

# India's Regulatory and Ethical Stance on Autonomous Weapon Systems

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India has progressively integrated emerging technologies, particularly artificial intelligence (AI), autonomous weapon systems (AWS), and robotics into its military modernization agenda. Given India's security needs and cross-border infiltration, a substantial number of investments in these areas reflects a strategic shift, enhancing operational effectiveness while minimizing human risk during combat. India's official stance further emphasizes a commitment to align conventional war-fighting strategies with digital technologies, signalling the inclusion of autonomous systems in future operational planning. The paper analyses current military doctrine envisioning a broad spectrum of AWS applications, participation in global forums delving into key themes of accountability, human control, and transparency, highlighting India's policy gaps and strategic choices.

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## Introduction

Today, with nearly 53 percent of the world's population living in urban areas,<sup>1</sup> armed conflict<sup>2</sup> in such settings is often especially brutal and complex. Urban warfare challenges commanders to distinguish combatants from non-combatants in densely populated zones, navigate intricate cityscapes, and deal with a host of environmental and logistical obstacles that rarely emerge on open battlefields. Notwithstanding these complexities, rapid technological developments, particularly Autonomous Weapon Systems (AWS), are reshaping the strategic, ethical, and humanitarian dimensions of modern conflict. AWS encompasses a broad range of military technologies capable of selecting and engaging targets with minimal or no human oversight. Their use in urban settings can, in principle, protect soldiers from direct harm and enhance precision by leveraging artificial intelligence (AI) from target recognition to real-

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<sup>1</sup> Ana Moreno-Monroy, Marcello Schiavina and Paolo Veneri, "Metropolitan Areas in the World: Delineation and Population Trends", *Journal of Urban Economics*, Vol. 125, 2021, p. 103242, available at: <https://doi.org/10.1016/j.jue.2020.103242>.

<sup>2</sup> *Prosecutor v. Tadic* [2005] ICTY IT-94-I [2005], Judgment pronounced the definition of an armed conflict, "An armed conflict exists whenever there is a resort to armed force between States or protracted armed violence between governmental authorities and organized armed groups or between such groups within a State. International humanitarian law applies from the initiation of such armed conflicts and extends beyond the cessation of hostilities until a general conclusion of peace is reached, or, in the case of internal conflicts, a peaceful settlement is achieved. Until that moment, international humanitarian law continues to apply in the whole territory of the warring States or, in the case of internal conflicts, the whole territory under the control of a party, whether or not actual combat takes place there."

time threat assessment. The crucial point is whether fully autonomous or heavily AI-dependent weapons can reliably adhere to the principles of International Humanitarian Law (IHL),<sup>3</sup> it is recommended by the International Committee for Red Cross (ICRC) that states should determine where these limits must be placed by adopting new legally binding rules in compliance with IHL norms<sup>4</sup> and by assessing the degree and type of human control needed to carry out the use of those weapons at a critical time which will also satisfy the ethical considerations. On the other hand, Stockholm International Peace Research Institute (SIPRI) highlights that compliance with IHL is an important benchmark, but the limits placed by IHL norms on AWS development are not fully settled, and unpredictability and lack of human control pose significant risks.<sup>5</sup>

Critics also argue that algorithms may be unable to evaluate the fluid nuances of an urban battle space, leading to algorithm injustice

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<sup>3</sup> Shahrullah Rina and Muhammad Saputra, “The Compliance of Autonomous Weapons to International Humanitarian Law: Question of Law and Question of Fact”, *Wacana Hukum*, Vol. 28, No. 2, 2022, pp. 8–17, available at: <https://doi.org/10.33061/1.wh.2022.28.1.6689>.

<sup>4</sup> Neil Davison, “A Legal Perspective: Autonomous Weapon Systems under International Humanitarian Law”, *UNODA*, Occasional Paper No 30, available at: [https://www.icrc.org/sites/default/files/document/file\\_list/autonomous\\_weapon\\_systems\\_under\\_international\\_humanitarian\\_law.pdf](https://www.icrc.org/sites/default/files/document/file_list/autonomous_weapon_systems_under_international_humanitarian_law.pdf). *See also* “Statement to the Convention on Certain Conventional Weapons (CCW) Meeting of Experts on Lethal Autonomous Weapons Systems (LAWS)”, *ICRC*, Geneva, 11 April 2017, available at: <https://www.icrc.org/en/document/statement-icrc-lethal-autonomous-weapons-systems>.

<sup>5</sup> Vincent Boulanin, Laura Bruun and Netta Goussac, “Autonomous Weapons Systems and International Humanitarian Law, Identifying Limits and the Required Type and Degree of Human-Machine Interaction”, *SIPRI*, 2021, available at: [https://www.sipri.org/sites/default/files/2021-06/2106\\_aws\\_and\\_ihl\\_0.pdf](https://www.sipri.org/sites/default/files/2021-06/2106_aws_and_ihl_0.pdf).

based on racial profiles<sup>6</sup>, and the technology blurring the line between civilian and combatant<sup>7</sup>. Others note the difficulty of establishing accountability: if an AWS malfunctions and causes unintended harm, should responsibility lie with the developer of the software, the commanding officer who deployed it, or the machine's onboard logic itself? These questions become even more pressing, given that many states, such as China, Israel, Russia, South Korea, Türkiye, the United Kingdom, India, and the United States, are rapidly investing in AWS research,<sup>8</sup> spurred by the promise of reduced military casualties and potentially decisive tactical advantages. Meanwhile, arms control experts and human rights advocates stress that robust legal frameworks, or outright prohibitions, may be

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<sup>6</sup> Ishmail Bhila, "Putting Algorithm Bias on Top of the Agenda in the Discussion of Autonomous Weapon Systems", *Digital War*, 2024, available at: <https://doi.org/10.1057/s42984-024-00094-z>.

<sup>7</sup> Andreas Wenger and Simon J.A. Mason, "The Civilianization of Armed Conflict: Trends and Implications", *International Review of the Red Cross*, Vol. 90, p. 872, December 2012, available at: <https://www.icrc.org/sites/default/files/external/doc/en/assets/files/other/irrc-872-wenger-mason.pdf>.

<sup>8</sup> Charukeshi Bhatt and Tejas Bharadwaj, "Understanding the Global Debate on Lethal Autonomous Weapons Systems: An Indian Perspective", *Carnegie India*, 30 August 2024, available at: <https://carnegieendowment.org/research/2024/08/understanding-the-global-debate-on-lethal-autonomous-weapons-systems-an-indian-perspective?lang=en>. See also US Office of General Counsel, U.S. Working Paper, Characteristics of Lethal Autonomous Weapons Systems", 10 November 2017, para. 30, available at: <https://docs.un.org/en/CCW/GGE.1/2017/WP.6>. See also "Working Paper entitled Principles and Good Practices on Emerging Technologies in the Area of Lethal Autonomous Weapons Systems submitted by Australia, Canada, Japan, the Republic of Korea, the United Kingdom, and the United States", 2022, para. 32. See also "United States of America, Department of Defence Directive 3000.09 "Autonomy in Weapon Systems", 21 November 2012.

essential to prevent an arms race that could further endanger civilian populations.<sup>9</sup>

On the one hand, AWS promises to enhance military capabilities, reduce the risk to soldiers, and potentially increase precision in targeting, while on the other hand, their deployment in urban settings raises serious ethical and legal questions. Chief among these concerns is compliance with the core principles of IHL and human rights standards, particularly the principles of distinction and proportionality.<sup>10</sup> Ensuring that AWS can reliably discriminate between military and civilian objects in crowded urban areas remains a profound technical challenge. The potential for algorithmic bias, errors in target identification, or unforeseen malfunctions could lead to unintended harm, triggering questions about accountability, transparency, and oversight. International legal debates on AWS have been ongoing in various forums, most prominently under the framework of the Convention on Certain Conventional Weapons (CCW) and its related Group of Governmental Experts (GGE) on Lethal Autonomous Weapons Systems (LAWS).<sup>11</sup> Many states and civil society organizations advocate for clear regulations or outright prohibitions on fully autonomous systems, citing the paramount need to safeguard civilians.

