

## Legal Review of Drone Use as Weapons and Surveillance Tools in Armed Conflict: An International Humanitarian Law Perspective

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### Abstract

**Introduction:** This article examines the use of unmanned aerial vehicles (drones) as weapons and surveillance tools in armed conflict. The core issue lies in the potential inconsistency between current drone practices and fundamental principles of international humanitarian law, specifically distinction and proportionality.

**Purposes of the Research:** This research aims to analyze the legality of drone deployment in armed conflict under international humanitarian law.

**Methods of the Research:** This research uses a normative legal method with a literature study approach, focusing on the analysis of relevant laws and international legal documents.

**Findings of the Research:** Findings indicate that drone use can violate the principles of distinction and proportionality, often leading to disproportionate civilian casualties due to difficulties in distinguishing between military and civilian targets. Furthermore, the absence of specific international regulations on drone warfare creates a legal vacuum, increasing the risk of violations and abuse. Therefore, the study concludes that specialized regulations are urgently needed to align technological advancements with humanitarian law principles.

**Keywords:** Drones; Surveillance Devices; Armed Conflict; International Humanitarian Law.

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## INTRODUCTION

Initially, humanitarian law was known as the law of war, which contained provisions related to the humanitarian aspects of armed conflict.<sup>1</sup> Humanitarian law largely regulates "protection for persons involved or not involved in a war. The basis of International Humanitarian Law comes from treaties, customs and general legal principles, court decisions and doctrine."<sup>2</sup> International Humanitarian Law aims to limit the impact of armed conflict on people and objects, and to ensure that the suffering caused by war is minimized.

Over time, there have been various changes and advances, especially in the field of technology. One of them is the development of technology used for military purposes in warfare. In the law of war, there are two things that are the measure or criteria in Just War Theory, namely "ius ad bellum and ius in bello. Ius ad bellum talks about whether a decision to wage war is right and ius in bello is related to the course of the war, how the war should be waged."<sup>3</sup> Ius in bello is also commonly referred to as international humanitarian law, which

<sup>1</sup> Teguh Sulistia, "Peran Internasional Criminal Court Dan Kejahatan Terhadap Kemanusiaan Oleh Militer," *Indonesian Journal of International Law* 5, no. 1 (2007): 16-42, <https://doi.org/10.17304/ijil.vol5.1.146>.

<sup>2</sup> Josina A Yvonne Wattimena et al., *Buku Ajar Hukum Humaniter Internasional* (Malang: Widina Bhakti Persada, 2023), p. 8-12.

<sup>3</sup> Fahri Fadilah et al., "Analisis Yurisdiksi Mahkamah Pidana Internasional (ICC) Dalam Kasus Surat Perintah Penangkapan Terhadap Vladimir Putin," *Yustisi* 10, no. 3 (2023): 6-72, <https://doi.org/10.32832/yustisi.v10i3.15202>.

includes the Law of The Hague and the Law of Geneva. With the development of military technology, new weapons have emerged in war, one of which is drones or unmanned aircraft equipped with weapons.

In the rules of war, one of them is regulated in the Hague Convention 1907, Article 23 of Convention IV concerning the Laws and Customs of War on Land, which generally regulates: prohibits the use of poison and poisoned weapons, killing or wounding a surrendering enemy, and the prohibition of the use of weapons, projectiles, or materials that cause unnecessary suffering. One of the principles of international humanitarian law is the distinction principle, which requires parties to a conflict to distinguish between military targets and non-military targets, such as civilians, civilian objects, and wounded or sick members of the war (*hors de combat*).<sup>4</sup>

