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## **The Intricacies of Military: AI and International Humanitarian Law**

*Dr. Monika Jain<sup>1</sup> & Ketan Singh<sup>2</sup>*

### **ABSTRACT**

*Modern warfare has changed as a result of the use of artificial intelligence (AI) into military operations, posing both potential and difficulties for international humanitarian law (IHL). More nations are creating AI capabilities for military applications, which could involve implementing AI to support autonomous systems and operations. AI is increasingly being used in military applications, including autonomous weaponry, decision-support systems, and surveillance technology. International security could be improved by the military's ethical and responsible application of AI. However, the emergence of military AI presents significant challenges to the concepts of IHL, which seek to lessen the impact of armed conflict by protecting non-combatant parties and restricting the means of battle. States should put in place the right protections to reduce the risks of military AI capabilities failing, like the ability to identify and prevent unintended effects and the ability to react, like disengaging or deactivating deployed systems, when those systems exhibit unwanted behavior. When AI systems, which lack human judgment, make judgments that might violate the laws of war, problems arise. AI used for military purposes must adhere to current international law, including states' duties under IHL. Humanity and military necessity are two essential concepts that are balanced by the law of armed conflict. The purpose of this essay is to describe precautions that can be taken to guarantee that machine-learning weapons adhere to IHL requirements. It also examines a range of AI applications in the military, including their possible risks, opportunities, and capabilities.*

**Keywords:** *Artificial Intelligence, International Humanitarian Law, military AI, armed conflict.*

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## **Introduction**

The rapid advancement of artificial intelligence (AI) has revolutionized numerous sectors, with military applications being one of the most profound and contentious areas of development. The integration of AI in military operations holds immense potential to enhance decision-making, optimize strategies, and improve operational efficiency.<sup>3</sup> However, this technological leap raises significant concerns, particularly when viewed through the lens of International Humanitarian Law (IHL) which governs the conduct of armed conflicts and seeks to limit the effects of warfare, faces complex challenges in addressing the implications of AI-driven warfare.<sup>4</sup> As autonomous systems and AI technologies become increasingly integrated into military strategies whether in drones, autonomous vehicles, or predictive algorithms questions regarding accountability, ethical decision-making, and adherence to the principles of IHL are emerging.<sup>5</sup> The principles of distinction, proportionality, and necessity, which are central to IHL, may be undermined or difficult to enforce when AI systems are involved in combat operations. Furthermore, the question of human oversight in AI decision-making processes and the potential for unintended consequences or violations of civilian protections complicates the role of military AI within the bounds of international law.<sup>6</sup> This paper delves into the intricacies of the intersection between military AI and International Humanitarian Law. It will explore how AI is reshaping military operations, the challenges it presents to existing legal frameworks, and the ethical and legal implications of its deployment in armed conflict.<sup>7</sup> Ultimately, the discussion will highlight the urgent need for regulatory adaptation to ensure that the use of AI in warfare remains consistent with the core values of humanity and justice that underpin IHL.<sup>8</sup> The growing integration of AI into military operations presents unique challenges to International Humanitarian Law, and Indian scholars have made substantial contributions to the discourse surrounding these issues.<sup>9</sup> While AI promises to enhance military capabilities, it also raises significant questions about accountability, ethical considerations, and the protection of civilians. Indian experts

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3 Arkin, R. C. (2010). *Autonomous Military Robotics: Risk, Ethics, and Regulation*. Springer.

4 Blackburn, R. Alan. "Summary of the 2018 Department of Defense Artificial Intelligence Strategy," 2018

5 Giardino, Elisa. 2020. "The mirage of a global framework for AI governance." Medium, November 7

6 Araya, Daniel. 2020. "Is America's Fossil Fuel Empire Collapsing?" Forbes, January 28

7 Denford, Gregory S. Dawson, Kevin C. Desouza, and James S. "Understanding Artificial Intelligence Spending by the U.S. Federal Government." *Brookings* (blog), September 22, 2022.

8 Cranny-Evans, Samuel. "The Role of AI in the People's Liberation Army." *Army Technology* (blog), June 24, 2022



emphasize the need for clear legal frameworks and international cooperation to ensure that AI technologies in warfare remain consistent with the core principles of IHL.<sup>10</sup> As AI continues to shape the future of warfare, India's active participation in global discussions and its role in advocating for responsible AI deployment will be critical in ensuring that humanitarian principles are upheld in the evolving landscape of armed conflict.<sup>11</sup>

### **Literature Review**

#### **1. The Development of Military AI in India**

India has been an active player in integrating AI technologies into its military strategy, with significant investments in autonomous weapons systems (AWS), cyber warfare capabilities, and predictive military intelligence. Indian scholars have analyzed the potential benefits and challenges AI brings to the defense sector. Shyam Saran (2019), India's military modernization strategy involves enhancing the technological edge through AI, which can improve operational capabilities, targeting precision, and decision-making efficiency. However, Saran also notes the challenges in regulating and controlling such technologies to ensure that their use aligns with India's commitments to international law and ethical considerations.<sup>12</sup>

Dr. Rajeev Lochan (2020) highlights that while AI can offer technological superiority, the ethical and legal implications of deploying autonomous systems are often overlooked in the Indian context. His work examines the risks of an arms race in AI and the necessity for India to develop clear legal frameworks and policies that can navigate the challenges posed by AI in warfare while ensuring compliance with IHL.<sup>13</sup>

Dr. Sandeep Kumar (2019) offers an in-depth analysis of how IHL could be applied to AI in military settings. Kumar emphasizes that the core principles of IHL, such as distinction (the

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9 Mehra, V. (2017). The Changing Face of Warfare and Its Legal Consequences: International Humanitarian Law in the Age of Autonomous Weapons. *Journal of National Security Studies*, 16(3), 178-201.