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<sup>9</sup> John Cherry and Durward Johnson, "Maintaining Command and Control (C2) of Lethal Autonomous Weapon Systems: Legal and Policy Considerations", *Southwestern Journal of International Law*, Vol. 27, 2020, available at: <https://www.swlaw.edu/sites/default/files/2021-03/1.%20Cherry%20%5Bp.1-27%5D.pdf>. See Also Geneva Academy of International Humanitarian Law and Human Rights, "Autonomous Weapons Systems Under International Law", Academy Briefing No. 8, 2014, available at: [https://www.geneva-academy.ch/joomlatools-files/docman-files/Publications/Academy%20Briefings/Autonomous%20Weapon%20Systems%20under%20International%20Law\\_Academy%20Briefing%20No%208.pdf](https://www.geneva-academy.ch/joomlatools-files/docman-files/Publications/Academy%20Briefings/Autonomous%20Weapon%20Systems%20under%20International%20Law_Academy%20Briefing%20No%208.pdf).

<sup>10</sup> R. Shahrullah and M. Saputra, above note 3, p. 2.

<sup>11</sup> *Ibid.*, p. 2

In light of these challenges and spurred by the global debate on LAWS and its development, this paper seeks to analyse the current military doctrine of India with respect to its present strategic standing. It also reflects upon current trends, the development of indigenous AWS, and the debate surrounding the usage of AWS. It discusses the legal and policy standing of India in a global discourse, comparing its standing with other countries. The objective is to critically examine the emerging challenges that lead to shifts in its strategic imperatives, its foreign policy, and national security. This shift has been more evident in India's willingness to employ proactive military measures in response to cross-border terrorism. The recent retaliation of India under *Operation Sindoor*<sup>12</sup> carried out against Pakistan following the *Phalgam* (Kashmir, India) terrorist attack in 2025 signalled a new doctrinal stance, demonstrating not only methodical preparedness<sup>13</sup> to defend its territorial integrity, but also a resolve to project its military strength when provoked using modern military technology, elaborated in further sections.

This policy posture was also reinforced in the aftermath of the *Pulwama* attack<sup>14</sup> back in 2019, wherein the tragic loss of over forty

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<sup>12</sup> Ministry of External Affairs, Government of India, "Statement by Foreign Secretary: OPERATION SINDOOR", 7 May 2025, available at: [https://www.mea.gov.in/Speeches-Statements.htm?dtl/39473/Statement\\_by\\_Foreign\\_Secretary\\_OPERATION\\_SINDOOR](https://www.mea.gov.in/Speeches-Statements.htm?dtl/39473/Statement_by_Foreign_Secretary_OPERATION_SINDOOR).

<sup>13</sup> Press Information Bureau, "Operation SINDOOR: India's Strategic Clarity and Calculated Force", 22 April 2025, available at: <https://static.pib.gov.in/WriteReadData/specificdocs/documents/2025/may/doc2025514554501.pdf>

<sup>14</sup> Ministry of External Affairs, Government of India, "India Strongly Condemns the Cowardly Terrorist Attack on our Security Forces in Pulwama, Jammu and Kashmir", 14 February 2019, available at: <https://www.mea.gov.in/press->

paramilitary personnel in Jammu and Kashmir led to the India Air Force conducting targeted airstrikes in *Balakot*, Pakistan. Together, these incidents reflect a broader recalibration of India's security paradigm, grounded in the proclamation of sovereign rights and safeguarding its national interest.

India emerges out to be an important actor at this moment because of its rapidly evolving military doctrine, heavy investment in the development of military technology, and its partnership with the global west, located at the cusp of transforming geo-political scenarios with rising tensions with its neighbouring countries. As it faces complex security challenges on multiple fronts, its doctrinal and technological evolution will have significant implications for regional stability, the global arms control debate, and the future of AWS governance. This article presents a useful overview of India's stance on AWS from political, legal, and ethical perspectives, and makes some predictions about how this stance may evolve, given the increasing global focus on the ethical and legal dimensions of emerging military technologies. Against the backdrop of evolving strategic assertiveness, it gauges challenges and reflects on India's foreign policy and national security stance with particular emphasis on the imperative to institutionalise research and development of LAWS.

Out of 127 countries that fundamentally supported the initiative under the CCW framework, India is one among them, regulating and prohibiting the use of certain conventional weapons. India has also been an active participant in a group of government experts, where it chaired the session in 2017 and 2018, and led to the

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[releases.htm?dtl/31053/India\\_strongly\\_condemns\\_the\\_cowardly\\_terrorist\\_attack\\_on\\_our\\_security\\_forces\\_in\\_Pulwama\\_Jammu\\_amp\\_Kashmir.](#)

development of eleven guiding principles under lethal autonomous weapon systems<sup>15</sup> (LAWS). Numerous countries have objected to the working of GGE that the consensus model is not leading to a stricter regime, so a legally binding document will be more effective. In December 2023, the United Nations General Assembly (UNGA) adopted a resolution to seek suggestions from the member states to deal with the issues of LAWS and to submit a substantive report to which India voted against the resolution stating that it will lead to replication of consolidated work done by GGE so far considering and negotiating with each stakeholder by bringing all of them into one forum. She opined that a legally binding instrument will be a premature step as the impact of technology and veracity of harm has not been completely assessed. Also, the IHL rule of distinction is a technology-neutral stand and is sufficient to regulate LAWS. Presently, India has realised the need for the development of AWS to protect its interests and curtail the cross-border infiltrations. It has also criticised the complete denunciation of these technologies as ineffective; rather, it focuses on the positive side of these technologies, noting that autonomy in weapons can ensure meticulousness and efficacy, thus avoiding human errors.

## **1. India's Approach to Autonomous Weapon Systems**

India's approach to AWS is shaped by its security environment, technological ambitions, and legal-ethical commitments. As a rising military power facing diverse threats, India is actively developing AWS from armed drones to unmanned ground vehicles, while

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<sup>15</sup> "Annexure III, Guiding Principles affirmed by the Group of Governmental Experts on Emerging Technologies in the Area of Lethal Autonomous Weapons System", CCW/MSP/2019/9, available at: [https://ccdcoe.org/uploads/2020/02/UN-191213\\_CCW-MSP-Final-report-Annex-III\\_Guiding-Principles-affirmed-by-GGE.pdf](https://ccdcoe.org/uploads/2020/02/UN-191213_CCW-MSP-Final-report-Annex-III_Guiding-Principles-affirmed-by-GGE.pdf).



grappling with how to integrate these systems into its defense doctrine.<sup>16</sup> At the same time, Indian policymakers navigate international pressure to regulate “killer robots”<sup>17</sup> and must ensure compliance with IHL principles if AWS are deployed, especially in complex urban warfare scenarios. This section critically examines India’s evolving stance on AWS, including its development status, envisioned uses in domestic security, regulatory and ethical positions (e.g., in UN forums), and the IHL implications of deploying such systems in cities. Comparisons are drawn with other major powers’ approaches to highlight where India mirrors global trends and where it diverges. Throughout, key themes of accountability, human control, transparency, and urban operational complexity are emphasized in evaluating India’s policy gaps and doctrinal choices.

### 1.1. Technological Advancement and Indigenous Development

India has steadily embraced emerging technologies like AI-driven weapons and robotics as part of its military modernization. The Indian Army publicly demonstrated a swarm of 75 autonomous drones in January 2021, showcasing offensive “low-cost precision” strike

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<sup>16</sup> Brijesh Singh, “India’s Evolving Defense Doctrine”, *Indian Council of Global Relation*, 26 May 2025, available at: <https://www.gatewayhouse.in/indias-evolving-defencedoctrine/#>.