The distinction principle requires parties to an armed conflict to at all times separate military targets between civilians and combatants and civilian objects from military objects.<sup>5</sup> Combatants are defined as “a group of people who actively participate in a conflict or hostilities, and conversely, civilians are a group of people who do not participate in a conflict.”<sup>6</sup> This principle states that attacks may only be directed against legitimate military targets and may not be directed against the civilian population or civilian objects. Thus, parties to an armed conflict must take all necessary measures to ensure that their military action does not intentionally or disproportionately harm the civilian population or civilian property. The use of drones in armed conflict is not expressly regulated by international humanitarian law, and can therefore be considered illegal because it does not meet basic principles such as proportionality and distinction. The use of drones often causes civilian casualties and excessive suffering, which is contrary to Article 23 (e) of the 1907 Hague Convention, which prohibits the use of weapons likely to cause unnecessary suffering. In armed conflict, victims come not only from the warring parties, but also from civilians. The protection of civilians is regulated by the 1949 Geneva Convention IV, which first discussed civil rights in war, and is further explained in the 1977 Additional Protocol which regulates the protection of civilians in various conflict situations.

According to Chris Cole and Jim Wright, “drones are Unmanned Aerial Vehicles (UAVs) or unmanned aircraft that are controlled by a pilot from the ground or independently carry out pre-programmed missions.”<sup>7</sup> Unmanned Aerial Vehicle (UAV) has several terms such as “drone remotely piloted vehicle (RPV), remotely piloted aircraft (RPA), remotely operated aircraft (ROA) or if used for war it can be called an unmanned aerial combat vehicle (UACV).”<sup>8</sup> The use of drones offers advantages in terms of efficiency, accuracy, and the ability to reach difficult-to-access areas, but on the other hand it also raises challenges related to regulation, privacy, and the potential for misuse of this technology in situations of conflict or crime.

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<sup>4</sup> Bintang Adi Prakoso, “Perlindungan Hukum Terhadap Kelompok Bersenjata Yang Sakit Dan Terluka Di Darat Ditinjau Dari Hukum Humaniter Internasional Dalam Konflik Bersenjata Non-Internasional Di Libya Tahun 2014” (Universitas Atma Jaya Yogyakarta, 2018), <https://repository.uajy.ac.id/eprint/18196/1/HK115250.pdf>.

<sup>5</sup> Herman Suryokumoro et al., *Hukum Humaniter Internasional: Kajian Norma Dan Kasus* (Malang: Universitas Brawijaya Press, 2020), p. 41.

<sup>6</sup> Arlina Permanasari, *Pengantar Hukum Humaniter* (Jakarta: Jakarta International Committee of The Red Cross, 1999), p.73.

<sup>7</sup> Dimas Bagus Arya Saputra, “Perlindungan Warga Sipil Terhadap Serangan Drone (Studi Kasus Operasi Global War On Terror Yang Dilakukan Oleh Amerika Serikat)” (Universitas Airlangga, 2014), [https://repository.unair.ac.id/12040/15/8.DAFTAR\\_BACAAN.pdf](https://repository.unair.ac.id/12040/15/8.DAFTAR_BACAAN.pdf).

<sup>8</sup> Markus Wagner, “Unmanned Aerial Vehicles.” *Max Planck Encyclopedia of Public International Law*, Rüdiger Wolfrum, Ed., Oxford University Press, Forthcoming,” *University of Miami Legal Studies Research Paper* 15, no. 12 (2015): 1-8, [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2584652](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2584652).

Based on the facts that have occurred until now, the armed conflict situation that occurred between the parties The conflict between Russia and Ukraine continues, with the use of drones as an important weapon. On August 6, 2023, the Ukrainian Air Force shot down 30 of the 40 missiles and all Shahed drones launched by Russia. In addition to shaded, Russia also uses Orlan-10 drones which function for reconnaissance and attack. Tensions between the two countries have existed since Ukraine's independence in 1991, and increased after the annexation of Crimea in 2014. The Russian invasion began on February 24, 2022, with the use of military technology such as drones for attacks and reconnaissance. To date, Russia has launched more than 1,000 drones and missiles into Ukraine. Both Ukraine and Russia use drones to identify enemy positions and launch attacks, although these attacks often cause civilian casualties. The Russian Ministry of Defense reported that they managed to intercept many Ukrainian drones, but the attacks also resulted in civilian deaths, including a pregnant woman. Although international humanitarian law has long governed war, the development of drone technology creates new challenges that have not been fully addressed by existing legal frameworks, raising crucial questions regarding state compliance and obligations.

