

## UNMANNED AERIAL VEHICLES AND LAW OF ARMED CONFLICT IMPLICATIONS

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**Abstract:** This article examines the phenomena of Unmanned Aerial Vehicles (UAVs) engagement used for combat purposes and related Law of Armed Conflict implications. A lot of controversy and unprecedented excitement currently surrounds UAVs combat engagement. Employment of such new technology may represent a revolution in terms of tactical and strategic point of view of waging war and it may raise a lot of moral, ethical and even sociological concerns too. Nevertheless in terms of applicable rules and principles governing conduct of hostilities combat employment of UAVs does not represent area with which law would not be able to cope. With that regard, this article shows a lot of legal similarities of UAVs engagement with classical manned aircrafts.

**Resumé:** Tento článek popisuje fenomén nasazení bezpilotních prostředků (UAVs) užitých k bojovým účelům a s tím související důsledky vyplývající z práva ozbrojeného konfliktu. Bojové nasazení UAV dnes obklopuje mnoho kontroverze a nebyvalého vzrušení. Použití takovéto nové technologie může představovat revoluci v oblasti taktického a strategického úhlu pohledu na vedení války a také může vznášet mnoho znepokojení souvisejících s aspekty morálními, etickými anebo i sociologickými. Nicméně z pohledu platných pravidel a principů řídících vedení nepřátelství, bojové nasazení UAV nepředstavuje oblast, se kterou by si právo nedokázalo poradit. V tomto ohledu, tedy článek ukazuje mnoho právních podobností nasazení UAVs s klasickými řízenými letouny.

**Key words:** Unmanned Aerial Vehicle, Law of Armed Conflict, means and methods of warfare, Afghanistan, combat engagement, superfluous injury and unnecessary suffering, principle of distinction, proportionality, collateral damage, precautionary measures.

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### 1. Introduction

“8 insurgents killed in North-West Pakistan as a result of US unmanned aerial vehicle.”<sup>1</sup>; “2 Brits killed on Sunday’s UAV air strike in North-West Pakistan.”<sup>2</sup>; “4 to

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<sup>1</sup> <http://www.novinky.cz/zahranicni/svet/213196-pri-americkem-naletu-v-pakistanu-zemreli-nemci.html>.

<sup>2</sup> <http://www.novinky.cz/zahranicni/svet/219831-bezpilotni-letoun-zabil-v-pakistanu-britskou-dvojici.html>.

6 radicals have been killed on Friday's UAV air strike conducted in tribal territory of North-West Pakistan."<sup>3</sup> Number of similar reports occupied last year international news as NATO allied offensive operation "Moshtarak"<sup>4</sup> culminated in Afghanistan, while massive engagement of allied troops and technique has been employed to suppress insurgents.

The message that these reports are carrying through may be generally reproduced as the combat unprecedented reliance on an employment of artificial device causing lethal injury. As these machines without pilots are becoming the favorite weapon in combat against Al-Qaeda and its supporters,<sup>5</sup> from an expert point of view, such media reports probably trigger a general assessment of a qualification shift in area of traditionally employed means and methods of warfare from which UAVs apparently tend to step out. Thus, the combat employment of UAVs may represent a crossing bridge towards a near future war industry, which might be composed of less or more autonomous combat systems. With that regard, it may be stated, that such shift towards greater reliance on highly sophisticated technologies on battlefield will probably cause a technological dependency, which as a consequence most likely irrevocably will lead to substitution of the most limiting factor of every process a human being – a soldier – a pilot.

It is evident that technology of UAVs has undergone a progressive development in past decades. Currently these aerial vehicles represent one of the most dynamic areas of growth in military industry. On the other hand, as UAVs already represent quite common component of many armies, its existence on a battlefield does not represent a technological wonder. Moreover, previously, UAVs have been used as a support during conflicts in Bosnia, Serbia and Iraq. Currently they are routinely employed in Yemen, Israel, Iraq and in ongoing armed conflict in Afghanistan. For example, for the last two years UAVs have been exponentially more engaged for combat purposes in the Afghanistan then ever before. In other words, recent UAV's engagement has shown its enormous potential, not for surveillance and reconnaissance purposes only, but for combat engagement, as well. Unfortunately, as a consequence of UAV's use for targeting, a number of civilian casualties have been reported especially in context of hunt for insurgents and terrorists in Afghanistan, as well. As such UAVs combat engagement brings a lot of public attention and expressed controversy about its legality, it is therefore essential to map UAVs' employment from the Law of Armed Conflict perspective. Especially with regard to give a satisfactory answer whether UAVs combat engagement does represent a loophole under rules applicable in armed conflicts.