<sup>17</sup> “United Nations, “Report of the Secretary General, Our Common Agenda, 2021, Promote Peace and Prevent Conflicts, Action 11: Prevent the weaponization of emerging domains and promote responsible innovation, considers the transformative potential of emerging technologies in conflict and warfare, the threat of their use by non-state actors, and the risks posed to human rights due to issues with accuracy, reliability, human control and data and algorithmic bias”, available at: [https://www.un.org/en/content/common-agenda-report/assets/pdf/Common\\_Agenda\\_Report\\_English.pdf](https://www.un.org/en/content/common-agenda-report/assets/pdf/Common_Agenda_Report_English.pdf).

capabilities enabled by artificial intelligence.<sup>18</sup> This marked a shift in doctrine from a manpower-intensive force to a technology-enabled force, with heavy investments in AI, autonomous weapon systems, and robotics to augment traditional war-fighting. Official statements underscore the Army's commitment to converging its war-fighting philosophy with digital technologies, indicating that autonomous systems are being factored into future battle plans.<sup>19</sup> Indeed, India's military doctrine now envisions a spectrum of AWS applications from surveillance and target acquisition to direct combat as a force multiplier that can reduce risks to soldiers and enhance mission effectiveness in challenging environments.<sup>20</sup>

This shift can be noticed through the active involvement of India's defense research institutions and key private industry in the development of indigenous AWS prototypes.<sup>21</sup> The Defence Research and Development Organisation (DRDO) and allied start-ups have launched projects ranging from unmanned ground vehicles (UGVs) to AI-enabled combat platforms. Notably, DRDO's Combat Vehicles Research Establishment has proposed an unmanned combat vehicle based on the "*Arjun*" main battle tank, equipped with a 120mm gun

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<sup>18</sup> Press Information Bureau, "Indian Army Demonstrates Drone Swarms During Army Day Parade", *Press Information Bureau*, Delhi, 15 January 2021, available at: <https://pib.gov.in/PressReleaselframePage.aspx?PRID=1688807>.

<sup>19</sup> Vinod Sahay, "Defence Budget of 2024-25: Boosting Self-reliance, Modernization and Indigenous Production", *FICCI Blog*, 24 September 2024, available at: <https://www.pib.gov.in/PressReleaselframePage.aspx?PRID=2001375>.

<sup>20</sup> R Shashank Reddy, "India and the Challenge of Autonomous Weapons", *Carnegie Endowment for International Peace*, 22 June 2016, available at: <https://carnegieendowment.org/research/2016/06/india-and-the-challenge-of-autonomous-weapons?lang=en>.

<sup>21</sup> *Ibid.*

for remote operation in hazardous theatres.<sup>22</sup> The Army has spelled out requirements for such UGVs to perform surveillance, reconnaissance, and targeting roles in high-altitude and desert border areas, underscoring the doctrinal intent to deploy autonomous or semi-autonomous platforms where terrain or enemy fire makes human operation perilous.

In the aerial domain, India has acquired and deployed loitering munitions like the Israeli-origin Harop drone,<sup>23</sup> which can autonomously home in on enemy radar emissions and destroy them. The Air Force already maintains over a hundred Harop (P-4) drones<sup>24</sup>, a SEAD-oriented loitering weapon that can operate in a fully autonomous “fire-and-forget” mode or under human supervision, and will abort and return to base if no target is found. The use of such systems indicates that India is not merely theorizing about AWS but is fielding platforms with automated targeting capabilities in specific niches (e.g., anti-air defense suppression). Meanwhile, the Navy and paramilitary forces are exploring unmanned systems for maritime surveillance and border security, aligning with Prime Minister Narendra Modi’s “*Aatmanirbhar Bharat*” (self-reliant India) vision to indigenously develop next-generation defense technology.<sup>25</sup> Overall,

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<sup>22</sup> Inder Singh Bisht, “India to Develop Unmanned Tank for Desert Warfare”, *The Defense Post*, 15 April 2022, available at: <https://thedefensepost.com/2022/04/15/india-unmanned-tank/>.

<sup>23</sup> H. Ben-Yishai, “Drones in the Israeli-Palestinian Conflict: Evolution and Strategic Impact”, *Journal of Strategic Studies*, Vol. 43, No. 5, 2020, pp. 789–810.

<sup>24</sup> Approval for 54 Israeli attack drones Harop for Indian Air Force”, Army Recognition, 13 February 2019, available at: <https://armyrecognition.com/news/aerospace-news/2019/india-approuval-for-54-attack-drones-harop-from-israel-for-indian-air-force>

<sup>25</sup> “India Unveils Indigenous AI-Driven Autonomous Weapon Platform, Enters Global Race for Lethal AWS”, *Aviation Defence Universe*, 16 April 2025, available at:

India's defense doctrine increasingly views autonomy as a critical enabler to address its strategic needs from force protection to precision strike and to achieve technological parity with leading military powers.

## 2. International Conflicts and Shifting Defense Doctrine

India faces a range of internal security challenges, i.e., cross-border terrorism, insurgencies, and potential urban terror attacks that drive interest in AWS for domestic applications. The Indian leadership has noted that autonomous weapons could augment internal defenses and even outperform humans for certain objectives, such as checking cross-border infiltration by militants.<sup>26</sup> Along India's volatile frontiers, the Line of Control in Jammu and Kashmir, intrusions by armed insurgents have traditionally been countered by manned patrols incurring high risk. AWS offers a tantalizing alternative: unmanned systems can survey rugged terrain and even engage infiltrators without exposing Indian soldiers to ambush. This logic underpinned recent policy moves. In 2019, the Army announced plans to deploy "mechanised formations, such as tanks and infantry combat vehicles" in sensitive border sectors to reduce troop vulnerability.<sup>27</sup> Such formations would likely include remotely operated autonomous vehicles operating in extreme climates and high-threat zones where human presence is dangerous. Likewise, India has been compelled to

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<https://www.aviation-defence-universe.com/india-unveils-indigenous-ai-driven-autonomous-weapon-platform-enters-global-race-for-lethal-aws-autonomous-weapon-system/>.

<sup>26</sup> R. S. Reddy, above note 20.

<sup>27</sup> Anoushka Soni and Elizabeth Dominic, "Legal and Policy Implications of Autonomous Weapons Systems", *CIS-India Blog*, 31 October 2020, available at: <https://cis-india.org/internet-governance/blog/legal-and-policy-implications-of-autonomous-weapons-systems-1>.

respond to hostile drone use by terrorists. For example, Pakistan-based groups have used small drones to drop weapons and explosives into Indian territory. This has galvanized India's pursuit of counter-drone systems and potentially automated air defense networks to detect and neutralize unmanned threats. In short, domestic conflict scenarios from Kashmir to the northeast are accelerating India's consideration of AWS as tools for border security, counter-infiltration, and force protection.

Recent escalations along the Line of Control underline how quickly those considerations are moving from concept to practice. During "Operation Sindoor,"<sup>28</sup> launched by India retaliation for a brutal terror attack on civilians at a tourist place in Pahalgam, Kashmir (India) on 22 April 2025, Pakistan attempted to overwhelm Indian positions with dozens of small swarm-drones and stand-off munitions. The Army responded with a layered, partly automated air-defence web, legacy "L-70 and Zu-23 guns" and radar-guided "*Schilka*", a self-propelled anti-aircraft gun handling low-altitude targets, while the long-range "S-400 Sudarshan Chakra" batteries stationed in Punjab, India, intercepted higher-flying drones and missiles. Sensors feeding India's Integrated Air Command and Control System (IACCS) auto-classified tracks and cued individual weapons, where human operators retained the final "engage" command but neutralised more than fifty hostile drones in minutes.<sup>29</sup> The India Air

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<sup>28</sup> "Ministry of External Affairs, Government of India, Statement by Foreign Secretary: Operation Sindoor", 7 May 2025, available at: [https://www.mea.gov.in/Speeches-Statements.htm?dtl/39473/Statement\\_by\\_Foreign\\_Secretary\\_OPERATION\\_SINDOOR](https://www.mea.gov.in/Speeches-Statements.htm?dtl/39473/Statement_by_Foreign_Secretary_OPERATION_SINDOOR).

