

Remotely Piloted Aircraft and International Law

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MUCH PUBLIC debate has centred on the legality of unmanned aerial vehicles (UAVs)¹ for the application of armed force. Using UAVs, operators who sometimes sit hundreds or thousands of kilometres away are capable of carrying out surveillance over long periods and attacking stationary and moving targets with a wide range of explosive ordnance and a relatively high degree of precision. These capabilities, along with the fact that pilot lives are not at risk, make this new technology particularly attractive to military and security forces.

Nevertheless, the idea of remote warfare has caused much public discomfort on ethical, moral and political grounds. Some have argued that UAVs' heightened utility may increase opportunities to attack, drive war into populated areas and put civilians and civilian objects at greater exposure to incidental harm. Some sources have raised additional concerns about the psychological harm caused to people living under the persistent threat of UAV attacks. Other worries relate to the perceived lack of transparency and accountability surrounding the use of lethal force by UAVs.

This chapter will not address all of the concerns relating to the use of UAVs in the support or application of force, nor will it comment on specific examples of UAV use.² This piece will focus on certain questions of legality in military and security operations through the lens of existing international law. International Humanitarian Law (IHL), which governs the use of UAVs in armed conflict, and international human rights law, which applies to their use in situations that do not amount to armed conflict,³ can provide frameworks in which to consider some of the common concerns that have been expressed about the ways UAVs are used.

How Are UAVs Typically Used?

Unmanned aerial vehicles are able to conduct surveillance for extended periods thanks to both sophisticated sensors and an increased ability to remain airborne for extended periods. Most UAVs are used for intelligence-gathering, surveillance and reconnaissance, both in peacetime and in armed conflict. UAVs can also carry a range of explosive ordnance, including bombs and missiles, and can be armed with precision-guided munitions. The ordnance typically use a combination of blast, fragmentation, penetration and incendiary effects to injure or kill people and damage or destroy objects. Only a small number of countries currently possess armed UAVs.⁴

While small surveillance UAVs may be operated by a single person, larger surveillance and armed UAVs are typically operated and controlled by a crew

composed of a pilot and a payload operator who are supported by a team of signals and imagery intelligence analysts. At present, human operators activate, direct and fire the weapons carried by UAVs. Many armed UAVs can be controlled by operators located hundreds or thousands of kilometres away from the intended target, allowing the crews to be physically absent from the place where the UAV is deployed.

These sophisticated features allow a state to use armed UAVs to conduct surveillance over a given area outside its borders for an extended period of time and to attack stationary targets as well as moving vehicles and persons. Targeting decisions are made not only on the basis of what is observed through the UAV's own sensors, but also on the basis of the operational context and intelligence obtained by the UAV crew from various other sources.

Which Rules of International Law Apply to the Use of Military UAVs?

UAVs can be used directly as weapons platforms from which to launch bombs and missiles, or indirectly as surveillance platforms to provide targeting intelligence in support of attacks carried out by conventional aircraft, artillery, forces on the ground, or other UAVs.

Much unease about UAVs relates to whether their use is lawful under international law. More specifically, questions often arise as to the lawfulness of the threat or use of force (*jus ad bellum*)⁵ and the manner in which force is applied (*jus in bello*). The former should not be confused with IHL or international human rights law, which address *how* force may be used in order to ensure a minimum of humanity.⁶ International human rights law generally deals with a person's inherent right to be protected against abusive power, while IHL regulates the behaviour of parties to an armed conflict. As the International Committee of the Red Cross (ICRC) is not in the practice of opining on the lawfulness of force from a *jus ad bellum* perspective, this chapter will focus on the rules of IHL and international human rights law as they apply in military and security operations.

In armed conflicts, IHL applies equally to all parties to the conflict regardless of whether their resort to force was lawful. It is a body of law that seeks, for humanitarian reasons, to limit the effects of armed conflict. There are two types of armed conflict: international and non-international. While the former type is waged between states,⁷ the latter involves hostilities of a certain intensity between a state and an organised non-state armed group, or between such groups themselves.⁸

A key development in recent years has been the rise of non-international armed conflict with an extraterritorial element. Some of these types of conflict, originating within the territory of a state between government armed forces and one or more organised armed groups, have been known to

‘spill over’ into neighbouring states. In addition, a non-international conflict can involve multinational armed forces, or forces under the aegis of the UN or a regional organisation, fighting alongside the armed forces of a state in its territory, against one or more organised armed groups.