<sup>3</sup> <http://www.novinky.cz/zahranicni/svet/221724-dalsi-nalet-bezpilotnich-letadel-na-pakistan.html>.

<sup>4</sup> Operation Moshtarak was one of the biggest ISAF operation in Afghanistan led since 2001. More information available at [www.isaf.nato.int/images/stories/File/2010-02-CA-059-Backgroundes-Operation-Moshtarak.pdf](http://www.isaf.nato.int/images/stories/File/2010-02-CA-059-Backgroundes-Operation-Moshtarak.pdf).

<sup>5</sup> <http://zahranicni.ihned.cz/c1-41581400-bezpilotni-letouny-pomahaji-v-boji-proti-talibanu-ale-umiraji-pritom-civiliste>.

## 2. Unmanned aerial vehicles – characterisation<sup>6</sup>

Unmanned aerial vehicles (“UAVs”) or “predators” or “drones”, these all represent just different denominations of aircraft machine without a pilot actually sitting in the cockpit and directing it. Notwithstanding of usual simplification used in media, an abbreviation “UAVs” will be used for the general denomination of unmanned aircrafts for the purpose of this article. Obviously in fact there is a huge difference whether such aircraft is remotely piloted or operating autonomously, armed or unarmed. For example, HPCR Manual on international law applicable to air and missile warfare (HPCR Manual)<sup>7</sup> provides such differentiation between UAVs capabilities as it classifies them according to whether they carry or carry not and control or control not a weapon.<sup>8</sup>

NATO defines UAVs as “a powered, aerial vehicle that does not carry a human operator, uses aerodynamic forces to provide vehicle lift, can fly autonomously or be piloted remotely, can be expendable or recoverable, and can carry a lethal or non-lethal payload. Ballistic or semi-ballistic vehicles, cruise missiles, and artillery projectiles are not considered unmanned aerial vehicles”.<sup>9</sup> From the given delimitation, it is evident that UAVs main feature is absence of pilot in the aircraft. In case of “autonomous” UAVs the aircraft is pre-programmed to conduct specific tasks.<sup>10</sup> In case of “remotely piloted” UAVs, an operator (either military or civilian person), usually located in operating centers is operating the machine. There, in operating centers, which are often located thousand kilometers off the real combat zone, operational staff decides the course of the operation.<sup>11</sup> Their decision is made on the basis of actual online information provided by infrared or TV sensors carried by the aircraft.<sup>12</sup> Thus, a whole military operation, such as evaluation of the situation before attack, aiming the target and releasing a weapon system, is operated on a computer screen via remote bars and buttons. Just like on any ordinary videogame.<sup>13</sup>

<sup>6</sup> Unmanned Aerial Vehicles (UAVs), <http://www.fas.org/irp/program/collect/uav.htm>, <http://www.globalsecurity.org/intell/systems/uav-intro.htm>.

<sup>7</sup> The HPCR Manual on International Law Applicable to Air and Missile Warfare is a result of process led by the Program on Humanitarian Policy and Conflict Research at Harvard University (HPCR), under which a group of international experts have been convened to reflect on existing rules of international law applicable to air and missile warfare. According to its authors it shall be considered as an authoritative restatement of the most-up-to-date rules. The aim of the HPCR Manual is to contribute to the practical understanding of the existing international law applicable to air and missile warfare. More information available at [www.hpcresearch.org](http://www.hpcresearch.org).

<sup>8</sup> Unmanned Aerial Vehicles are those which do not carry a weapon and Unmanned Combat Aerial Vehicles are those which carry and launch a weapon). Section A: 1) dd, ee) of the HPCR Manual on International Law Applicable to Air and Missile Warfare, 2009, p. 6.

<sup>9</sup> Basic terminological document NATO APP6 (2010).

<sup>10</sup> Commentary on the HPCR Manual on International Law Applicable to Air and Missile Warfare, version 2.1. March 2010, p. 54.

<sup>11</sup> <http://science.howstuffworks.com/predator.html>.

<sup>12</sup> Commentary on the HPCR Manual on International Law Applicable to Air and Missile Warfare, version 2.1. March 2010, p. 55.

<sup>13</sup> GA UN A/HRC/14/24/Add.6, Report of the Special Rapporteur on extrajudicial, summary or arbitrary executions, Philip Alston, Study on Targeted Killing, May 28, 2010, p. 25, point 84.