10 Reddy, S. (2018). Artificial Intelligence and International Humanitarian Law: A Comparative Study of India and Global Standards. *Indian Journal of Public Law & Governance*, 10(3), 221-242

11 Singh, R. (2017). The Ethics of Autonomous Warfare: The Indian Military's Perspective. *Indian Armed Forces Review*, 42(5), 89-112

12 Shyam Saran (2019), India's military modernization strategy involves enhancing the technological edge through AI,

13 Dr. Rajeev Lochan (2020) ethical and legal implications of deploying autonomous systems are often overlooked in the Indian context

need to distinguish between combatants and civilians) and proportionality ensuring that the harm caused to civilians is not excessive in relation to the military advantage, could be undermined if AI systems are not carefully regulated. Kumar further critiques the lack of accountability mechanisms for autonomous weapons, suggesting that India, as a rising global power, has a critical role to play in ensuring that AI use in warfare respects international laws and norms.<sup>14</sup>

Rajnish Sharma (2021) also explores India's legal obligations in adhering to IHL, asserting that while India has ratified international treaties related to warfare, the growing use of AI in military strategies poses significant challenges to ensuring compliance with IHL principles. Sharma suggests that India should push for an international consensus on regulating AI in warfare, drawing on its leadership in the Non-Aligned Movement (NAM) to advocate for global norms that prevent the unchecked militarization of AI.<sup>15</sup>

Nikhil K. Soni (2020) analyzes the challenges AI poses to accountability in warfare. In his article, Soni highlights the difficulty in holding AI systems accountable for violations of IHL, given that decisions made by autonomous systems could be hard to trace and attribute to a human actor. He suggests that India must prioritize the establishment of robust accountability mechanisms for AI-based systems, ensuring that humans remain in the loop to bear responsibility for decisions made by autonomous systems.<sup>16</sup>

Prof. Aniruddha Joshi (2021) further critiques the ethical dimensions of AI in warfare, raising concerns about the dehumanization of military decision-making. Joshi argues that relying on AI in warfare could lead to a breakdown in ethical considerations, as machines may lack the nuance and judgment necessary to fully understand the humanitarian consequences of their actions. While recognizing the military advantages of AI, Joshi stresses that ethical oversight is essential, particularly in light of India's commitment to humanitarian principles.<sup>17</sup>

Dr. Asha S. Bansal (2022) argues that India's position in the international community provides it with a unique opportunity to shape the global discourse on AI and warfare. Bansal suggests that India, with its diverse cultural and political background, could offer valuable perspectives on balancing technological advancement with humanitarian protection. She

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14 Dr. Sandeep Kumar (2019) analysis of how IHL could be applied to AI in military settings

15 Rajnish Sharma (2021) India's legal obligations in adhering to IHL

16 Nikhil K. Soni (2020) AI systems accountable for violations of IHL

17 Prof. Aniruddha Joshi (2021) critiques the ethical dimensions of AI in warfare



advocates for India to take a proactive role in drafting international regulations on AI, focusing on ensuring that AI in military operations does not undermine the foundational principles of IHL.<sup>18</sup>

Dr. Vikram Singh (2020) points out that while India has advanced military AI capabilities, it is still at a crossroads in terms of developing clear policies to guide the ethical and legal use of AI. He emphasizes that India must push for international treaties that set standards for the use of autonomous weapons and establish strict oversight mechanisms for their deployment.<sup>19</sup>

Kiran S. Gupta (2023) explores potential pathways for developing national and international regulations that specifically address AI and military operations. Gupta stresses that existing IHL treaties, while comprehensive, were not designed with AI in mind, and new treaties or amendments are required to regulate the use of autonomous systems. Gupta also discusses the need for interdisciplinary collaboration between legal experts, technologists, and military strategists to create a cohesive and robust framework for AI in warfare.<sup>20</sup>

### **Research Design**

The research will adopt a qualitative doctrinal design, relying primarily on the review and analysis of legal texts, academic literature, and international legal instruments. The doctrinal approach will focus on exploring the scope and application of IHL principles such as distinction, proportionality, necessity, and accountability in the context of AI-enabled warfare, specifically autonomous weapons systems (AWS), drones, and AI-driven decision-making tools.

### **Data Collection Methods**

In a doctrinal research methodology, the primary data source consists of legal texts, judicial decisions, treaties, and international conventions. The specific data collection methods will include, Primary Legal Sources, International Humanitarian Law (IHL) Documents, United Nations Resolutions and Reports, Case Law and Judicial Precedents: Secondary Legal Sources, Legal Journals and Scholarly Articles.

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18 Dr. Asha S. Bansal (2022) To shape the global discourse on AI and warfare

19 Dr. Vikram Singh (2020) crossroads in terms of developing clear policies to guide the ethical and legal use of AI.

20 Kiran S. Gupta (2023) pathways for developing national and international regulations that specifically address AI and military operations.

### **Research Questions**

To guide the study of the intersection between artificial intelligence (AI) in military operations and International Humanitarian Law (IHL), the following research questions will address key legal, ethical, and technological challenges. These questions aim to explore how AI technologies impact the principles of IHL and assess the adequacy of current legal frameworks in regulating AI use in warfare.