## METHODS OF THE RESEARCH

This writing uses normative legal research, because the approach taken is based on primary legal materials by examining theories and laws and regulations related to this research.<sup>9</sup> This literature review approach includes a search and analysis of primary legal sources such as international treaties (The 1949 Geneva Convention and its Additional Protocols), other relevant legal documents, as well as precedents from relevant international judicial bodies. The analysis also refers to secondary literature such as scientific journal articles, books, and reports of international organizations relevant to the use of drones in armed conflict and international humanitarian law.

## RESULTS AND DISCUSSION

### A. Regulation of Drones as Weapons and Surveillance Tools in Humanitarian Law

The use of drones as weapons and surveillance tools is not specifically explained in international agreements or other legal rules of international humanitarian law, but "the use of all types of weapons must be subject to the legal rules of international humanitarian law."<sup>10</sup> This shows that when using drones as weapons, the user, in this case the military, must always be able to distinguish between combatants and civilians, and between military objects and civilian objects.

The legality of the development and use of drones as weapons in armed conflict can be examined based on Article 36 of Additional Protocol I to the 1977 Geneva Conventions, which states that: In the investigation, development, production or acquisition of a new weapon, device or method of warfare, a High Contracting Party is obliged to determine whether in any particular or all circumstances its use would not be prohibited by this Protocol or by any other rule of international law applicable to that High Contracting Party. Article 36 is intended to maintain the development of weapons used by both countries and international organizations to continue to respect, maintain, and not violate the limits of the

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<sup>9</sup> Soerjono Soekanto & Sri Mamudji, *Penelitian Hukum Normatif: Suatu Tinjauan Singkat* (Jakarta: RajaGrafindo Persada, 2019), p.101.

<sup>10</sup> David Greacy Geovanie, Dewa Gede Sudika Mangku, and Ni Putu Rai Yuliantini, "Penggunaan Drone Sebagai Senjata Dalam Konflik Bersenjata Ditinjau Dari Perspektif Hukum Humaniter Internasional," *Jurnal Komunitas Yustisia* 5, no. 1 (2022): 1-12, <https://ejournal.undiksha.ac.id/index.php/jatayu/article/view/45902>.

principles of international humanitarian law. The rules of international humanitarian law cover all developments in weapons technology, because in the development of weapons or methods of war, countries are required to adjust so that their development does not conflict with international humanitarian law. "The state must be responsible for losses resulting from war if it conflicts with these rules." The legal obligations contained in Article 36 do not only apply to the parties to the agreement, but to all countries that develop weapons and methods of warfare. In an armed conflict, the use of force by the parties must always be proportional to the military advantage to be obtained. This is what is meant by the principle of proportionality. This principle is regulated in Article 51 paragraph (5) letter b and Article 57 paragraph (2) letter a points i-iii of Additional Protocol I of 1977 to the 1949 Geneva Conventions, which contains: Article 51 paragraph (5) letter b: an attack that is likely to cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination of these, which would be excessive when compared with the concrete and direct military advantage anticipated

Article 57 paragraph (2) letter a points i-iii of Additional Protocol I of 1977 to the 1949 Geneva Conventions: i) do everything possible to verify that the targets to be attacked are not civilians or civilian objects and are not subject to special protection, but are military objectives within the meaning of paragraph 2 of Article 52 and that it is not prohibited by the provisions of this Protocol to attack them; ii) take all appropriate precautions in selecting means and methods of attack with a view to avoiding, and in any case minimizing, loss of civilian life, injury to civilians and damage to civilian objects; iii) refrain from deciding to launch any attack that could be expected to cause loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, that would be excessive in relation to the concrete and direct military advantage anticipated.

This article emphasizes the need for preventive measures for those who are going to carry out an attack. "Proportionality mandates that the Drone must be able to assess the military advantage it will gain and also the number of residents and civilian infrastructure destroyed by its attack."<sup>11</sup> This assessment aims to ensure that the attack does not cause excessive civilian losses compared to the expected military benefits. Thus, the use of drones must be accompanied by careful calculations to remain in line with the principles of international humanitarian law.