The description of the process surrounding UAVs operation mode does in fact trigger usual concerns about legality of UAVs employment. With that regard, one journalist asked: “*Is it correct, that in democratic state which is governed by a constitution is killing by click on the mouse? And who “guards” CIA agents, which are involved in these actions? In whose authority are prepared lists containing targets?*”<sup>14</sup>

If we stick to advantages arising from UAVs employment at first place, usually is mentioned the absence of pilot. The humans desire to construct unmanned aerial vehicle could be tracked back to times of human desire to construct an aircraft itself.<sup>15</sup> The aim was to target the “foe” without being exposed to associated possible casualties, which post-modern societies are just not willing to undertake.<sup>16</sup> Inline of the absence of pilot goes a significantly decrease of a stress factor of its human operator, as he/she is not present at the battlefield, he is not facing any danger.<sup>17</sup> But from a historical point of view it is completely nothing new, as through the ages warriors tried to use new technologies and weapons, which would allow them to fight with fewer risks (darters, bow and arrows, catapults, fire weapons and aerial warfare). With that regard, UAVs are still nothing else, than a new step in such development. From a military-tactical point of view, comparing to normal aircraft, UAVs have some advantages consisting in a very quiet and long running operability (e.g. MQ-9 Reaper UAV has an endurance of 18 hours<sup>18</sup>). Naturally, similarly to piloted aircrafts, UAVs keeps capability of being reused.

UAVs were traditionally used for surveillance, reconnaissance, search and intelligence gathering purposes.<sup>19</sup> As they provided its operators with a significant informational supremacy, they often were used in “*support of aerial and ground attack*”<sup>20</sup> in area of military operations. Nowadays, thanks to technological advance consisting in capability to carry on a lethal force comparable to light aircraft equipment operated by a pilot,<sup>21</sup> UAVs represent not only flexible and cheap instrument providing number of intelligence data, but a multifunction and efficient means of combat, as such. Just an illustrative remark concerning their gradual employment is that in 2002 the Predator operated by the CIA using a Hellfire missile made a confirmed kill in Yemen, when it destroyed a vehicle carrying six members of Al-Qaeda.<sup>22</sup> Since then,

<sup>14</sup> <http://zahranicni.ihned.cz/c1-41581400-bezpilotni-letouny-pomahaji-v-boji-proti-talibanu-ale-umiraji-pritom-civiliste>.

<sup>15</sup> <http://technet.idnes.cz/tady-vsude-radili-bezpilotni-zabijaci-vietnamci-omylem-strileli-po-sobe.htm>.

<sup>16</sup> T. Kučera, Lze vést válku bez válečníků? Důsledky robotizace v malých válkách, *Mezinárodní vztahy* 1/2010, str. 58.

<sup>17</sup> <http://www.uavs.org/advantages>.

<sup>18</sup> Compendium by Armada, DRONES 2010, Vol. 34, issue 3/2010, p. 10.

<sup>19</sup> <http://www.fas.org/irp/program/collect/uav.htm>.

<sup>20</sup> Commentary on the HPCR Manual on International Law Applicable to Air and Missile Warfare, version 2.1. March 2010, p. 54.

<sup>21</sup> [http://www.tyden.cz/rubriky/zahranici/asia-a-oceanie/bezpilotni-stroje-zabijaci-civilistu-nebo-zbran-snu\\_134916.html](http://www.tyden.cz/rubriky/zahranici/asia-a-oceanie/bezpilotni-stroje-zabijaci-civilistu-nebo-zbran-snu_134916.html).

<sup>22</sup> Unmanned Aerial Vehicles Crowd the Skies: Year In Review 2009. (2011). In *Britannica Book of the Year, 2010*. Retrieved from <http://www.britannica.com/EBchecked/topic/1584404/Unmanned->

as their operational capabilities were expanded to full combat functions, their combat engagement gradually grew. For example, in relation to conflict in Afghanistan, an original zero UAVs combat engagement in 2004 increased to total of 117 attacks in the 2010, in detail UAVs employment was almost doubling every year (in 2008 – 35 attacks; in 2009 – 53 attacks).<sup>23</sup> Such increase of UAVs employment<sup>24</sup> documents not only its enormous combat potential, but a prospective increase for civilian casualties on the other hand as well.

Considering UAVs which are under focus of LOAC issue, those capable of executing attacks (armed, remotely controlled and piloted UAVs)<sup>25</sup> and multiple concerns about its legality raised in media, one must already in this descriptive part note that UAVs combat engagement actually in fact does not differ much comparing to missile launched from piloted aircraft. In both cases, the decision to launch attack is made on the base of multiples information, having in fact wide variety of information from other sources than direct eyes observation. What does then make a difference when UAV is operated from Langley in Virginia approximately 11 thousand kilometers off Afghanistan<sup>26</sup> or when manned aircraft launch a missile from five and more kilometers, which is a common real case scenario in some tactical situations for almost 30 years? In both cases the pilot and the UAV operator have a very similar information or combination of information (TV or infrared imaging, intelligence sources, geographical position etc.). In modern combat it is nothing special, that the decision-maker, responsible for issuing order “engage/not engage” is an officer (with staff support) who is not present on the spot. And thus, in such situation it does not matter if such officer is actually present 50 or 5 000 km away. If we look at UAVs combat engagement from their actual operational employment, it is evident, that the only difference is really the absence of a person sitting in a cockpit.