<sup>29</sup> "L-70 Guns, Zu-23 mm, Schilka, S-400: Weapons India Deployed to Intercept Pakistan Drones", *The Times of India*, 9 May 2025, available at:

Force has also reported to have launched Israeli-origin Harop loitering munitions against Pakistani air-defence sites around Lahore, thereby, demonstrating that the same autonomous technologies India fields for border protection can be flipped for precision counter-strike even in densely populated areas.<sup>30</sup>

Looking ahead, the indigenous *AakashTeer* is a multilayered, AI-driven defence system developed by DRDO and Bharat Electronics Limited (BEL) and integrated by the Indian Space Research Organisation (ISRO), which has tightened that defensive-offensive loop still further. Now being inducted across Army Air Defence formations, *AakashTeer* fuses ISRO real-time satellite imagery, NAVIC navigation, ground radars, and AI-directed kamikaze-drone swarms into a single, decentralised “combat cloud” capable of detecting, deciding, and engaging within seconds.<sup>31</sup> Deployed from jeep-mounted or hardened command nodes, the system is intended to give local commanders, city-scale airspace control or border-sector denial without waiting for higher headquarters. It is a capability with obvious appeal for protecting urban centres such as Jammu or Srinagar against mass-drone incursions. Yet, the speed and autonomy that make this defensive weapon attractive also magnify unresolved questions about meaningful human control, target verification, and proportionality in

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<https://timesofindia.indiatimes.com/india/l-70-guns-zu-23mm-schilka-s-400-weapons-india-deployed-to-intercept-pakistan-drones/articleshow/121016434.cms>.

<sup>30</sup> “What Are Harop Drones? Weapon Used by India to Target Pakistan Air Defence Systems”, *Times of India*, 8 May 2025, available at:

<https://timesofindia.indiatimes.com/india/what-are-harop-drones-weapon-used-by-india-to-target-pakistan-air-defence-systems/articleshow/120995810.cms>.

<sup>31</sup> “Akashteer: Transforming India’s Air Defence with Cutting-edge Technology”, *The Economic Times*, New Delhi, 12 November 2024, available at:

<https://economictimes.indiatimes.com/news/defence/akashteer-transforming-indias-air-defence-with-cutting-edge-technology/articleshow/115218211.cms>.

crowded environments. Ensuring that those AI-driven engagements remain reviewable and interruptible, therefore, becomes a doctrinal imperative for India, which is shifting from demonstration to routine AWS deployment on its own soil. So, an intriguing nuance that surrounds this discussion is the usage of defensive AWS, which is legal under IHL norms presently, but can raise similar legal issues if not used in a stable environment or against an unpredictable target.

## 2.1 Ways to Strengthen Domestic Security

Under the domestic law of India urban security and counterterrorism operations are dealt with under a range of national laws such as the National Security Act<sup>32</sup> (NSA), the Unlawful Activities Prevention Act 2019<sup>33</sup> (UAPA) and other mentioned under Part III of the Indian Constitution Act, 1949<sup>34</sup> are substantial national security laws formulated to counter anti-national activities that endanger the security of the states and its citizens. These laws empower the Union government of India to take actions against any organisation or person deemed unlawful and to take any preventive action against them to combat their unlawful activities. The NSA empowers both state and central government to detain and arrest persons for acts that may endanger national security in addition to maintaining law and order and ensuring the continuity of essential goods and services of the area under the Essential Commodities Act.<sup>35</sup> NSA provides a three tier National Security Council chaired by the Prime Minister of India;

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<sup>32</sup> India Ministry of Home of Affairs, National Security Act, 1980, available at: [https://www.mha.gov.in/sites/default/files/ISdivII\\_NSAAct1980\\_20122018.pdf](https://www.mha.gov.in/sites/default/files/ISdivII_NSAAct1980_20122018.pdf).

<sup>33</sup> Unlawful Activities Prevention Act 2019

<sup>34</sup> Indian Constitution Act, 1949

<sup>35</sup> Essential Commodities Act, 1955

this act further reads with the National Investigation Agency Act<sup>36</sup> which was enacted after the 26/11 Mumbai terror attack in 2008.

At present, urban security and counter terrorism threats are another potential theatre for Indian AWS deployment, albeit one approached with caution. Indian forces have gradually integrated unmanned tools for dangerous tasks in urban environments. The National Security Guard (NSG) and military bomb squads already utilize robots like the *DRDO Daksh UGV* to remotely dispose of improvised explosive devices, including those which were within city settings.<sup>37</sup> These remotely operated robots are equipped with sensors, manipulators, and even shotguns for blasting suspicious objects, which have proven their worth in defusing bombs without risking human life. Building on such successes, the army is scaling up the use of ground robots for urban combat support. In 2019 it signalled the need to procure over 500 robotic surveillance platforms to assist in counter-terrorism operations in built-up areas, explicitly to “avoid casualty to own troops during initial breach” of insurgent-held buildings or rooms<sup>38</sup>. This move reveals a doctrinal shift, before soldiers storm a terrorist stronghold in a city. India envisages sending in robotic scouts or “robotic mules” to locate threats and perhaps engage or distract them, minimizing risk to human operators. Such robots might carry cameras, sensors, and possibly small arms or stun devices, serving as the first entrant in high-risk urban raids. The “Robot Sentry” or “RoboSen” prototype developed by DRDO

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<sup>36</sup> National Investigation Agency Act, 2008

<sup>37</sup> Palak Gupta, “Army of Robots”, *Force India*, 2025, available at: <https://forceindia.net/feature-report/army-of-robots/>.

<sup>38</sup> “Can Robots Help Indian Army Fight Terror in Kashmir”, *The New Indian Express*, 13 November 2025, available at: <https://www.newindianexpress.com/nation/2019/Nov/13/can-robots-help-indian-army-fight-terror-in-kashmir-2061280.html>.



exemplifies this trend as a mobile robot intended for patrolling and surveillance in semi-public urban spaces like campuses<sup>39</sup>. While primarily unarmed, it could be adapted for security patrols or perimeter defense with less-than-lethal capabilities.

Despite these advances, India has so far refrained from deploying fully lethal AWS in domestic law enforcement or counterterrorism, but it is actively researching and developing AI-enabled and semi-autonomous weapon<sup>40</sup> systems which are currently designed to operate with a human on the loop for critical target engagement advocating for operational capabilities enabling systems to function without human intervention after aligning military AI applications with IHL. In recent time, India and the United States (U.S.) have also announced to co-produce advanced systems under the Autonomous Systems Industry Alliance (ASIA) initiative<sup>41</sup> which will bolster the defence capabilities of India and the U.S. and enhance the security in the strategically vital Indo-Pacific Region.<sup>42</sup>

Every use case from Kashmir valley counterinsurgency to metropolitan counter-terror scenarios involves dense civilian

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<sup>39</sup> C. Bhatt and T. Bharadwaj, above note 8.

<sup>40</sup> Vishal Sengupta, "Aero India 2025: Indian Army Displays AI-based Weapon Systems", *Janes*, 14 February 2025, available at: <https://www.janes.com/osint-insights/defence-news/weapons/aero-india-2025-indian-army-displays-ai-based-weapon-system>.

<sup>41</sup> Jon Harper, "Trump, Modi Announce New US-India Autonomous Systems Partnership", *Defensescoop*, 14 February 2025, available at: <https://defensescoop.com/2025/02/14/trump-modi-announce-us-india-autonomous-systems-industry-alliance/>.