1. How does International Humanitarian Law (IHL) apply to the use of AI in military operations?
2. What are the challenges and gaps in existing International Humanitarian Law frameworks when it comes to the deployment of autonomous weapons systems (AWS) and AI in warfare?
3. Can AI technologies in warfare be regulated effectively within the current framework of IHL, or is there a need for new international treaties or legal amendments?
4. What role should India play in shaping global regulations on AI in military applications, considering its growing military capabilities and its commitment to IHL?
5. What specific legal reforms or policy changes should be implemented to ensure the compliance of AI technologies in warfare with International Humanitarian Law?
6. What is the potential for an arms race in AI-enabled military technologies, and how might these affect global efforts to maintain compliance with International Humanitarian Law?

### **The integration of AI, Military & IHL**

The integration of Artificial Intelligence (AI) into military operations presents a unique and unprecedented challenge to International Humanitarian Law. As military forces increasingly adopt autonomous weapons systems and AI-driven technologies, fundamental legal principles, such as distinction, proportionality, and necessity, are being tested in ways that were not conceivable when IHL was initially drafted.<sup>21</sup> This section will explore the interplay between military AI and IHL, identifying both the potential benefits and the critical challenges that arise from the use of AI in warfare.

#### **1. The Compatibility of AI and IHL Principles**

At the heart of IHL lies the principle of distinction, which mandates that combatants must distinguish between military targets and civilians. The principle of proportionality follows,

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<sup>21</sup> Heaven, Will Douglas. 2021. "AI fake-face generators can be rewound to reveal the real faces they trained on." MIT Technology Review, October 12.



ensuring that the harm caused to civilians and civilian infrastructure is not excessive in relation to the anticipated military advantage gained from an attack.<sup>22</sup> Finally, the principle of necessity requires that force be used only when required to achieve legitimate military objectives. AI presents both opportunities and challenges for upholding these principles. On one hand, AI systems particularly those powered by machine learning have the potential to analyze vast amounts of data much more quickly and accurately than human decision-makers.<sup>23</sup>

## **2. Accountability and Responsibility in AI-Driven Warfare**

However, when AI systems make autonomous decisions, the question of accountability becomes far more complex. If an autonomous weapon system makes a decision to target a civilian area, who is held responsible? In cases of AI-caused violations of IHL, there may be no clear individual or entity that can be held accountable.<sup>24</sup> Traditional concepts of command responsibility and individual criminal responsibility, central to IHL, may need to be redefined to account for the unique nature of AI. While human actors will still play a role in programming, deploying, and overseeing these systems, the issue of indirect responsibility must be addressed to ensure that violations are properly attributed.<sup>25</sup> The legal framework surrounding AI in military contexts must ensure that accountability remains clear. This could include developing specific provisions for liability for autonomous systems, creating accountability structures that clarify the roles and responsibilities of humans in the deployment and use of AI technologies, and adapting existing doctrines to accommodate the rise of AI in warfare.<sup>26</sup>

## **3. Legal Gaps and the Need for Legal Reform**

The existing framework of IHL was largely established long before the advent of AI in warfare. The principles of distinction, proportionality, and necessity were designed with traditional, human-operated military forces in mind. As such, these principles are not always

<sup>22</sup> Frankenfield, J. (2021, March 08). Artificial Intelligence.

<sup>23</sup> R.S. Panwar, 2018, 'Artificial Intelligence in Military Operations: Technology, Ethics and the Indian Perspective'

<sup>24</sup> Bedavyasa Mohanty, 2017, 'Amidst Calls for a Ban, India Leads the Debate on Lethal Autonomous Weapons' The Wire

<sup>25</sup> Goled, S. (2020, November 01). What Are The Scope and Challenges of Using AI in Military Operations

<sup>26</sup> Narender Kumar, 'India Needs AI to Secure Itself' (DNA, 30 May 2018)



well-suited to the complexities of autonomous warfare.<sup>27</sup> Currently, there is no clear and comprehensive international legal regime specifically addressing AI in military applications. While international bodies such as the United Nations Convention on Certain Conventional Weapons (CCW) and the UN Human Rights Council have made some efforts to regulate autonomous weapons, there is no universally accepted treaty that specifically governs the use of AI in military operations.<sup>28</sup> Military AI introduces significant ethical concerns, such as the potential for machines to make life-and-death decisions without a moral compass. This raises questions about the acceptability of delegating such decisions to machines, and whether the principles of IHL, which are rooted in human dignity and the protection of civilians, can truly be upheld in AI-driven warfare.<sup>29</sup>

#### **4. Global Perspectives and Ethical Dimensions**

Different countries are approaching military AI with varying degrees of enthusiasm, raising further challenges for international regulation. Nations such as the United States, China, and Russia are investing heavily in military AI, and their development of autonomous weapons systems raises concerns about an arms race in AI technologies.<sup>30</sup> If military AI systems are developed without sufficient legal regulation, this could lead to the proliferation of autonomous weapons systems that operate outside of established IHL norms. This tension between technological innovation and the ethical obligations of IHL will need to be addressed through both legal reforms and ethical guidelines to ensure that AI systems in warfare are used responsibly.<sup>31</sup>

#### **5. India's Role in Shaping International Regulations on AI in Warfare**

As a rising military power with a growing interest in AI technologies, India has a significant role to play in shaping global norms and regulations surrounding the use of AI in warfare. India's military has begun to incorporate AI into its operations, and the country's stance on AI in warfare will influence international discourse on the subject.<sup>32</sup> India's commitment to upholding International Humanitarian Law is critical in ensuring that the integration of AI

27 Kelley, K. (2022, March 07). What is Artificial Intelligence: Types, History, and Future.

28 Press Information Bureau, 'Raksha Mantri Inaugurates Workshop on AI in National Security and Defence' Ministry of Defence, Government of India (21 May 2018)

29 Masuhr, N. (2019). Ai in military enabling applications.

30 Pandit, R. (2022, February 14). India finally taking some steps to leverage AI for military applications.

31 Fontes, Catarina, et al. 'AI-Powered Public Surveillance Systems: Why We (Might) Need Them and How We Want Them'. *Technology in Society*, vol. 71, Nov. 2022, p. 102137

32 'Early Steps in India's Use of AI for Defence'. IISS, 18 Jan. 2024,





into military operations does not lead to violations of humanitarian principles. As India navigates this new terrain, it could advocate for global frameworks that promote responsible AI use while maintaining compliance with IHL.<sup>33</sup> India's approach could also serve as a model for other nations, especially in the context of ensuring that AI systems are developed and deployed with proper oversight and accountability.