The existence of drones in supporting the success of the battle needs to be assessed as to whether it is in accordance with international law or actually violates it. Every country that develops this technology certainly has an obligation to examine whether every detail of its use is in accordance with international humanitarian law. Drones were created for military purposes and to strengthen a country's fleet and defense equipment, but their use must be in line with humanitarian law.

The use of unmanned aircraft or drones as weapons in armed conflict is a result and consequence of the rapid development of technology today. There are currently no international regulations that specifically regulate the use of unmanned aircraft as military weapons or not. International humanitarian law can be flexibly applied to the development of very advanced weapons technology, although this must still be based on the provisions in Article 36 of Additional Protocol I of the 1977 Geneva Conventions. The rules in Article

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<sup>11</sup> Heriyanto and Dodik Setiawan Nur, *Penerapan Prinsip Proporsionalitas Terhadap Penggunaan Pesawat Tanpa Awak Dalam Konflik Bersenjata* (Jakarta: Raja Grafindo Persada, 2015).

36 only regulate general provisions, and do not specifically regulate certain technologies or methods of warfare.

Previously existing rules, it must be recognized that they may not be sufficient to follow specific technological developments and also the impacts and consequences caused by these technological developments. "The use of drones in armed force or conflict must take into account whether their use will result in harm to civilians or not."<sup>12</sup> Drones are considered illegal weapons, but whatever their use and utilization must be in accordance with and subject to international humanitarian law.

Regarding drones, their existence is indeed very questionable, this is because apart from the absence of specific and real standard rules, which regulate the use of drones as weapons. Another thing is also because currently drones have many types and specifications. Until now there has been no global law that specifically regulates: whether the use of drones is a weapon or not to support the success of the battle; therefore, it is necessary to examine whether their presence in supporting the success of the battle is in accordance with international law or actually violates it.

In general, international humanitarian law prohibits the use of weapons that are scorch-earth in nature, meaning that their use does not only affect the military, but also the civilian population. These weapons must meet three criteria: "weapons that cannot be targeted at specific military objects or subjects, weapons that cannot separate civilians from the armed forces, and weapons that cannot be predicted in their consequences as required by international humanitarian law."<sup>13</sup> Weapons that do not meet these three criteria are considered to violate the basic principles of humanitarian law, in particular the principles of distinction, proportionality and prevention of unnecessary suffering. Therefore, their use is prohibited because it poses a significant risk to the safety of civilians and upsets the balance between military necessity and the protection of humanity. The use of drones is like a firearm that cannot distinguish its targets between armed forces and civilians, so that the impact it causes is very disproportionate to its desire, namely "eliminating one person but affecting many more people. It is considered a denial of international humanitarian law."<sup>14</sup> This situation shows that the use of combat drones often violates the principles of proportionality and distinction, which are at the heart of humanitarian law. The inability of drones to accurately distinguish between military targets and civilians can lead to the loss of innocent lives and damage to civilian infrastructure. As a result, such actions not only cause suffering, but also undermine the legal and moral legitimacy of the military operation itself.

Every country is bound to comply with the principle of proportionality in armed conflict, because this rule is already a point of international customary norms. To prevent civilian casualties, the principle of proportionality must be applied when using drones.<sup>15</sup> Facing the absence of regulations regarding the use of drones as weapons, on a local or national scale, it is possible that in the future their use will be without any regulations regarding drones at

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<sup>12</sup> Heriyanto and Nur.

<sup>13</sup> Teguh Sulistia, "Pengaturan Perang Dan Konflik Bersenjata Dalam Hukum Humaniter Internasional," *Indonesian Journal of International Law* 4, no. 3 (2007): 526-55, <https://doi.org/10.17304/ijil.vol4.3.157>.

<sup>14</sup> Febby Magdalena Huwae, Irma Halimah Hanafi, and Johanis Steny Franco Peilouw, "Pertanggungjawaban Penggunaan Unmanned Aerial Vehicle (UAV) Dalam Konflik Bersenjata Ditinjau Dari Hukum Humaniter Internasional," *TATOHI: Jurnal Ilmiah Hukum* 2, no. 10 (2022): 995-1003, <https://doi.org/10.47268/tatohi.v2i10.1439>.