Some believe that another type of non-international armed conflict can exist across the territory of multiple states, between a state and an organised non-state armed group, such as the United States and Al-Qa’ida. The ICRC adopts a case-by-case approach to classifying the situations of violence occurring in the ‘fight against terrorism’. Some situations have been classified as international armed conflict, others as non-international, while various acts of terrorism have been assessed as occurring outside any armed conflict.⁹

IHL does not govern situations of violence that do not amount to an armed conflict. Such situations, which can include internal tensions or disturbances, are governed by international human rights law. This offers guidance on how force can be used by law-enforcement officials ‘in self-defence or defence of others against the imminent threat of death or serious injury, to prevent the perpetration of a particularly serious crime involving grave threat to life, to arrest a person presenting such a danger and resisting their authority, or to prevent his or her escape, and only when less extreme means are insufficient to achieve these objectives’.¹⁰

When used in armed conflict, UAVs must be employed in compliance with applicable IHL treaties and customary law. Outside of armed conflict, UAVs must be used in compliance with the relevant rules of international human rights law. Both the operators concerned and the relevant party or state to which they belong are responsible and accountable for respecting these bodies of law.

Some Concerns Regarding the Use of UAVs in the Application of Force

When new weapons emerge, there is often debate as to whether existing international law sufficiently addresses their legality. Uneasiness has also arisen around the belief that UAVs may increase the opportunities for attacking an adversary and thus put civilians and civilian objects at greater exposure to incidental harm. A number of technical limitations can also make it difficult to distinguish between civilian and military objects or to properly assess the risk of excessive incidental harm to civilians. On the other hand, because UAVs possess sophisticated sensors and are able to conduct surveillance for long periods, they have the potential to increase an operator’s ability to exercise the required caution in the timing, location and precision of an attack by directing more precise attacks and thus reducing incidental civilian casualties and damage to civilian objects. Set out below are some thoughts on whether and how IHL provides a framework in which to address some of these issues.

The Legality of New Weapons

There can be no doubt that the longstanding rules of IHL apply to new weapons and to the use of new technological developments in warfare. This is recognised, for instance, in Article 36 of Additional Protocol I to the Geneva Conventions of 1949 (AP I), which requires that each State Party determine whether the employment of any new weapon, means or method of warfare that it studies, develops, acquires or adopts would, in some or all circumstances, be prohibited by international law, including IHL.¹¹

This requirement to review the legality of all new weapons arguably applies to all states, regardless of whether or not they are party to AP I. Indeed, every state should ensure that the new weapons it develops or acquires are used in accordance with its international legal obligations. The assessment will entail an examination of all relevant empirical information, such as the weapon's technical description and actual performance, and its effects on health and the environment.¹²

Even in the absence of rules of international law that are specific to UAVs, the longstanding rules of IHL govern their use. In light of the rapid development of weapons technology, it is important that the study, development, acquisition or adoption of military UAVs be subject to legal review.

Claims of Increased Likelihood of Attacks and Incidental Harm

Because UAVs cover vast ranges, have greater persistence, gather more information about the battle space, reduce risks to air crew, and present an attractive alternative to more valuable aircraft, there are claims that this heightened utility may increase opportunities to attack. It has also been alleged that an increase in the likelihood of attacks may cause an associated rise in civilian exposure to harm.