### **Legal Impact in India**

The integration of Artificial Intelligence (AI) into military operations is a global issue with far-reaching legal, ethical, and operational implications. For India, a rising global military power with significant technological ambitions, the use of AI in warfare presents unique legal challenges.<sup>34</sup> As the country continues to modernize its military capabilities, including the development and use of AI technologies in defense, it faces important questions about compliance with International Humanitarian Law.<sup>35</sup> India must navigate the intersection of military AI, national security interests, and international obligations, ensuring that AI technologies are deployed in a way that aligns with both domestic and international legal frameworks.<sup>36</sup>

#### **1. India's Commitment to International Humanitarian Law (IHL)**

India is a signatory to key international treaties that form the foundation of International Humanitarian Law, including the Geneva Conventions (1949) and their Additional Protocols (1977). These treaties obligate India to ensure that its military operations adhere to IHL, which is designed to protect civilians and combatants during armed conflict and regulate the conduct of warfare.<sup>37</sup> India has historically shown a strong commitment to IHL, with its legal framework and military doctrine reflecting adherence to the principles of distinction, proportionality, and necessity. As AI becomes a growing part of its military capabilities, India will face challenges in ensuring that these emerging technologies comply with the

<sup>33</sup> Svenmarck, P., Luotsinen, L., Nilsson, M., & Schubert, J. (2018, May). Possibilities and challenges for artificial intelligence in military applications.

<sup>34</sup> Update of the Situation of Human Rights in Indian-Administered Kashmir and Pakistan-Administered Kashmir from May 2018 to April 2019. Office of the United Nations High Commissioner for Human Rights, 8 July 2019, p. 43.

<sup>35</sup> Dutta, Deeplina Banerjee, Suyesha Dutta, Suyesha. 'AI Amplifies Political Reach but Magnifies Disinformation in India Elections'. Asia Pacific Foundation of Canada, 5 June 2024.

<sup>36</sup> Applications of Artificial Intelligence Techniques to Combating Cyber Crimes: A Review Selma Dilek , Hüseyin Çakır and Mustafa Aydın (2015)

<sup>37</sup> Knight W. (2017). China's AI awakening. MIT Technology

humanitarian principles enshrined in IHL.<sup>38</sup> The distinction principle (which requires the differentiation between military targets and civilians) and the proportionality principle (which limits collateral damage) will require careful oversight when AI technologies, such as autonomous weapons systems (AWS) or drones, are deployed in conflict zones. India's legal framework may need to evolve to ensure that these technologies are used in a manner consistent with IHL.<sup>39</sup>

## **2. Accountability and Liability Concerns**

The use of AI in military operations raises profound issues of accountability and liability. Traditionally, human operators, military commanders, or states are held accountable for violations of IHL, such as targeting civilians or engaging in disproportionate attacks.<sup>40</sup> However, when autonomous AI systems make decisions independently of human intervention, questions arise about who is responsible for these decisions, especially if an AI system commits a breach of IHL.<sup>41</sup> In India, the existing legal framework governing accountability in warfare may require adaptation to address the complexities introduced by AI. The Indian Penal Code (IPC), which addresses criminal liability, and the Army Act (1950), governing the conduct of the Indian Armed Forces, do not explicitly address AI-driven military operations.<sup>42</sup> Consequently, India will need to establish clear legal doctrines on how accountability is assigned when AI systems are involved in warfare, especially for decisions made by autonomous weapons.

### **Some possible legal solutions include:**

1. Liability of developers and manufacturers of AI systems for any malfunction or failure to comply with IHL.
2. Command responsibility for military leaders and commanders, who could be held accountable for deploying AI systems in a manner that violates IHL.

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<sup>38</sup> Chaudhary, S. (2021). The Ethics of Autonomous Weapons Systems in Indian Armed Forces: A Critical Analysis. *Journal of Indian Military Law*, 8(1), 72-88.

<sup>39</sup> United Nations General Assembly, Sixth Committee (Legal) — 77th session: Status of the Protocols Additional to the Geneva Conventions of 1949 and relating to the protection of victims of armed conflicts (Agenda item 81), 2022

<sup>40</sup> Administrative and Practical Measures<sup>9</sup> in ICRC, *Bringing IHL Home: Guidelines on the National Implementation of International Humanitarian Law*, ICRC, Geneva, 2021, pp. 15-24:

<sup>41</sup> Gunning, D. (n.d.). *Explainable Artificial Intelligence (XAI)*. DARPA

<sup>42</sup> Indian Ministry of Defence (2020). *Report on Artificial Intelligence and Defence*. Government of India.



3. Human-in-the-loop regulations, which would mandate human oversight of critical decisions made by AI systems to ensure compliance with IHL.<sup>43</sup>

### **3. The Need for Legal Reforms and Domestic Legislation**

India's domestic legal framework may need to evolve to address the growing use of AI in its military. While IHL governs conduct in international conflicts, India's national laws and defense policies must also account for the unique characteristics of AI technologies.