<sup>42</sup> "India and US to Co-Produce Advanced Autonomous Systems Under ASIA Initiative", *Indian Defence Research Wing*, 23 February 2025, available at: <https://idrw.org/india-and-us-to-co-produce-advanced-autonomous-systems-under-asia-initiative/>.

presence and complex rules of engagement, which demand high human control. Indian security forces continue to rely on human judgment for the use of lethal force in populated areas, using drones and robots in supporting roles for surveillance, bomb disposal, and delivering tear gas. The government is acutely aware that an errant autonomous strike in a domestic context would carry heavy political and ethical costs. Thus, current doctrine for urban security treats AWS as adjuncts to human-led operations involving eyes and ears in the form of unmanned reconnaissance drones, or tools to neutralize specific hazards in tightly supervised settings. Still, Indian planners see increasing roles for autonomy even in urban security, provided the systems can discriminate against threats and be controlled to avoid unintended harm. The push for AI-enabled surveillance networks in smart cities and the use of drones for crowd monitoring during large events also indicate a blurring line between military AWS and domestic security tech. This raises urgent questions about how India will regulate and oversee the use of autonomy in force application on its soil; an issue closely tied to ethical and legal considerations discussed in further sections.

### 3. Regulatory and Ethical Stance on AWS

India's public stance on regulating lethal autonomous weapons reflects a pragmatic balance between security interests and rule-based order. At several international forums, the United Nations Convention on Certain Conventional Weapons (CCW), India has resisted calls for a blanket ban on AWS, deeming such a step as "*premature*." Indian delegates<sup>43</sup> point out that the technology is still

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<sup>43</sup> "Convention on Certain Conventional Weapons, Intervention by Ambassador Pankaj Sharma, Permanent Representative of India to the conference on

evolving and that no internationally agreed definition of AWS exists, making a prohibition impractical at this stage. Instead, India aligns with a growing consensus that any use of autonomous weapons must remain firmly subject to the regulation of universally accepted humanitarian principles. It emphasizes that the existing IHL framework is adequate, given that these laws are “technology-neutral<sup>44</sup>” and regulate weapons based on their effects rather than the means of operation. In other words, from India’s perspective, regardless of whether a weapon is autonomous or not, for as long as it can be used in compliance with the principles of distinction, proportionality, and necessity, it is not per se unlawful. India often cites how novel technologies have been managed under IHL in the past, such as laser weapons were used for targeting<sup>45</sup> even when Protocol IV of the CCW bans blinding laser weapons completely. Thus, India argues that new rules should focus on weapon effects and proper use rather than banning enabling technologies. Consistent with this view, India joined other states in affirming that responsibility and accountability for any use of AWS lies with human commanders and operators<sup>46</sup>, thereby preserving the chain of command and oversight required by IHL. By stressing human responsibility, India maintains that deploying AWS does not mean abdicating complete human control; on the contrary, it means that a commander will

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Disarmament during the First Session of the 2021 GGE on LAWS,” 3 August 2021, available at <https://meaindia.nic.in/cdgeneva/?13789?000>.

<sup>44</sup> “Convention on Certain Conventional Weapons, Statement by Ms. Muanpui Saiawi, Joint Secretary (Disarmament & International Security Affairs) at the Second Session of the Group of Governmental Experts (GGE) on Lethal Autonomous Weapons Systems (LAWS), Geneva”, 16 May 2023, available at: <https://meaindia.nic.in/cdgeneva/?17885?000>.

<sup>45</sup> “Article 1, Protocol on Blinding Laser Weapons, Protocol IV to the 1980 Convention”, 13 October 1995

<sup>46</sup> CCW Convention, above note 43.

always be accountable for decisions to use force, even if an autonomous agent executes the attack.

At the CCW GGE meetings as well, India has positioned itself as a constructive voice advocating in favour of a regulation which may not be completely binding on the nation states, but establishes an agreement based on effective compliance. It has supported the formulation of eleven non-binding guiding principles, which were adopted in 2019, and has backed the idea of a high-level political declaration on AWS. Through such a declaration, India reaffirms its commitments to IHL acquiescence, human oversight, and prompt development of national policies, all without the delays of treaty negotiation. This approach mirrors that of other major powers like the United States, which in 2023 issued its voluntary guidelines for responsible military AI use<sup>47</sup> and Russia, both of which prefer flexible norms over hard law in this domain. Indeed, India voted against the December 2023 UN General Assembly resolution that sought to move AWS discussions toward a new legally-binding instrument, on the grounds that an enormous amount of work has already been done by GGE after involving all the key stakeholders, and it is inappropriate, time-consuming, as this duplication would waste all the previous efforts. India's priority is to continue deliberations within the CCW, where it even chaired early discussions in 2017–2018, and to build on the substantive work already done, rather than to rush into a mandating treaty that key military powers may boycott or reserve the provisions for the future will not be an effective way.<sup>48</sup> Notably, Indian

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<sup>47</sup> "U.S. Department of State, Bureau of Arm control, Deterrence and stability - Political Declaration of Responsible Military Use of Artificial Intelligence and Autonomy", *REAIM2023*.

<sup>48</sup> Bedavyas Mohanty, "Command and Control: India's Place in the Lethal Autonomous Weapons Regime", *Observer Research Foundation*, Issue Briefs, 25 May

officials have warned that “blanket condemnation” of autonomous weapons could be counterproductive and stigmatize beneficial use cases. The underline positive aspects in some cases are autonomy in weapons, which might increase precision and reduce human error or emotional recklessness on the battlefield.<sup>49</sup> This nuanced stance implies that India is not blind to the ethical concerns raised by AWS, but it prefers to address those through careful design and use, rather than outlawing the technology outright.

On the home front, India’s ethical and legal deliberations on AWS are progressing in tandem with its technological development. The government has convened internal expert groups and tracked dialogues to debate the risks and safeguards required for military AI. For instance, a high-level seminar in early 2025 focused on technical and legal safeguards, accountability measures, and governance frameworks for integrating AI and AWS into India’s defense architecture.<sup>50</sup> Such efforts indicate an understanding that doctrinal clarity and policy guidance must keep pace with innovation. Yet, critics note a degree of policy opacity and ambiguity in the case of India, in that it has not issued a public doctrine on AWS use, nor has it detailed how it will ensure “meaningful human control” in practice.<sup>51</sup> Indian representatives have conceptually endorsed the

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2016, available at: <https://www.orfonline.org/research/command-and-ctrl-indias-place-in-the-lethal-autonomous-weapons-regime>.

<sup>49</sup> *Ibid.*

<sup>50</sup> “India’s Approach to AI in Military Domain and Emerging Technologies in Areas of Lethal Autonomous Weapon Systems (LAWS)”, *Manohar Parrikar Institute for Defence Studies and Analyses*, 28–30 January 2025, available at: <https://www.idsa.in/idsa-event/indias-approach-to-ai-in-military-domain-emerging-technologies-in-areas-of-lethal-autonomous-weapon-systems-laws/>

<sup>51</sup> Anna-Kathrina Ferl, “Imagining Meaningful Human Control: Autonomous Weapons and the (De-) Legitimation of Future Warfare”, *Global Society*, Vol. 38, No. 1, pp. 139–155, available at: <https://doi.org/10.1080/13600826.2023.2233004>.

need for human involvement at critical stages of targeting cycles, but without using the exact phrase.<sup>52</sup> Still, evidence of India's commitment to ethical constraints can be seen in its procurement and development choices. The recently unveiled prototype of an indigenous AI-driven autonomous weapon platform was explicitly built with multiple ethical safeguards, it is programmed with strict rules of engagement, secure control protocols to prevent unauthorized use, and a "human override mechanism" to allow commanders to intervene or abort engagements if needed.<sup>53</sup> Incorporating a human override in the system's design reflects India's adherence to the principle of human control over lethal decisions, even as it pushes the frontier of autonomy. Additionally, India emphasizes the responsibility of the state not only in using AWS, but also in preventing their proliferation to non-state actors.<sup>54</sup> Indian

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<sup>52</sup> "Convention on Certain Conventional Weapons, Intervention by Ambassador Pankaj Sharma, Permanent Representative of India to the conference on Disarmament during the First Session of the 2021 GGE on LAWS, 3 August 2021; All member state should be encouraged to share good practices in areas of human control and human machine interaction in the emerging technologies pertaining to LAWS. The technology should not be stigmatized, and any potential policy measure taken within the context of the CCW should not hamper progress in or access to peaceful uses of intelligent autonomous technologies."