The general rules of IHL applicable to all means and methods of warfare provide general protection to civilian individuals, populations and objects. They apply to any use of UAVs in armed conflict. One of the fundamental rules of IHL requires that parties to an armed conflict distinguish between civilian persons and civilian objects on the one hand, and combatants and military objectives on the other, and that they direct their operations *only* against military objectives.¹³

In international armed conflict, members of the armed forces of a party to the conflict can be lawfully targeted. In non-international armed conflict, members of state armed forces can be lawfully targeted, as can members of an organised armed group of a party to the conflict¹⁴ when their continuous function is to directly participate in hostilities.¹⁵

Persons who do not fall within these categories are civilians and are entitled to protection against direct attack. There is one exception to this, however. Civilians directly participating in hostilities become legitimate targets of attack, but only for the duration of their direct participation. In order to qualify as direct participation in hostilities, a civilian's specific act must be on a spontaneous, sporadic or unorganised basis and meet the following three cumulative criteria:¹⁶

1. The act must be likely to adversely affect the military operations or military capacity of a party to an armed conflict or, alternatively, to inflict death, injury or destruction on persons or objects protected against direct attack
2. There must be a direct causal link between the act and the harm likely to result either from that act, or from a co-ordinated military operation of which that act constitutes an integral part
3. The act must be specifically designed to directly cause the required threshold of harm in support of a party to the conflict and to the detriment of another.

Measures in preparation of a specific act of direct participation in hostilities, and the deployment to and the return from the location of the act also form an integral part of that act.¹⁷ When civilians cease their direct participation in hostilities, they regain full civilian protection against direct attack.¹⁸

As for military objectives, they are defined as follows: the object to be attacked must, by its nature, location, purpose or use, contribute effectively to the military action of the enemy and its partial or total destruction, capture or neutralisation, and must offer – in the circumstances ruling at the time – a definite military advantage. Any object that does not fall under the definition of a military objective is a civilian object and must not be attacked.

Whether or not UAVs actually increase the likelihood of attacks, their operators must comply with these clear IHL prohibitions on attacking civilian persons or civilian objects.

Indeed, civilians who are near a legitimate target are often victims of inevitable side-effects of an attack on it. While it is legally accepted that civilian persons and objects may be incidentally harmed in this way, the IHL rule of proportionality dictates that 'incidental loss' of civilian life or property must not be excessive in relation to the concrete and direct military advantage anticipated from an attack against a military objective. Attacks that do not comply with the rule of proportionality are forbidden.¹⁹

In addition, precautions must be observed by all parties to an armed conflict in order to avoid or at least minimise such incidental effects. Some of the rules on these precautions are addressed below.

Extraterritorial Targeting of Persons

Over recent years, questions have also been raised about the lawfulness of extraterritorial targeting of persons with UAVs.²⁰

As seen above, members of organised armed forces or groups whose continuous function is to conduct hostilities on behalf of a party to an armed conflict can be lawfully targeted. Despite the fact that only combatants are explicitly authorised under IHL to directly participate in hostilities, the reality is that civilians often do so as well. For such time as they are directly participating in hostilities, they lose their protection against direct attack.

Of course, to determine the lawfulness of extraterritorial targeting by a UAV, it will also be important to examine whether the activities of the targeted person are committed within an armed conflict (in which case IHL applies) or have no link to an armed conflict (in which case international human rights law applies).

A particular concern relates to the lawfulness of UAV attacks against persons directly participating in hostilities in connection to a specific non-international armed conflict²¹ that has no relation to the state from which they are carrying out their hostilities. Under one view, that person 'carries' an armed conflict with him to that state. In this case, the IHL rules mentioned above on whom may be lawfully targeted would apply here. The application of the rule of proportionality would entail that 'incidental' harm to civilians or civilian objects could be lawful when the targeted person is in their midst. The contrary view, which the ICRC shares,²² is that the person does not 'carry' the armed conflict with him to the state from which he or she is participating in hostilities. In such a case, and in contrast to the first view mentioned above, the application of armed force against a person in the territory of a non-belligerent state should be governed by the rules of law enforcement under international human rights law.²³

There have also been cases in which states have extraterritorially targeted individuals whose activity, based on publicly available facts, clearly had no connection to any armed conflict. Here, too, the lawfulness of such an application of armed force would need to be examined under the same human rights law standards: lethal force may be used only if other means are 'ineffective or without promise of achieving the intended result'.²⁴ If the use of force is unavoidable, the operator must exercise restraint, act in proportion to the seriousness of the offence and the legitimate objective to be achieved, minimise damage and injury, and respect and preserve human

life.²⁵ In light of these strict human rights standards, it has been argued that the use of UAVs for extraterritorial targeting is almost never likely to be legal outside of an armed conflict.²⁶

Feasible Precautions

Because UAVs possess such sophisticated sensors as video and infra-red cameras and are able to conduct surveillance over a given area for an extended period of time, they also have the potential to help direct attacks more precisely against military objectives and thus reduce civilian casualties and damage to civilian objects. As armed UAVs are crewed by a pilot and payload operator and are supported in real time by intelligence analysts, they may be less subject to information overload than, for instance, the pilot of a conventional single-seat fighter-bomber.