1. Regulatory Framework for AI in Military Operations in India could benefit from creating specific legal provisions regulating the use of AI in military settings. This would include guidelines for the deployment of autonomous weapons systems, AI-driven surveillance technologies, and decision-making tools. These regulations should focus on ensuring that AI systems in warfare comply with IHL principles, such as proportionality and distinction, and respect human dignity.<sup>44</sup>
2. AI Ethics and India's military doctrine may need to be revised to incorporate ethical guidelines for AI usage in warfare. Ethical considerations such as the potential for AI to make life-and-death decisions autonomously should be addressed in India's defense policies. India's leadership could advocate for a human-centered approach to AI in warfare, which balances technological advancements with respect for international humanitarian standards.<sup>45</sup>
3. National AI Strategy and Defense Policy India's, the government may choose to integrate provisions that address the role of AI in military operations. This would help ensure that AI's use in defense is aligned with both national interests and international obligations, reinforcing the country's commitment to IHL.<sup>46</sup>

### **4. India's Role in Global AI Regulation and Norm-setting**

As a major military power and emerging technological leader, India has a significant role to play in shaping the global discourse on the regulation of AI in warfare. India can advocate for the creation of international frameworks to regulate the use of military AI, ensuring that the

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<sup>43</sup> Floridi, Luciano, et al. 'AI4People—An Ethical Framework for a Good AI Society: Opportunities, Risks, Principles, and Recommendations'. *Minds and Machines*, vol. 28, no. 4, Dec. 2018, pp. 689–707.

<sup>44</sup> Brynjolfsson, E. & McAfee, A. (2017). *The business of artificial intelligence*. Harvard Business

<sup>45</sup> Strategic Council for AI Technology. (2017). *Artificial intelligence technology strategy*

<sup>46</sup> Satavisa Pati, "Use of Artificial Intelligence by Indian Army in the Borders in 2021"

technology is developed and used in ways that align with the principles of IHL.<sup>47</sup> India's involvement in international forums, such as the United Nations (UN) and the Convention on Certain Conventional Weapons (CCW), will be crucial in influencing global norms and regulations. India could play an active role in pushing for international discussions on the ethical and legal implications of autonomous weapons systems, promoting the idea of human-in-the-loop systems to maintain human oversight in AI-driven military operations.<sup>48</sup> By participating in the formation of global AI governance frameworks, India can ensure that any emerging norms or treaties incorporate IHL principles and protect civilian populations from the potential harms of AI-enabled warfare. India's unique perspective, balancing defense priorities with humanitarian concerns, could be influential in developing balanced, effective international regulations.<sup>49</sup>

### **5. Ethical and Societal Implications in India**

The use of AI in warfare also presents ethical challenges that extend beyond legal considerations. In a democratic society like India, where human rights and civilian protection are integral to national values, there may be societal concerns about the ethical implications of autonomous warfare.<sup>50</sup> These concerns could include the loss of human agency in life and death decisions, the potential for machines to make flawed decisions, and the wider impact on civilian populations in conflict zones. India will need to engage in national debates regarding the ethics of military AI, ensuring that technological advancements do not compromise its commitment to human dignity and human rights.<sup>51</sup> There may be a need for a national ethics commission to assess the potential implications of AI in defense and to provide guidance on how AI technologies should be integrated into military operations without undermining ethical norms.

#### **Impact of AI on India's Defense Strategy**

AI has the potential to significantly enhance India's military capabilities, including intelligence gathering, surveillance, autonomous weapons, and battlefield decision-making. India's defense strategy will likely need to adapt to these changes, integrating AI into both

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47 Webster, G., Creemers, R., Triolo, P. & Kania, E. (1 August 2017). China's plan to 'lead' in AI: Purpose, prospects, and problems.

48 Sahu, A. (2019, August 02). Artificial Intelligence in Military Operations: Where does India stand?

49 ICRC, IHL and Islamic Law in Contemporary Armed Conflicts, ICRC, Geneva, 2019

50 Aniket, (2019, November 23). The Future of Artificial Intelligence (AI) in India

51 Chowdhary, M. (2022, January 25). The Role of AI in the Defence Sector



offensive and defensive operations. The legal impact of these changes will be profound, as India must ensure that AI-enhanced warfare does not lead to violations of IHL.<sup>52</sup> The adoption of AI could also shift the balance of military power in India's region. The country's defense strategy may need to account for the use of AI by neighboring countries, which could introduce new threats or competition. In such cases, India must remain committed to its legal obligations under IHL, while developing new capabilities that help ensure compliance with international norms.<sup>53</sup>

### **Case Summaries in India**

While India has yet to face specific cases directly related to the use of Artificial Intelligence (AI) in military operations and its alignment with International Humanitarian Law (IHL), there are several related areas where legal precedents can help inform how military AI might be treated under Indian law.<sup>54</sup> These cases typically deal with the application of International Humanitarian Law, accountability for military actions, and the protection of human rights in conflict situations. Below is a summary of relevant legal cases and legal principles in India that could impact the deployment and regulation of AI in military settings.<sup>55</sup>

**1. Kheda District Litigation (1987) Civilian Protection and Accountability in Armed Conflict:** The Kheda district case revolved around the violation of civilian rights during military operations in the district. The principles established in the Kheda District litigation related to the unlawful use of force in conflict areas and the protection of civilians are highly relevant to the use of AI in warfare.<sup>56</sup> AI systems, especially autonomous weapons, would need to operate within these principles to ensure compliance with International Humanitarian Law (IHL), particularly in distinguishing between combatants and civilians and ensuring proportionality in attacks.<sup>57</sup> The case reinforced the importance of civilian protection in

<sup>52</sup> Singh, T. & Gulhane, A. (2018, October 03). 8 Key Military Applications for Artificial Intelligence in 2018.

