systems, and calling off an attack when necessary. This is due to the fact that warfare is an act of generating meaning, the algorithm of LAWS cannot generate meaning and humans define the meaning based on information and judgement.

The HRW has comprehensively narrated the stay of proponents of LAWS including major powers mainly the US, China and Russia along with a few developing states including Israel, India and Turkey. According to the HRW report, China has supported the multilateral frameworks on LAWS while describing them as complex platforms creating uncertainty in implementing international humanitarian law. China highlights the precedent of banning of blinding lasers to be executed in the case of LAWS. In 2018, China called on banning fully autonomous weapons, but emphasized that the ban must be limited to only the use of such weapons while showing no intention on formulating new international treaty banning LAWS.[7] India, while itself developing LAWS, states that development, production and deployment of such weapon systems must rely with the concerned states, thus, supporting the development of LAWS implicitly.[8] India maintains a vast fleet of UAVs and has also entered into joint ventures with Israel for development and production of LAWS. India currently operates Israeli HAROP suicide drones, HERO drones and has also made a deal with the US to purchase over 30 MQ-9 Reaper UAVs for its Tri-Services worth $3 billion.[9] Israel is a proponent of autonomous weapons systems and rejects calls on banning and negotiating any international treaty

7 "Stopping Killer Robots Country Positions on Banning Fully Autonomous Weapons."

8 Ibid.

9 "India Keeps an Eye on Drone Warfare even as it Considers Buying the US MQ-9 Reaper", *Economic Times*, October 13, 2020, https://economictimes.indiatimes.com/news/defence/india-keeps-an-eye-on-drone-warfare-even-as-it-considers-buying-the-us-mq-9-reaper/harop/harpy-suicide-drones/slideshow/78638042.cms

to restrict such platforms.[10] Israel maintains an extensive and vast production, testing and operational autonomous weapon programs, while it is one of the major exporters of autonomous weapons systems, UAVs like HERO and loitering munitions such as HAROP.

Pakistan has been one of the pioneer states that have called on complete prohibition of LAWS and has been a regular participant of CCW on LAWS since May 2013.In 2018, Pakistan called for implementing a complete moratorium on the use of LAWS in the UN.[11] Pakistan has maintained its position that LAWS causes a serious ethical, moral and legal dilemma. Russia has actively opposed the debate of the existence of LAWS and negating any legally binding normative frameworks over LAWS, stating that the existing international humanitarian law encompasses the weapon systems with high degrees of autonomy.[12] According to Russia, the debate of human control and involvement over autonomous weapons systems involve subjective assessments and is irrelevant. Turkey has supported multilateral talks on LAWS while it states that the debate is hypothetical and is hesitant in developing a pre-emptive general prohibition. Turkey maintains a robust autonomous weapons systems platforms.[13]

The UK has said that it has no interest in maintaining a fleet of autonomous weapons systems without any human intervention but considers that there is no need for an international ban on such systems.[14] The US negates the need of any binding international law on LAWS and hold on to the notion that such a debate to stigmatize autonomous weapons is pre-mature and state that existing international laws are sufficient.[15] The US maintains one of the world's largest and heavily funded autonomous weapons systems and developing aerial, terrestrial and sub-surface LAWS programs. Trump administration has also worked upon revoking the clauses of drone sales under the Missile Technology Control Regime (MTCR) to maximise the sale of the American manufactured unmanned aerial, land and sea-based drones.[16] The US Air Force has also recently conducted a test in which AI secured a sweeping victory against a human pilot in a virtual aerial dogfight.[17]

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10 "Stopping Killer Robots Country Positions on Banning Fully Autonomous Weapons."

11 "Pakistan Calls for Moratorium on Production of Lethal Autonomous Weapon Systems," *The Nation*, November 2, 2018, https://nation.com.pk/01-Nov-2018/pakistan-calls-for-moratorium-on-production-of-lethal-autonomous-weapon-systems#:~:text=At%20the%20United%20Nations%2C%20Pakistan,human%20intervention%2C%20reported%20Radio%20Pakistan.

12 "Stopping Killer Robots Country Positions on Banning Fully Autonomous Weapons."

13 Ibid.

14 Ibid.

15 Ibid.

16 Mike Stone, "Exclusive: Trump Aims to Sidestep another Arms Pact to Sell more US Drones," *Reuters*, June 12, 2020, https://www.reuters.com/article/us-usa-arms-trump-exclusive-idUSKBN23J1HS

17 Ryan Pickrell, "AI Just Beat a Human Pilot in a Simulated Dogfight," *Business Insider*, August 22, 2020, https://www.businessinsider.com/ai-just-beat-a-human-pilot-in-a-simulated-dogfight-2020-

The debate of stipulating regulations and prohibitions on LAWS is one quagmire in the interests of great power politics and national interests of major states with little or less regard to the implications on human morality and international humanitarian law. The sketch of the norms for international arms control and non-proliferation of LAWS indicates little or no possibilities for a meaningful and binding normative framework at the international level. The major powers would surely and steadily invest in the LAWS as they provide a wide range of flexibility in exercising their national interests. The need for a new framework is also essential as the proliferation of LAWS would not remain under the control of state actors and would also be exploited by non-state actors due to ready accessibility and lack of normative legal frameworks. It is now up to the conscious of the civilized world how to augment and encapsulate the debate of legalizing and formulation of effective controls over the spread of LAWS.

8#:~:text=An%20artificial%20intelligence%20program%20developed,hit%2C%20according%20to%20multiple%20reports.