<sup>15</sup> Iras Gabriella, Joko Setiyono, and Soekotjo Hardiwinoto, "Pelanggaran Terhadap Prinsip Proporsionalitas Dalam Kasus Penyerangan Israel Ke Jalur Gaza Menurut Hukum Humaniter Internasional," *Diponegoro Law Journal* 6, no. 2 (2017): 1-18, <https://doi.org/10.14710/dlj.2017.16979>.

all. This concern is based on Article 36 of Additional Protocol I of the 1977 Geneva Convention, where countries are required to regulate the development of weapons technology and the latest methods of warfare that they develop, in this case countries that currently use drone technology, especially countries that use it as a weapon must formulate a special regulation regarding the use of drones, both as weapons (lethal purpose), and those used for other purposes (non-lethal purpose). The absence of legal regulations that specifically and specifically regulate the use of drones, related to their use as weapons, opens up a very large opportunity for abuse and violations of international humanitarian law, when armed drones are used in an armed conflict.<sup>16</sup>

## B. State Accountability for Humanitarian Law Violations Due to Drone Use

Drones are “an innovation in the military world that essentially reduces the risk to human power, because this technology can be controlled remotely or operated automatically according to a predetermined program.”<sup>17</sup> Rapid technological developments have spurred developed countries to start creating tools that can help human activities. One of these technologies is the emergence of various types of drones that have their own functions and purposes. The development of international regulations is not as rapid as the development of current technology. This has resulted in many questions regarding the legality of using drones, especially drones used to cross the borders of other countries.

State responsibility is a “fundamental principle in international law that is derived from the doctrine of international legal experts.”<sup>18</sup> State responsibility arises when there is a violation of an international obligation to do something, whether the obligation is based on an international agreement or international custom. State responsibility arises “as a result of the principle of equality and sovereignty of states contained in international law.”<sup>19</sup> This principle then gives authority to a country whose rights have been violated to demand a right in the form of reparation.

The consequences arising from an act, whether in the form of negligence or error. Based on the Dictionary of Law<sup>20</sup>, State responsibility is “an obligation of a state to make reparation arising from a failure to comply with a legal obligation under international law.”<sup>21</sup> This means that state responsibility is an obligation to make improvements arising from a state's mistake to comply with legal obligations under international law. Sugeng Istanto argues that accountability means the obligation to provide an answer which is a calculation of all things that happen and the obligation to provide restitution for losses that may be caused. Every individual, group, or state that carries out an action that harms others can be sued and held accountable.

State responsibility in international law is defined as “an obligation that must be carried out by a state to another state based on the orders of international law.”<sup>22</sup> Accountability means “the obligation to provide an answer which is an account of something that has happened and the obligation to provide restitution for any losses that may have been

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<sup>16</sup> Gabriella, Setiyono, and Hardiwinoto.

<sup>17</sup> Neza Zakaria and Sasmini Mintorodihardjo, “Legalitas Penggunaan Drone Yang Melintasi Perbatasan Negara Berdasarkan Hukum Internasional,” *BELLI AC PACIS: Jurnal Hukum Internasional* 1, no. 1 (2015): 15–24, <https://doi.org/10.20961/belli.v1i1.27360>.

<sup>18</sup> Andrey Sujatmoko, *Tanggung Jawab Negara Atas Pelanggaran Berat HAM: Indonesia, Timor Leste Dan Lainnya* (Jakarta: Gramedia Widiasarana Indonesia, 2005), p.28.

<sup>19</sup> R C Hingorani, “Modern International Law,” in *VRÜ Verfassung Und Recht in Übersee* (New York: Oceana Publications, 1979), 69–71.

<sup>20</sup> Elizabeth A Martin, *A Dictionary of Law* (New York: Oxford University Press, 2002), p. 477.

<sup>21</sup> F Sugeng Istanto, *Hukum Internasional* (Yogyakarta: Atma Jaya, 1998), p. 77.