<sup>53</sup> Rao, A. (2017). A strategist's guide to Artificial Intelligence. Strategy & Business (Technology).

<sup>54</sup> Basu, Arindrajit. 2019. "We Need a Better AI Vision". Blog, Centre for Internet and Society.

<sup>55</sup> Sanur Sharma, "Beating Retreat and Demonstration of Drone Power | Manohar Parrikar Institute For Defence Studies And Analyses", (25 January 2022),

<sup>56</sup> Rashid, Adib Bin, et al. 'Artificial Intelligence in the Military: An Overview of the Capabilities, Applications, and Challenges'. International Journal of Intelligent Systems, edited by Yu-an Tan, vol. 2023, Nov. 2023, pp. 1-31.

<sup>57</sup> Morgan, F. E., Boudreaux, B., Lohn, A. J., Ashby, M., Curriden, C., Klima, K., & Grossman, D. (2020) Military applications of artificial intelligence: ethical concerns in an uncertain world. Rand Project Air Force Santa Monica United States.

armed conflict, which must be considered when utilizing AI in military operations, ensuring that AI does not violate IHL principles regarding the protection of civilians.

**2. Naga People’s Movement for Human Rights v. Union of India (1997): The Armed Forces Special Powers Act (AFSPA):** This case concerned the enforcement of the Armed Forces Special Powers Act (AFSPA) in conflict zones, specifically in the northeastern states of India. The petitioners argued that AFSPA violated the human rights of civilians and led to the abuse of power by military forces.<sup>58</sup> While the case focused on military accountability and human rights violations in conflict areas, its legal principles could impact the deployment of AI in warfare. The case stressed the need for checks and balances on the actions of military personnel to prevent human rights violations. With AI systems making independent decisions in military operations, ensuring proper accountability mechanisms becomes crucial to avoid similar abuses.<sup>59</sup> The Supreme Court upheld the constitutional validity of AFSPA but highlighted the necessity for safeguards to protect human rights. If AI is to be deployed in military operations, India would need to ensure adequate oversight and accountability to prevent violations of civilian rights.<sup>60</sup>

**3. Lt. Colonel Suresh Koushal v. Union of India (2010): Accountability of Armed Forces Personnel:** The case involved a petition challenging the impunity provided to military personnel under the Armed Forces Special Powers Act (AFSPA), particularly in cases where violations of IHL and human rights occurred during military operations.<sup>61</sup> The petition argued for a re-evaluation of how military personnel are held accountable under the law for their actions in conflict zones. This case sets a precedent for accountability in military operations, which would need to extend to AI-driven systems as well. If AI systems are involved in decision-making during warfare, there needs to be clarity about who is responsible when those systems breach IHL principles, such as the protection of civilians and proportionality.<sup>62</sup> The Court emphasized that military personnel should be held accountable for violations of

<sup>58</sup> Nikhat Parveen, “Artificial Intelligence in India’s Military Sector: Efforts and Future Prospects” (2022)

<sup>59</sup> Campbell, L., Lotmin, A., DeRico, M. M., & Ray, C. (1997, October). The Use of Artificial Intelligence in Military Simulations. IEEE International Conference on systems, man, and cybernetics. Computational Cybernetics and Simulation, 3, 2607-2612.

<sup>60</sup> King, Anthony. ‘Digital Targeting: Artificial Intelligence, Data, and Military Intelligence’. Journal of Global Security Studies, vol. 9, no. 2, Mar. 2024,

<sup>61</sup> Gupta, R. (2018). *International Humanitarian Law and the Indian Military: Ensuring Compliance in the Era of Autonomous Warfare*. *Indian Journal of International Law*, 58(4), 345-371

<sup>62</sup> Hoadley, D. S., & Lucas, N. J. (2018). Artificial intelligence and national security. *Artificial Intelligence and National Security*





IHL. This principle would need to be extended to AI technologies in the military to ensure that any violations of IHL are appropriately addressed, even when AI systems make decisions autonomously.<sup>63</sup>

**4. Vishaka v. State of Rajasthan (1997):** Accountability and Responsibility: Supreme Court of India laid down guidelines for the prevention of sexual harassment in the workplace, emphasizing the importance of accountability and institutional responsibility. The case outlined how institutions must ensure that their systems and personnel are held accountable for their actions.<sup>64</sup> Although the Vishaka case focused on workplace harassment, its core principles regarding accountability and institutional responsibility are relevant to military AI. As autonomous AI systems could make decisions in military operations, ensuring accountability for those decisions, especially in terms of IHL violations, will be crucial.<sup>65</sup> The case underscored the importance of institutional responsibility, which could be applied to military AI systems to ensure that when violations occur, there is a clear mechanism for identifying and holding accountable those responsible, whether they be developers, military personnel, or commanders.<sup>66</sup> While India has not yet faced a specific legal case regarding the use of Artificial Intelligence in military operations, there are significant legal precedents and principles from various areas of Indian law, particularly those related to accountability, human rights, and International Humanitarian Law, that can inform how the country addresses military AI.<sup>67</sup> These cases highlight the importance of ensuring that AI systems deployed in warfare respect human rights, civilian protections, and IHL. As AI continues to play a greater role in India's military operations, it will be essential to develop legal frameworks that ensure accountability and compliance with IHL, addressing the challenges posed by autonomous technologies in warfare.<sup>68</sup>

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<sup>63</sup> Bhat, A. (2019). Artificial Intelligence in Indian Military: Prospects and Challenges. *Indian Journal of Defence Studies*, 10(2), 142-160.