<sup>53</sup> "India Unveils Indigenous AI-Driven Autonomous Weapon Platform, Enters Global Race for Lethal AWS", *Aviation Defence Universe*, 16 April 2025, available at: <https://www.aviation-defence-universe.com/india-unveils-indigenous-ai-driven-autonomous-weapon-platform-enters-global-race-for-lethal-aws-autonomous-weapon-system/>.

<sup>54</sup> Government of India, "Statement by India: An Exploration of the Potential Challenges Posed by Emerging Technologies in the Area of Lethal Autonomous Weapons Systems to International Humanitarian Law", *UNODA Documents Library*, 26 March 2019, available at: [https://unoda-documents-library.s3.amazonaws.com/Convention\\_on\\_Certain\\_Conventional\\_Weapons\\_-\\_Group\\_of\\_Governmental\\_Experts\\_\(2019\)/5%2Ba%2B26%2BMar%2B2019%2Bforen.pdf](https://unoda-documents-library.s3.amazonaws.com/Convention_on_Certain_Conventional_Weapons_-_Group_of_Governmental_Experts_(2019)/5%2Ba%2B26%2BMar%2B2019%2Bforen.pdf).

officials frequently raise concerns that terrorist groups or rogue entities could acquire autonomous capabilities, and argue for international regimes or export controls to keep AWS out of malicious hands. This ties into India's broader ethical stance, where AWS development is acceptable and even necessary for national security, but it must be paired with accountability, oversight, and measures against misuse. By championing state accountability, calling for normative guidelines, and instituting domestic review of AWS projects, India signals that it seeks to be a responsible innovator in this arena, rather than an outlier.

### 3.1. Accountability under International Humanitarian Law

The ultimate test of India's approach to AWS will be compliance with International Humanitarian Law when these systems are deployed in an armed conflict, especially in the intricate milieu of urban warfare. Urban combat presents a nightmare scenario for autonomous systems striving to meet IHL requirements, when cities are densely populated with civilians, friendly forces, and adversaries intermingled, making the core principle of distinction extraordinarily difficult. Even for human soldiers, identifying legitimate targets in a crowded street or an apartment building can be fraught with uncertainty; for an AI-driven machine, the challenge is magnified. As India in recent times has recognised the potential of AI usage for Defence purposes and how it acts as a force multiplier in achieving military objectives, the defence ministry bore the task of integrating this technology<sup>55</sup> through planning, preparing, processing, and complying with structural changes at the user level. India should

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<sup>55</sup> "National Initiatives on Artificial Intelligence in Defence", *United Service Institution of India*, 2023, available at: <https://usiofindia.org/publication/cs3-strategic-perspectives/national-initiatives-on-artificial-intelligence-in-defence/>.

recognize this concern by affirming that IHL fully applies to AI-enabled defence technology alongside AWS, and any use of autonomy must be “compliant with the principles of distinction, proportionality and precautions in attack” just as with conventional forces.<sup>56</sup> However, assuring such compliance in practice is an open question. An autonomous drone or UGV operating in an Indian city would need robust sensors and training data to distinguish a hostile armed insurgent from an innocent civilian, which current AI vision systems can do only in constrained scenarios. The risk of misidentification leading to unlawful harm is a primary reason India has not yet authorized lethal AWS for independent operation in urban areas.

Proportionality is another IHL pillar under strain, as this rule requires weighing anticipated military advantage against collateral civilian damage. That calculation involves value judgments and contextual awareness; however, understanding the difference between an active shooter and a surrendering fighter, or the significance of destroying one terrorist at the cost of ten civilian lives in an apartment, is quite difficult. Programming an AWS to make such nuanced judgments is exceedingly complex. Indian strategic study experts have noted that any AWS would need rigorous testing to ensure it can follow rules of engagement and yield to human judgment in ambiguous cases.<sup>57</sup> In essence, human oversight remains critical as a safety net for proportionality, a human operator can decide not to fire if a situation is too uncertain, whereas a fully

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<sup>56</sup> R.S Reddy, above note 20.

<sup>57</sup> Yogesh Joshi, “Emerging Technologies and India’s Defence Preparedness”, *Observer Research Foundation*, Special Report No. 209, 5 May 2023, available at: <https://www.orfonline.org/research/emerging-technologies-and-india-s-defence-preparedness>.



autonomous system might lack that broader intuition or hesitation. Consequently, India is likely to mandate a human in the loop or on the loop for any AWS deployment in dense civilian areas, at least until artificial cognition vastly improves.

The principle of precaution in attack further compels India to be careful about AWS in urban warfare. Precaution means doing everything feasible to verify targets and minimize civilian harm. For India, this would translate into operational measures like restricting autonomous engagements to clearly defined combat zones or using AWS only after civilians have been warned or evacuated. One can envision, for example, a future scenario where an Indian platoon corners terrorists in an urban enclave and then deploys an autonomous ground vehicle to enter the building first. In line with precaution, that vehicle might be constrained to use non-lethal force unless it positively identifies a hostile firearm, and even then, might seek confirmation from a human controller before using deadly force. Such human-in-the-loop authorization is a likely requirement for India's use of AWS in compliance with Article 57 of Additional Protocol I<sup>58</sup> to the extent that India has also accepted this as a customary international law rule regarding verification of targets.<sup>59</sup> Indeed, India has stressed in UN discussions that while autonomy can assist in faster decision-making, full autonomy in critical functions would challenge the ability to assign responsibility and ensure IHL compliance, so any such capabilities must be carefully circumscribed and made compliant with IHL during the conceptualisation, design,

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<sup>58</sup> Protocol Additional (I) to the Geneva Convention of 12 August 1949 and Relating to the Protection of the Victims of International Armed Conflicts, 1125 UNTS 3, 8 June 1977 (entered into force 12 July 1978), Art. 57.

<sup>59</sup> T. Bhatt and C. Bharadwaj, above note 8.

and development of the system.<sup>60</sup> This suggests that India is looking at a “compliance by design” approach, building AWS that has IHL principles encoded as constraints, for instance, no-fire zones such as hospitals and schools hardwired into targeting algorithms, friend-or-foe recognition to prevent fratricide, and fail-safes to shut down the weapon if the situation exceeds the system’s validated parameters.

In terms of accountability, India faces the same dilemma as all states developing AWS: how to attribute fault if an autonomous system commits a violation. Under the laws of armed conflict, commanders and operators can be held responsible for war crimes, if they deploy a weapon in a negligent or indiscriminate manner.<sup>61</sup> India’s position is that this doctrine of command responsibility remains fully intact with AWS, the human who deploys an autonomous weapon must do so with due care and will be accountable for its actions. But practical accountability could be muddled if an AI “decides” on a target that a human operator did not explicitly intend. India has not announced any special legal framework for AWS accountability, implying it will rely on existing military justice systems, i.e., if an Indian AWS were to mistakenly kill

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<sup>60</sup> “Statement by India: Further Consideration of the Human Element in the Use of Lethal Force; Aspects of Human Machine Interaction in the Development, Deployment and Use of Emerging Technologies in the Area of Lethal Autonomous Weapons Systems, Statement by Commodore Nishant Kumar, Director (Military Affairs), Ministry of External Affairs, Government of India on Agenda item 5(b) Further consideration of the human element in the use of lethal force; aspects of human machine interaction in the development, deployment and use of emerging technologies in the area of Lethal Autonomous Weapons Systems”, 2019, Session of GGE on LAWS, Geneva, 26 March 2019”, *Embassy of India*, available at: <https://eoi.gov.in/eoisearch/MyPrint.php?7926?001/0002>.