<sup>22</sup> Rebecca M. M. Wallace and Olga Martin-Ortega, *International Law* (London: Sweet and Maxwell, 2020), p.175.

caused.”<sup>23</sup> Accountability in international law has several provisions that are similar to national law, but this is not prominent. In addition, international law on accountability has not developed so rapidly. International legal accountability, every act that is blamed can be held accountable.

State accountability for violations of humanitarian law resulting from the use of drones in the conflict between Russia and Ukraine is an important concern in the realm of international law. In this case, Russia used drones to attack civilian targets and non-military infrastructure in Ukraine. One example that attracted international attention was the drone attacks on energy infrastructure in Kyiv and other cities in late 2022. The attacks caused major damage to power generation facilities and energy distribution networks, which had a direct impact on the lives of civilians, especially during the winter. The attacks allegedly did not comply with the principles of proportionality and precaution as stipulated in Additional Protocol I to the 1977 Geneva Conventions, because the targets attacked did not provide a direct military advantage proportional to the impact on civilians. Therefore, these actions can be categorized as violations of international humanitarian law.

The use of drones in the Russian and Ukrainian conflicts that resulted in major damage during the armed conflict until now, there has been no official legal accountability enforced against the state. Drone attacks have been widely reported to cause civilian casualties and damage civilian infrastructure, the process of demanding accountability for violations of international humanitarian law still faces various obstacles. The use of drones in complex conflict areas makes it difficult to identify the direct perpetrators of the attacks.

Institutions such as the International Criminal Court (ICC) have issued arrest warrants against a number of high-ranking Russian officials for alleged responsibility for war crimes, but their implementation has been hampered by Russia's failure to recognize the ICC's jurisdiction.<sup>24</sup> The United States and Western countries have also said that Russia's use of drones has violated international humanitarian law, especially in attacks on civilian areas in Kyiv and other cities.<sup>25</sup> However, until now there has been no international judicial process that definitively states the responsibility of a state for the use of drones in this conflict.

### **C. Forms of Humanitarian Law Violations That Can Result from the Use of Drones in Armed Conflict**

The use of drones in armed conflict can lead to various forms of violations of International Humanitarian Law (IHL), especially when basic principles such as distinction, proportionality and protection of civilians are not respected. One of the main violations is the principle of distinction, namely the obligation to distinguish between military targets and civilian objects.

The armed conflict between Russia and Ukraine, the intensive use of drones has caused various violations of International Humanitarian Law (IHL). "Russia uses attack drones such as the Iranian-made Shahed-136 to attack critical civilian infrastructure in various Ukrainian cities, including power plants, water systems, and heating facilities, especially

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<sup>23</sup> DJ Harris, *Cases and Materials on International Law* (London: Sweet and Maxwell, 1982), p. 374.

<sup>24</sup> Financial Times, "ICC Issues Arrest Warrants for Russia's Sergei Shoigu and Valery Gerasimov," ft.com, 2025, <https://www.ft.com/content/e84b5260-0242-46ba-b401-66be64373202>.

<sup>25</sup> Euractiv, "US Holds Russia Responsible of 'war Crimes' after Drone Attack Hits Kyiv Apartment Block," euractiv.com, 2022, <https://www.euractiv.com/news/us-holds-russia-responsible-of-war-crimes-after-drone-attack-hits-kyiv-apartment-block/>.

during the cold season which has a major impact on the civilian population."<sup>26</sup> These actions violate the principles of distinction and proportionality, which are fundamental to IHL, because they target civilian objects that do not directly contribute to military operations. Russia has also launched drone attacks on densely populated areas, such as "in Kyiv and Lviv, causing civilian casualties and damage to civilian infrastructure, which can legally be characterized as acts of intimidation against civilians."<sup>27</sup> Ukraine has also used drones to attack targets inside Russia. Some reports suggest that "these strikes sometimes hit residential areas and civilian facilities in cities such as Belgorod and Moscow, which if not properly directed at legitimate military targets, could violate the principles of IHL."<sup>28</sup> Ukraine has also been accused by Russia of using civilian facilities to launch or store drones, such as near schools and residential areas.