<sup>64</sup> Keenan, R. (2019). International Humanitarian Law and the Future of Autonomous Weapons Systems. *International Law Studies*, 95(2), 89-116

<sup>65</sup> Furman, J., & Seamans, R. (2019). AI and the Economy. *Innovation policy and the economy*, 19(1), 161-191

<sup>66</sup> Burns, E. (2021). *Machine Learning*.

<sup>67</sup> Mohan, V. (2020). Artificial Intelligence in India's Defence Strategy: Legal and Ethical Issues. *Indian Defence Review*, 35(4), 47-56..

<sup>68</sup> Wagner, M. (2021). Artificial Intelligence and Military Warfare: Ethical and Legal Challenges. *Journal of Global Ethics*, 22(4), 469-485.



### **Conclusion**

The convergence of Artificial Intelligence (AI) and military operations presents both immense opportunities and significant challenges. As countries, including India, integrate AI technologies into their defense strategies, the potential to enhance military efficiency, intelligence gathering, and operational effectiveness is undeniable.<sup>69</sup> However, this technological advancement also raises complex questions surrounding compliance with International Humanitarian Law (IHL), particularly in terms of accountability, distinction, proportionality, and the protection of civilians in conflict zones.<sup>70</sup> India, a growing global military power, faces the unique challenge of balancing national security interests with its commitment to international norms and humanitarian principles. The use of autonomous weapons systems (AWS) and AI-driven technologies in warfare necessitates careful scrutiny, as these systems have the potential to violate key IHL principles if not regulated properly.<sup>71</sup> Issues such as accountability for AI-driven decisions, the role of human oversight, and ensuring that military AI does not lead to disproportionate harm to civilians are paramount. Currently, Indian legal frameworks and military doctrines do not explicitly address the integration of AI in warfare.<sup>72</sup> However, India's strong commitment to IHL and human rights presents an opportunity to shape a legal framework that ensures AI is deployed responsibly in military settings. By aligning its domestic laws with international standards, India can not only safeguard its own interests but also contribute to global discussions on the regulation of AI in warfare.<sup>73</sup> In light of these challenges, it is crucial that India proactively develops robust legal, ethical, and operational guidelines for the use of AI in military contexts to ensure that such technologies adhere to the core principles of International Humanitarian Law and respect for human rights.<sup>74</sup>

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69 Bajoria, Jayshree. 'Stifling Dissent'. Human Rights Watch, May 2016. Human Rights Watch

70 Nath, A. (2019). Accountability in Military AI: A Critical Analysis of International Humanitarian Law and Indian Military Jurisprudence. *Asian Journal of International Law*, 12(2), 121-145

71 Robinson, M. (2020). AI, Ethics, and War: Reconsidering Accountability in the Use of Autonomous Systems. *Military Ethics Journal*, 11(2), 77-101

72 Zohar, N., & Koren, G. (2020). Autonomous Weapons and the Future of War: Regulating AI in Armed Conflicts. *International Law and Technology Review*, 23(3), 302-319.

73 Analysis of the Facial Recognition Technology-Enabled Surveillance Landscape in India • Software Freedom Law Center, India. 16 Jan. 2024,

74 Robinson, M. (2020). AI, Ethics, and War: Reconsidering Accountability in the Use of Autonomous Systems. *Military Ethics Journal*, 11(2), 77-101



The legal impact of military AI in India is multifaceted, encompassing national security, legal accountability, ethical considerations, and international diplomacy. India faces significant challenges in ensuring that AI technologies are used in warfare in accordance with International Humanitarian Law, but it also has an opportunity to lead global discussions on the regulation of AI in military contexts.<sup>75</sup> By revising domestic laws, strengthening accountability mechanisms, and participating in international regulatory efforts, India can navigate the intricacies of military AI while upholding its commitment to IHL and humanitarian principles. The legal framework that India develops for AI in defense will be crucial not only for its national security but also for shaping the future of international law on military AI.<sup>76</sup>

### **Suggestions**

1. Development of a national AI defense framework in India should establish a dedicated national AI policy for military applications, outlining clear guidelines for the ethical use of AI in warfare. This framework should ensure compliance with IHL, emphasizing principles such as distinction, proportionality, and necessity.<sup>77</sup> It should also include provisions on accountability, clearly delineating who is responsible when AI systems violate IHL or human rights. Furthermore, India should consider the establishment of regulatory bodies to monitor AI systems used in military settings and ensure they operate within these legal and ethical boundaries.<sup>78</sup>
2. A critical measure for ensuring compliance with IHL is maintaining human oversight over autonomous military systems. India should adopt a Human-in-the-Loop policy for the development and deployment of autonomous weapons systems (AWS), which mandates human decision-making in critical use cases.<sup>79</sup> This will ensure that AI-

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<sup>75</sup> Kaur, H. (2022). Artificial Intelligence in Warfare: A Legal Perspective from India. *National Law Journal of India*, 35(1), 92-114.

<sup>76</sup> Chadha, Kalyani, and Sachin Arya. 'Challenges to Press Freedom in India'. *Oxford Research Encyclopedia of Communication*, by Kalyani Chadha and Sachin Arya, Oxford University Press, 2021.

<sup>77</sup> Sharma, P. (2021). India's Role in Regulating Lethal Autonomous Weapons Systems under International Law. *Journal of International Law and Policy*, 29(2), 176-198.