<sup>61</sup> Vivek Sehrawat, “Autonomous Weapon System and Command Responsibility”, *Florida Journal of International Law*, Vol. 31, No. 3, 2021, available at: <https://scholarship.law.ufl.edu/fjil/vol31/iss3/2>.

civilians, an investigation would determine if the commanders followed the prescribed protocols. If not, they would be culpable, or if they did follow protocols and the AI erred due to an unforeseen flaw, the incident would likely be treated as a tragic accident and perhaps prompt improvements in the system. This scenario underscores why transparency of AI in weapons is crucial, for which India will need systems that can log decisions and provide post hoc explanations<sup>62</sup> or at least data to assess compliance. Without such transparency, it would be challenging to apply the accountability mechanisms that India insists upon. To achieve that, the government of India constituted a task force to facilitate around 75 AI-enabled projects<sup>63</sup> to be solely utilised for the defence imperatives.

### 3.2. AWS and Its Implications under AI

The development of AI- driven products relevant for defence experts has also started to discuss incorporating “explainable AI programme” in line with the U.S. defence research agency<sup>64</sup> that aims to create explainable models of AI so that the experts could infer actions of autonomous weapons by a human reviewer, which in turn helps establish a chain of accountability and trust. While AI’s role in decision-making related to the lethal use of force remains a subject of

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<sup>62</sup> Lt. Gen. Deependra Singh Hooda, “Implementing Artificial Intelligence in the Indian Military”, *Delhi Policy Group Brief*, 16 February 2023, available at: [https://www.delhipolicygroup.org/publication/policy-briefs/implementing-artificial-intelligence-in-the-indian-military.html#\\_ftn11](https://www.delhipolicygroup.org/publication/policy-briefs/implementing-artificial-intelligence-in-the-indian-military.html#_ftn11).

<sup>63</sup> ANI, “Rajnath Singh Launches 75 Newly-Developed AI-Enabled Defence Products”, *The Business Standards*, 12 July 2022, available at: [https://www.business-standard.com/article/current-affairs/rajnath-singh-launches-75-newly-developed-ai-enabled-defence-products-122071200094\\_1.html](https://www.business-standard.com/article/current-affairs/rajnath-singh-launches-75-newly-developed-ai-enabled-defence-products-122071200094_1.html).

<sup>64</sup> “Explainable Artificial Intelligence”, *Defense Advanced Research Projects Agency*, available at: <https://www.darpa.mil/program/explainable-artificial-intelligence>.

debate, government officials have largely dismissed the possibility of its application in this context.

Another IHL aspect India must consider is the obligation to perform legal reviews of new weapons. Although India is not a party to Additional Protocol I, which explicitly requires Article 36 legal reviews,<sup>65</sup> it is broadly accepted that any state introducing a novel weapon should ensure it doesn't contravene fundamental IHL rules or produce indiscriminate effects. For AWS, India's review process would have to involve not just lawyers but also technologists who understand AI behaviour. Ensuring that an AWS can consistently operate within IHL bounds may require extensive simulation of urban combat scenarios. This raises a practicality: given the unpredictability of war, especially in cities with cluttered electromagnetic environments, civilians unexpectedly emerging, etc., can India confidently certify an autonomous system as IHL-compliant in all cases? This uncertainty is at the heart of global hesitancy about AWS, and Indian policymakers are grappling with it. They have cited the Martens Clause as a general clause of IHL that appeals to the principles of humanity and dictates of public conscience, as an essential guide. India asserts that it "respects the universality of the Martens Clause from a humanitarian perspective", implying that even in the absence of a specific AWS treaty, it will measure the use of autonomous weapons against fundamental humanistic

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<sup>65</sup>"Protocol Additional (I) to the Geneva convention of 12th August 1949 and relating to the protection of the victims of international armed conflict, 8th June 1977, Art. 36, In the study, development, acquisition or adoption of a new weapon, means or method of warfare, a High Contracting Party is under an obligation to determine whether its employment would, in some or all circumstances, be prohibited by this Protocol or by any other rule of international law applicable to the High Contracting Party."

considerations.<sup>66</sup> This could serve as a self-imposed check: if a particular autonomous strike would shock the public conscience or seems to contravene basic humanitarian principles, then it should be halted. In practice, we can expect India to deploy AWS in urban settings only incrementally and with stringent controls. Early uses might be confined to surveillance drones, bomb-disposal robots, or unarmed support bots in cities, roles that pose little risk of IHL violation, while armed AWS might first be deployed in more clear-cut battlefields where distinguishing targets is easier. Over time, as technology and confidence grow, India might expand AWS roles in urban combat, but always with a doctrine of “human on the loop” as a fail-safe.<sup>67</sup> In summary, India’s challenge is to harness the tactical advantages of AWS in urban warfare with speed, persistence, and risk reduction for soldiers without undermining the legal and moral framework that governs the use of force. How India manages this balance in the future will not only impact its compliance with IHL but also influence the international legitimacy of AWS deployment in future conflicts.

#### 4. Comparison with Other Global Approaches

India’s approach to AWS both converges with and diverges from the approaches of other major actors such as the EU, the United States, and Russia. In many respects, India’s stance is closer to that of the U.S. and Russia than to the more precautionary European position. As Washington, Moscow, and New Delhi have resisted calls for an outright ban on autonomous weapons and instead advocate

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<sup>66</sup> “Statement by India, the Absence of a Dedicated AWS Treaty Does Not Imply a Legal Vacuum”, *Ministry of External Affairs, Government of India*, available at: <https://eoi.gov.in/eoisearch/MyPrint.php?7927%3F001%2F0002>.

<sup>67</sup> *Ibid.*

continued development under agreed guidelines. India has advocated that imposing a new legal regime, too, could hinder beneficial innovation and that it is better to first understand the technology and agree on rule-based development. This parallels the U.S. Department of Defence (DoD) policy of pursuing military AI advantages while unilaterally ensuring that appropriate human judgment is involved,<sup>68</sup> an approach which the U.S. has formalized in 2023 as Declaration on Responsible AI use.<sup>69</sup> Russia, too, has openly opposed any binding instrument on AWS and insists the CCW remain the sole forum for discussion, a position broadly in harmony with India's insistence on the CCW process.<sup>70</sup> Thus, India, the U.S., and Russia prioritize strategic and technical freedom of action in AWS development, underpinned by the assurance that existing IHL norms and national accountability are sufficient constraints. It is also clear that those states which are strongly object to a killer-robot ban,<sup>71</sup> the U.S., Russia, Israel, and others, implicitly counted on India's

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<sup>68</sup> "US Department of State, Political Declaration on Responsible Military Use of Artificial Intelligence and Autonomy", *Bureau of Arms Control, Deterrence, and Stability*, 2023, available at: <https://www.state.gov/bureau-of-arms-control-deterrence-and-stability/political-declaration-on-responsible-military-use-of-artificial-intelligence-and-autonomy>.

<sup>69</sup> Pasha Sharikov, "International Regulations of Lethal Autonomous Weapons Systems: Transatlantic Security Dialogue", *World Economy and International Relations*, Vol. 68, No. 12, 2024, pp. 38–48, available at: <https://doi.org/10.20542/0131-2227-2024-68-12-38-48>.