The most common violations arising from the use of drones in armed conflict are related to attacks on civilians. One of the main violations is the failure to distinguish between military targets and civilians, which violates the principle of discrimination in international humanitarian law. Drone attacks, whether directly or indirectly, that cause death, injury, and suffering to civilians, cannot be justified by law. In addition, drones that attack civilian infrastructure such as homes, health facilities, schools, or electricity networks without legitimate military interests are also considered violations of the law. These violations are often exacerbated by a lack of care in the planning and execution of attacks, resulting in excessive and disproportionate civilian casualties compared to the military advantage gained.

The impact of such attacks not only harms the victims directly, but also causes long-term trauma and damage to civilian communities, as well as giving rise to legal responsibility for the state using drones in these military operations. The use of drones in armed conflicts often raises issues in the application of international humanitarian law, particularly in relation to the principles of proportionality and distinction. The principle of distinction requires parties to a conflict to distinguish between combatants and civilians and between legitimate military targets and civilian objects. Meanwhile, the principle of proportionality prohibits attacks that could cause excessive harm to civilians compared to the military advantage gained. In practice, drone attacks often cause civilian casualties due to intelligence errors, attacks on targets whose combatant status is unclear, or uncontrolled side effects.

The Principle of Proportionality "prohibits any attack on a military target if the civilian casualties or losses are expected to outweigh or be disproportionate to the expected military advantage." In an effort to fulfill this principle, there is the Precautionary Principle which requires military commanders to take all precautions deemed necessary, when launching and planning attacks, to avoid and minimize the loss of civilian life and damage to civilian objects. The US Air Force argues that "in terms of determining the proportionality of an attack, such determination is an inherently subjective one and is resolved on a case-by-case

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<sup>26</sup> Amnesty International, "Russia/Ukraine: Latest Massive Missile Strike on Critical Infrastructure Is a War Crime," [amnesty.org](https://www.amnesty.org/en/latest/news/2024/11/russia-ukraine-latest-massive-missile-strike-on-critical-infrastructure-is-a-war-crime/), 2024, <https://www.amnesty.org/en/latest/news/2024/11/russia-ukraine-latest-massive-missile-strike-on-critical-infrastructure-is-a-war-crime/>.

<sup>27</sup> Kris Janowski and Spokesperson, "In Ukraine Short Range Drones Become Most Dangerous Weapon for Civilians UN Human Rights Monitors Say," [ukraine.ohchr.org](https://ukraine.ohchr.org), 2025, <https://ukraine.ohchr.org/en/In-Ukraine-Short-Range-Drones-Become-Most-Dangerous-Weapon-for-Civilians-UN-Human-Rights-Monitors-Say>.

<sup>28</sup> Gleb Garanich and Pavel Polityuk, "Mother and Son Killed in Russian Drone and Missile Attack on Kyiv," [reuters.com](https://www.reuters.com), 2025, <https://www.reuters.com/world/europe/russia-ukraine-launch-air-attacks-each-others-capitals-2025-05-07/>.

basis.”<sup>29</sup> Proportionality assessment is not absolute, but must be carried out based on the conditions and context of each case. Military objectives and impacts on civilians and infrastructure are the main considerations. This aims to ensure that attacks comply with international humanitarian law and reduce unnecessary losses.

The use of drones in armed conflict risks violating the principle of distinction in international humanitarian law, which requires the separation of combatants and civilians and military targets from civilian objects. Drones often rely on intelligence that is not always accurate, potentially attacking the wrong targets. The difficulty of real-time target identification in a dynamic environment increases the risk of mistaken identity. Furthermore, the limitations of artificial intelligence in understanding the context of war increase the possibility of attacks on illegitimate targets, which is contrary to the principles of humanitarian law.