On the other hand, UAVs' high altitudes and potentially long engagement ranges can hamper their sensor resolution, posing particular challenges for complying with the fundamental IHL rule of distinction. Moreover, due to limitations in intelligence-gathering and depending on the quality of the information provided by UAV sensors, targets may not be identified correctly and their activities may be mistakenly identified as having military significance. Some have argued that abuses are more likely when a person is disconnected and at a distance from a potential adversary,²⁷ but there is no evidence that this is true or more frequent in the particular case of UAV operators.²⁸ The limited capacity of an operator to process a large volume of data, including contradictory data, at a given time, and the supervision of more than one system at a time, have also led to questions about the operator's ability to fully comply with IHL in those circumstances.

These factors, combined with the difficulty of containing the effects of explosive ordnance, mean that civilians might sometimes be mistakenly attacked, and these attacks might sometimes cause excessive incidental injury or loss of life to civilians and damage or destruction to civilian objects.

According to Article 57 AP I and customary IHL applicable in all types of armed conflict, in the conduct of military operations, constant care must be taken to spare the civilian population, civilians and civilian objects. IHL therefore requires that parties to a conflict take feasible precautions in carrying out attacks.²⁹ This includes doing everything feasible to verify that targets are military objectives. This requires paying close attention to the gathering, assessment and rapid circulation of information on potential targets, which, in turn, depend on the availability and quality of the party's technical resources. A party must use the most effective and reasonably available means to obtain the most reliable information possible before an attack. In case of doubt, additional information must be obtained before an attack is launched.

In addition, a target's sudden appearance may make it necessary to strike within a very short time. In such instances, the need for a rapid reaction will affect the feasibility of certain precautions, as determining the military nature of a target and potential incidental damage will require an expedited analysis. In most cases, those who plan or decide on an attack will base their decisions on indirect information provided by intelligence or reconnaissance (human, aerial, satellite or other) operations. UAVs' enhanced real-time aerial surveillance possibilities therefore have the potential to widen the range of precautionary measures that may be taken in advance of an attack.³⁰

IHL also requires that each party to a conflict take all feasible precautions in the choice of means and methods of warfare with a view to avoiding, and in any event minimising, incidental loss of civilian life, injury to civilians and damage to civilian objects. This can entail restrictions on the timing or location of an attack, for instance to avoid attacking a military objective located within a densely populated area if the attack is likely to cause heavy civilian losses. It can also require choosing the axis of attack least likely to cause civilian losses. In light of this, consideration must be given to the use of precision-guided munitions where these are available to the party conducting the attack. If, through the use of UAVs, operators have an increased ability to exercise the required caution in the timing, location and precision of an attack, then UAVs may well – from an IHL point of view – be the preferred option for certain operations.

Conclusion

While UAVs that support or use force are not prohibited, international law clearly circumscribes their use. Operators are bound to comply with IHL or international human rights law, depending on the context. In armed conflict, their use to support or carry out attacks must conform to IHL rules of distinction, proportionality and precautions. Outside of armed conflict, the legality of UAV attacks is subject to the far stricter limits on the use of force under international human rights law and standards. While these legal frameworks can help respond to some of the common concerns about the use of UAVs, they can only be complementary to the growing ethical, moral and political concerns that we so often hear.

The views expressed in this chapter are those of the author and do not necessarily reflect those of the ICRC. The author is grateful to Raymond Smith for his invaluable expertise.