<sup>70</sup> "Document of the Russian Federation pursuant to UN GA Resolution 78/241 of 22 December 2023 on Lethal Autonomous Weapons Systems", *United Nations Office for Disarmament Affairs*, available at: [https://docs-library.unoda.org/General\\_Assembly\\_First\\_Committee\\_-Seventy-Ninth\\_session\\_\(2024\)/78-241-Russian-Federation-EN.pdf](https://docs-library.unoda.org/General_Assembly_First_Committee_-Seventy-Ninth_session_(2024)/78-241-Russian-Federation-EN.pdf).

<sup>71</sup> Ariel Conn, "European Parliament Passes Resolution Supporting a Ban on Killer Robots", *Future of Life Institute*, 14 September 2018, available at: <https://futureoflife.org/ai/european-parliament-passes-resolution-supporting-a-ban-on-killer-robots/>.

understanding, showing an implied support. India's refusal to align with proposals spearheaded by European and smaller states for a ban on AWS development or temporal suspension came out as a de facto response toward the pro-status-quo camp alongside the great powers and high-tech developers.

In contrast, European Union members and allied states have generally espoused a more restrictive approach grounded in humanitarian precepts at the stage of development. The European Parliament, for instance, passed a resolution in 2018 urging an international ban on lethal AWS and demanding that any weapon have “meaningful human control” during critical functions.<sup>72</sup> Several European countries along with countries like Brazil and numerous NGOs have pressed for a legally-binding treaty to prohibit fully autonomous weapons, reflecting a predominantly cautionary ethos in Europe. India diverges from this view as it does not endorse a blanket prohibition and is wary of overly stringent regulation, which could handicap its own security needs. Whereas a country like Germany has declared it will not acquire systems that lack human control, India has made no such unilateral pledge, preferring to keep options open while promising responsible use.<sup>73</sup> The Indian stance could be characterized as “regulated autonomy” as opposed to the European preference for “pre-emptive constraint.” However, India does mirror Europe in at least acknowledging ethical concerns. Indian officials frequently invoke humanitarian language and India's long-standing support for disarmament to assure that they take the moral questions

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<sup>72</sup> European Union External Action, “Autonomous Weapons Must Remain under Human Control, Mogherini says at European Parliament”, *The Diplomatic Service of the European Union*, 14 September 2018, available at: [https://www.eeas.europa.eu/eeas/autonomous-weapons-must-remain-under-human-control-mogherini-says-european-parliament\\_en](https://www.eeas.europa.eu/eeas/autonomous-weapons-must-remain-under-human-control-mogherini-says-european-parliament_en).

<sup>73</sup> *Ibid.*

seriously, even if they come to different policy conclusions than Europe. This contrasts with Russia's often technocentric approach that downplays ethics. In international forums, India has also partnered at times with other Non-Aligned Movement (NAM) states, which tend to emphasize the importance of human control and equity in tech governance. Like many NAM members,<sup>74</sup> India supports ensuring that developing countries are not left behind in AI warfare capabilities, and it voices concerns about arms races. Yet, when it comes to concrete policy, India stops short of the ban advocacy that many NAM and EU countries advance, positioning itself more in line with the great power consensus.

Compared to the United States, India's capabilities and frameworks are still nascent, which introduces some doctrinal ambiguity. The U.S. has already deployed semi-autonomous systems, e.g., loitering munitions, defence systems like the Aegis and Patriot with autonomous modes, and has detailed directives governing autonomous weapons use and development.<sup>75</sup> India, still in earlier stages of AWS development, does not have publicly known directives at that level of specificity. This could be seen as a policy gap in the absence of a clear public doctrine on AWS, unlike the U.S., which at least publishes its policy principles. However, practically, India may be following a trajectory similar to the U.S. by incrementally increasing autonomy while keeping a human check in the loop. One area where India explicitly echoes U.S. and NATO doctrine is the insistence that humans will make the final strike decisions for the

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<sup>74</sup> "Ministry of External Affairs, Role of India in the Non-Aligned Movement, Question No 1168", *Ministry of External Affairs, India*, 28 November 2019, available at: <https://www.mea.gov.in/rajyasabha.htm?dtl/32119/QUESTION+NO1168+ROLE+OF+INDIA+IN+NONALIGNED+MOVEMENT>.

<sup>75</sup> Centre for Strategic and International Studies, "Patriot", *Missile Defense Project*, 23 August 2023, available at: <https://missilethreat.csis.org/system/patriot/>.



foreseeable future. Indian defence scientists have spoken of a “human in charge” principle, akin to the Western concept of meaningful human control, especially for targeting in populated areas. Where India might diverge from the U.S. in transparency, as it has begun to be relatively transparent about its AI principles and even its arsenal to build global norms and domestic trust, whereas India’s military AI projects are largely secret until a public demonstration is staged. This difference highlights the transparency challenge, as India’s democratic accountability mechanisms in defense are not as robust as in some Western countries, potentially limiting public debate on AWS compared to the vigorous discussions in European parliaments or the U.S. Congress.

Finally, regional factors influence India’s approach in ways that differentiate it from Euro-Atlantic powers. China’s rapid advances in autonomous drones and AI-backed weapons undoubtedly spur India to accelerate its programs, an imperative that European countries, which are not facing the Chinese border, don’t experience. India is facing two nuclear-armed neighbours, i.e., China and Pakistan; it cannot ignore the possibility that refusing to develop AWS might leave it at a disadvantage if those rivals deploy such systems. This calculus is similar to Russia’s rationale and even the U.S.’s concern vis-à-vis China, reinforcing the realpolitik aspect of India’s stance. For example, Pakistan has been a vocal proponent of banning AWS at the UN,<sup>76</sup> but India views such calls hesitantly, noting Pakistan’s

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<sup>76</sup> “Permanent Mission of Pakistan to the United Nations Geneva, Remarks by Ambassador Zaman Mehdi, Deputy Permanent Representative of Pakistan at the Meeting of Group of Governmental Experts (GGE) on Lethal Autonomous Weapons Systems (LAWS)”, *United Nations Office for Disarmament Affairs*, 06 March 2023, available at: [https://docs-library.unoda.org/Convention\\_on\\_Certain\\_Conventional\\_Weapons\\_-](https://docs-library.unoda.org/Convention_on_Certain_Conventional_Weapons_-)

simultaneous development of armed drones and even autonomous capabilities. India thus approaches the global debate with a certain strategic skepticism; it will not agree to any regime that it perceives as potentially constraining its security vis-à-vis adversaries who may not honour the same. In this sense, India's stance mirrors that of Russia, which frequently points out U.S. tech advantages as a reason to avoid bans that would "freeze" disparities. Yet, unlike Russia, India also seeks to be seen as a responsible international actor and tends to engage seriously with normative discussions. It often serves as a bridge between outright ban proponents and the resistant great powers by suggesting middle paths or limits on specific uses. This diplomatic positioning harks back to India's non-aligned strategy—trying to reconcile security and disarmament goals.

## **Conclusion**

India's approach to AWS is intermediate: it is neither an advocate of immediate prohibition nor an aggressive champion of unconstrained AI warfare. It diverges from the EU's largely prohibitory, ethics-driven line and aligns more with the U.S./Russia emphasis on continued development with caution. However, India also injects its perspective, emphasizing the need for fairness so that major powers do not monopolize AWS technology and for gradual norm-building. The coming years will show whether India edges closer to the restrictive camp or doubles down with the developers' camp, but for now, it clearly believes that a regulated, responsible path to autonomous weapons is possible, a path that harnesses advanced technology for national defense while ostensibly upholding the law of war and ethical accountability. The effectiveness of this approach, especially in the unforgiving context of urban warfare, will be

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Group\_of\_Governmental\_Experts\_on\_Lethal\_Autonomous\_Weapons\_Systems\_(2023)/Statement\_of\_Pakistan\_at\_GGE\_(06\_March\_2023).pdf.

watched closely by allies and adversaries alike as autonomous weapons continue to test the bounds of international law and human control.