The principle of distinction requires that parties to a conflict be able to distinguish at all times between civilians and armed forces personnel, and between civilian and military objects. In essence, the principle prohibits the use of weapons that are indiscriminate or unable to distinguish between legitimate and illegitimate military targets. The type of analysis required to satisfy the principle of distinction is a highly complex and highly contextual one. In this regard, Benjamin Krishnan argues that, “distinguishing between a harmless civilian and an armed insurgent could go beyond anything machine perception could possibly do.”<sup>30</sup>

The principle of distinction states that “only combatants in combat may be direct targets. Articles 48 and 52 of Additional Protocol I to the 1949 Geneva Conventions provide: combatants and military objectives are the only ones that may lawfully be attacked.”<sup>31</sup> Combatants are groups of the population who actively participate in hostilities. The need for the principle of application, namely:<sup>32</sup> a) The parties to the conflict shall, at all times, distinguish between combatants and civilians in order to spare civilians and civilian objects; b) The civilian population, as well as individual civilians, must not be the object of attack even in the event of reprisals; c) Acts or threats of violence whose primary purpose is to spread terror against the civilian population are prohibited; d) The parties to the conflict must take all possible precautions to spare the civilian population or at least to reduce incidental loss or damage to a minimum; e) Only members of the armed forces have the right to attack and detain the enemy.

Any direct attack on civilians and/or civilian objects is categorized as a war crime. The civilian population/citizens are a group of groups of a country that do not participate in using weapons or attributes of war in an armed conflict. “Any weapon that is unable to distinguish between civilians/civilian objects and combatants/military objects is also prohibited under international military law.”<sup>33</sup> Without the principle of distinction, there would be no restrictions on the methods of warfare. This principle underlies the need for restrictions on the methods of warfare. Characteristically, drones do not have the

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<sup>29</sup> Ajda Hosseini Ghasemi, “Semi-Autonomous Weapon Systems in International Humanitarian Law: A Study of the New Decision-Making and Responsibility Issue in International Humanitarian Law Relating to Semi-Autonomous Weapon Systems” (Faculty of Law Lund University, 2014), <https://lup.lub.lu.se/luur/download?func=downloadFile&recordId=4580376&fileId=4580377>.

<sup>30</sup> Armin Krishnan, *Killer Robots: Legality and Ethicality of Autonomous Weapons* (New York: Routledge Taylor & Francis Group, 2009), <https://www.routledge.com/Killer-Robots-Legality-and-Ethicality-of-Autonomous-Weapons/Krishnan/p/book/9780754677260>.

<sup>31</sup> Umar Suryadi Bakry, *Hukum Humaniter Internasional* (Jakarta: Prenadamedia Group, 2019), p.13.

<sup>32</sup> Wahyu Wagiman, *Hukum Humaniter Dan Hak Asasi Manusia: Seri Bahan Bacaan Kursus HAM Untuk Pengacara* (Jakarta: ELSAM, 2005), p. 11-12.

<sup>33</sup> Wagiman.

qualifications that humans have to identify whether a soldier has become hors de combat in a complex and highly contextual situation, assess and understand the emotional state of the individual, and assess the situation in question as harmless. Armed forces personnel can assess the entire context holistically, whereas drones in their operation will only rely on certain visions or aspects due to their programming. In terms of operational weapons systems, there are also no clear provisions or characterizations about how civilians and hors de combat must act, look, or behave in order to be distinguished from legitimate military targets.

## CONCLUSION

The use of drones in armed conflict does not yet have specific regulations in international humanitarian law. Each operation must comply with the basic principles of humanitarian law, namely the principles of proportionality, distinction, and precaution, as stated in the 1907 Hague Convention, the 1949 Geneva Convention, and Additional Protocol I 1977. The legality of drone use is largely determined by its compliance with these principles. Use aimed at legitimate military targets and not causing excessive impact on civilians can be considered legally valid. Conversely, use that targets civilian objects or causes disproportionate civilian casualties is a violation of international humanitarian law. States that use drones in armed conflict are legally responsible if there is a violation of the provisions of international humanitarian law. Attacks on civilian objects, failure to distinguish between combatants and non-combatants, and use that causes excessive suffering can give rise to international liability. This responsibility includes the obligation to provide restitution, either in the form of restitution, compensation, or an official apology. Non-compliance

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