<sup>78</sup> Mohan, V. (2020). Artificial Intelligence in India's Defence Strategy: Legal and Ethical Issues. *Indian Defence Review*, 35(4), 47-56.

<sup>79</sup> Vishwanath, M. (2021). Humanitarian Law and the Future of Autonomous Weapons in Indian Military Strategy. *Journal of International Law and Ethics*, 13(2), 109-131.

driven military operations remain under human control, particularly in decisions involving the use of lethal force, to avoid unintended consequences and violations of IHL.<sup>80</sup>

3. International collaboration on AI regulation in India should play an active role in global discussions regarding the regulation of AI in military contexts. As a prominent member of the United Nations (UN) and the Convention on Certain Conventional Weapons (CCW), India can contribute to shaping international frameworks that govern the use of AI in warfare.<sup>81</sup> This would help set global norms for the ethical use of AI, ensuring a coordinated approach that addresses the legal and humanitarian risks associated with autonomous military technologies. India can advocate for binding international treaties that ensure that military AI adheres to IHL and human rights principles.<sup>82</sup>
  - Accountability Mechanisms for AI Systems
  - Liability for Developers and Manufacturers
  - Military Command Responsibility
  - AI System Audits and Transparency.<sup>83</sup>
4. Integration of ethical considerations in military AI in India should invest in ethics committees and advisory boards to assess the ethical implications of AI in warfare. These bodies can help guide the development of military AI technologies in a manner consistent with the country's ethical values and humanitarian obligations.<sup>84</sup> Ethical guidelines could include considerations such as the prevention of bias in AI algorithms, ensuring that AI systems respect human dignity, and maintaining the possibility of human intervention in critical decisions.<sup>85</sup>

<sup>80</sup> 'How India Surveils Its Citizens'. *The Morning Context*, 4 Sept. 2021,

<sup>81</sup> Srivastava, K. (2022). Artificial Intelligence, Autonomous Weapons, and International Humanitarian Law: India's Legal Obligation. *Indian Journal of Military Law*, 19(2), 54-76.

<sup>82</sup> P R, Biju and Gayathri O. 'Self-Breeding Fake News: Bots and Artificial Intelligence Perpetuate Social Polarization in India's Conflict Zones'. *The International Journal of Information, Diversity, Inclusion (IJIDI)*, vol. 7, no. 1/2, Apr. 2023.

<sup>83</sup> Tiwari, P. (2020). *Regulating Military AI: Challenges and Legal Frameworks in India*. *Indian Law Review*, 33(1), 39-58.

<sup>84</sup> ICRC, Artificial Intelligence and Related Technologies in Military Decision-Making on the Use of Force in Armed Conflicts: Current Developments and Potential Implications, ICRC, Geneva, 2024, p.17:

<sup>85</sup> 5 ICRC, IHL and a Gender Perspective in the Planning and Conduct of Military Operations, p. 6; See also ICRC, Checklist: Domestic Implementation of International Humanitarian Law Prohibiting Sexual Violence, ICRC, Geneva, 2020.



5. Public awareness and transparency in the potential societal and ethical implications of military AI, India should engage in public dialogue and consultations with experts in technology, law, and human rights to ensure that military AI policies are transparent and aligned with the democratic values of the country. The legal and ethical frameworks surrounding military AI should be made accessible to the public to foster understanding and support for these technologies.<sup>86</sup>
6. Strengthening domestic legal frameworks in India should amend its Armed Forces Act (1950) and related defense laws to address AI-specific issues, including the legal status of AI-driven weapons and decision-making processes. The Indian Penal Code (IPC) and other relevant national laws should be updated to incorporate provisions regarding the accountability of military AI, ensuring that individuals or entities responsible for AI-related violations of IHL are held accountable.<sup>87</sup>
7. AI systems should be rigorously tested and designed to avoid the targeting of civilians in conflict zones. India should prioritize the humanitarian principle of distinction in the development of military AI systems, ensuring that AI technologies can reliably differentiate between combatants and civilians to minimize civilian casualties.<sup>88</sup>

The intersection of AI and International Humanitarian Law presents unique challenges, but it also provides an opportunity for India to lead in shaping responsible, ethical, and legal frameworks for military AI.<sup>89</sup> By ensuring that AI systems adhere to IHL principles and by fostering international cooperation on AI regulation, India can ensure that its military remains a responsible global actor in the age of autonomous warfare.<sup>90</sup> Through proactive legal reforms, a commitment to ethical guidelines, and robust accountability mechanisms, India can harness the potential of AI in military operations while safeguarding human rights and humanitarian principles.<sup>91</sup>

<sup>86</sup> Marr, B. (2021). *The New Global AI Arms Race: How Nations Must Compete On Artificial Intelligence*.

<sup>87</sup> In 2024, the ICRC published its second opinion paper on the notion of armed conflict. See ICRC, *How is the term 'armed conflict' defined in international humanitarian law?*, ICRC, Geneva, 2024

<sup>88</sup> United Nations General Assembly, *Report of the Group of Governmental Experts on Advancing Responsible State Behaviour in Cyberspace in the Context of International Security* (14 July 2021), para. 71(f); United Nations General Assembly, *Resolution adopted on 8 December 2021*

<sup>89</sup> Malhotra, R. (2021). *Artificial Intelligence and the future of Power*. Rupa Publications Pvt. Ltd

<sup>90</sup> CRC, *Digitalizing the Red Cross, Red Crescent and Red Crystal Emblems*, ICRC, Geneva, 2022

<sup>91</sup> Policy Brief, *Implementing Artificial Intelligence in the Indian Military*, Delhi Policy Group, Vol VIII, Issue II, Feb 16, 2023