Notes and References

1. UAVs are also known as remotely piloted aircraft (RPA), remotely piloted vehicles (RPV) or simply as 'drones'.

2. The ICRC does not generally comment publicly on specific situations, but rather engages in bilateral and confidential dialogue with authorities.
3. IHL and international human rights law have different scopes of application but are complementary. While international human rights law is considered to apply at all times (constituting the *lex generalis*), the application of IHL is triggered by an armed conflict (constituting the *lex specialis*).
4. Israel, the US and the UK are reported to have conducted attacks using armed UAVs, also known as unmanned combat aerial vehicles (UCAVs). China, Iran and Italy are also reported to have introduced, or be planning to introduce, armed UAVs into service. See IHS Jane's, *All the World's Aircraft: Unmanned*, 38th edition (London: IHS Global Inc, June 2012).
5. The Charter of the United Nations prohibits all UN member states from resorting to the threat or use of force against the territorial integrity or political independence of any state, with the exception of the right of individual or collective self-defence recognised in Article 51 of the Charter and Security Council measures necessary to maintain or restore international peace and security. See United Nations, 'Charter of the United Nations', 1945, 1 UNTS XVI, [UN Charter] Articles 2(4) and 42.
6. See François Bugnion, 'Just War, War of Aggression and International Humanitarian Law', *International Review of the Red Cross* (Vol. 84, No. 847, September 2002), p. 523.
7. Or between a state and a national liberation movement provided the requisite conditions under AP I have been fulfilled (see Art. 1(4) Additional Protocol I to the Geneva Conventions of 1949).
8. A 2008 ICRC Opinion Paper defines non-international armed conflicts as '*protracted armed confrontations* occurring between governmental armed forces and the forces of one or more armed groups, or between such groups arising on the territory of a State (party to the Geneva Conventions). The armed confrontation must reach a *minimum level of intensity* and the parties involved in the conflict must show a *minimum of organization*.' See ICRC, 'How is the Term "Armed Conflict" Defined in International Humanitarian Law?', opinion paper, March 2008.
9. ICRC, 'International Humanitarian Law and the Challenges of Contemporary Armed Conflicts', Report to the 31st International Conference of Red Cross and Red Crescent, doc. 31IC/11/5.1.2 [ICRC Challenges report], Geneva, Switzerland, 28 November–1 December 2011, pp. 49–51.
10. See 'Basic Principles on the Use of Force and Firearms by Law Enforcement Officials Adopted by the Eighth United Nations Congress on the Prevention of Crime and the Treatment of Offenders', Havana, Cuba, 27 August–7 September 1990 [Basic Principles], Rule 9. These rules define when and how law-enforcement officials are permitted to use force. Law-enforcement officials include 'all officers of the law, whether appointed or elected, who exercise police powers, especially the powers of arrest or detention. In countries where police powers are exercised by military authorities, whether uniformed or not, or by State security forces, the definition of law enforcement officials shall be regarded as including officers of such services.'
11. Additional Protocol I does not specify how each State Party should determine the legality of the use of new weapons, means and methods of warfare that it

studies, develops, acquires or adopts. It is up to each state to set up its own review mechanism.

12. ICRC, 'A Guide to the Legal Review of New Weapons, Means and Methods of Warfare, Measures to Implement Article 36 of Additional Protocol I of 1977', 2006, <<http://www.icrc.org/eng/resources/documents/publication/p0902.htm>>, accessed 13 March 2013.
13. Additional Protocol I, Articles 48, 51(2) and 52(2).
14. See Nils Melzer, 'Interpretive Guidance on the Notion of Direct Participation in Hostilities under International Humanitarian Law', *International Review of the Red Cross* (Vol. 90, No. 872, December 2008), adopted by the Assembly of the International Committee of the Red Cross on 26 February 2009 [DPH Guidance], pp. 21 and 30. See also ICRC Challenges report, p. 42.
15. This distinguishes members of the organised armed group from civilians who directly participate in hostilities on a merely spontaneous, sporadic or unorganised basis, or who assume exclusively political, administrative or other non-combat functions.
16. DPH Guidance, 'Chapter V: Constitutive Elements of Direct Participation in Hostilities'.
17. DPH Guidance, 'Chapter VII: Temporal Scope of the Loss of Protection'.
18. The ICRC's criteria for 'direct participation in hostilities' are not universally accepted, and there are concerns that the definition is either too narrow or too broad. See Ryan Goodman and Derek Jinks, 'ICRC Interpretive Guidance on the Notion of Direct Participation in Hostilities under International Humanitarian Law: An Introduction to the Forum', *New York University Journal of International Law and Politics* (Vol. 42, No. 3, Spring 2010), p. 637; Noam Lubell, *Extraterritorial Use of Force Against Non-State Actors* (Oxford: Oxford University Press, 2010), p 96; Michael Schmitt, 'The Interpretive Guidance on the Notion of Direct Participation in Hostilities: A Critical Analysis', *Harvard National Security Journal* (Vol. 1, May 2010), p. 37; Kenneth Watkin, 'Opportunity Lost: Organized Armed Groups and the ICRC "Direct Participation in Hostilities" Interpretive Guidance', *New York University Journal of International Law and Politics* (Vol. 42, No. 3, Spring 2010), p. 692; Robert Gehring, 'Loss of Civilian Protections under the Fourth Geneva Convention and Protocol I', *Military Law and the Law of War Review* (Vol. 19, 1980), p. 19.
19. Article 51(5)(b) of Additional Protocol I; see also Jean-Marie Henckaerts and Louise Doswald-Beck, *Customary International Humanitarian Law, Vol. I: Rules* (ICRC/ Cambridge University Press, 2009), rule 14.
20. Extraterritorial targeting is understood as the use of lethal force against a specific person – or persons – by agents of one state in the territory of another.
21. In an international armed conflict, the extraterritorial use of UAVs does not raise the same concern (but of course continues to be governed by the general rules of IHL).
22. ICRC Challenges report, p. 22. For more on the geographical scope of armed conflict, see Noam Lubell and Nathan Derejko, 'A Global Battlefield? Drones and the Geographical Scope of Armed Conflict', *Journal of International Criminal Justice* (Vol. 11, No. 1, forthcoming 2013).
23. However, the fact that the state using force abroad lacks effective control over the person (or territory) for the purposes of establishing jurisdiction raises questions about the extraterritorial applicability of human rights law. Despite the views of a few

important dissenters, it is widely accepted that international human rights law does apply extraterritorially. It is submitted that customary human rights law prohibits the arbitrary deprivation of life and that law-enforcement standards fall within customary human rights law.

24. Basic Principles, rule 4.
25. Basic Principles, rule 5.
26. Report of the Special Rapporteur on extrajudicial, summary or arbitrary executions, Philip Alston, A/HRC/14/24/Add.6, 28 May 2010, § 85.
27. *Ibid.*, § 84.
28. For a description of an operator's daily work duties, see Megan McCloskey, 'The War Room: Daily Transition between Battle, Home Takes a Toll on Drone Operators', *Stars and Stripes*, 27 October 2009, <<http://www.stripes.com/news/the-war-room-daily-transition-between-battle-home-takes-a-toll-on-drone-operators-1.95949>>, accessed 13 March 2013.
29. Article 57, AP I states that:
 1. In the conduct of military operations, constant care shall be taken to spare the civilian population, civilians and civilian objects.
 2. With respect to attacks, the following precautions shall be taken:
 - (a) those who plan or decide upon an attack shall:
 - (i) do everything feasible to verify that the objectives to be attacked are neither civilians nor 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 feasible precautions in the choice of means and methods of attack with a view to avoiding, and in any event to minimizing, incidental loss or civilian life, injury to civilians and damage to civilian objects;
 - (iii) refrain from deciding to launch any attack which may be expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, which would be excessive in relation to the concrete and direct military advantage anticipated;
 - (b) an attack shall be cancelled or suspended if it becomes apparent that the objective is not a military one or is subject to special protection or that the attack may be expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, which would be excessive in relation to the concrete and direct military advantage anticipated;
 - (c) effective advance warning shall be given of attacks which may affect the civilian population, unless circumstances do not permit.
 3. When a choice is possible between several military objectives for obtaining a similar military advantage, the objective to be selected shall be that the attack on which may be expected to cause the least danger to civilian lives and to civilian objects.

30. See Jean-Francois Queguiner, 'Precautions under the Law Governing the Conduct of Hostilities', *International Review of the Red Cross* (Vol. 88, No. 864, December 2006), p. 793.