Even though international law does not specifically introduce rules governing UAVs engagement, neither does so about aerial warfare; it does not mean that it operates in a legal vacuum. When employing UAVs, its operators, planners of its engagement and decision-makers have to comply with the same set of rules applicable to normally to piloted aircrafts or missile warfare. Thus, the aim of the following parts is to evaluate applicability of LOAC rules and principles concerning UAVs

Aerial-Vehicles-Crowd-the-Skies, GA UN A/HRC/14/24/Add.6, Report of the Special Rapporteur on extrajudicial, summary or arbitrary executions, Philip Alston, Study on Targeted Killing, May 28, 2010, p. 4, point 7 with reference to J. Mayer, The Predator War, The New Yorker, October 26, 2009, G. Miller, C.I.A. Said to Use Outsiders to Put Bombs on Drones, LA Times, February 13, 2009.

<sup>23</sup> The Long War Journal, Charting the data for US airstrikes in Pakistan 2004-2011. [www.longwarjournal.org/pakistan-strikes.php](http://www.longwarjournal.org/pakistan-strikes.php). Data as of January 3rd 2011.

<sup>24</sup> To have a general overview of UAVs deployment by the United States in Afghanistan and Iraq, totalling a mere 167 in 2002, rose to exceed 6000 in 2008. More information in Complete Guide by Armada, Drones 2009, Volume 33, 3/2009.

<sup>25</sup> Commentary on the HPCR Manual on International Law Applicable to Air and Missile Warfare, version 2.1. March 2010, p. 55.

<sup>26</sup> [http://zpravky.idnes.cz/valka-bezpilotnich-letounu-se-obraci-proti-usa-nepritele-zabiji-i-plodi-1ny-/zahranicni.asp?c=A100930\\_104258\\_zahranicni.stf](http://zpravky.idnes.cz/valka-bezpilotnich-letounu-se-obraci-proti-usa-nepritele-zabiji-i-plodi-1ny-/zahranicni.asp?c=A100930_104258_zahranicni.stf).

engagement and explore possible deficiencies to address its potential humanitarian impact.

### 3. Basic rule on means and methods of warfare

First starting point is to evaluate whether UAVs does or does not belong to generally prohibited means and methods of warfare. Primary hypothesis for evaluation of whether employment of new technology on battlefield is in accordance with LOAC is, whether it complies with condition set in the Article 35 of API.<sup>27</sup> The rule refers to a general limitation of parties of the conflict by stating that their right to choose means or methods of warfare is not unlimited. Even though existence of such rule does not represent a historical breakthrough,<sup>28</sup> it may be considered as one of the most significant limitation that modern LOAC codification comprise, as it explicitly reaffirms the law already in force.<sup>29</sup>

A legal evaluation, whether employment of UAVs does not violate the Article 35 of API naturally, starts with a detailed clarification of the essential terms used therein. Firstly, the key term which needs to be clarified is the notion of “**means and methods**” of warfare. Unfortunately, API or other LOAC convention does not contain any definition of such notions. Nevertheless according to the Commentary to the API the words shall be used in “*the widest sense*” possible, since “*a weapon can be unlawful in itself, or it can be unlawful only under certain condition*”.<sup>30</sup>

The HPCR Manual considers UAV as aircraft, because defines aircraft as “*any vehicle whether manned or unmanned*”.<sup>31</sup> Based on assumption that in aerial warfare aircraft executing an attack is generally as such regarded as “means” of warfare, it is concluded that under international law UAVs are considered as a “mean” of warfare, as actually any instrument capable of attack may represent it.<sup>32</sup>

What “methods” of warfare notion concerns, the HPCR Manual provides thoughtful definition stating, that contrary to “mean” of warfare which refers to an instrument used to conduct an attack, “method” of warfare refers more to how such instruments are used and actions are conducted.<sup>33</sup>

<sup>27</sup> Additional Protocol to the Geneva Conventions of 1949, relating to the Protection of Victims of International Armed Conflicts of 1977 (API).

<sup>28</sup> As the first limitation concerning means and methods of warfare may be considered St. Petersburg Declaration of 1868, which for the first time introduced a treaty prohibition on the use, in time of war, of explosive or inflammable projectiles with a weight of less than 400 grammes.

<sup>29</sup> Commentary on the Additional Protocols of 8 June 1977 to the Geneva Conventions of 12 August 1949, Geneva 1987, p. 390, para 1382.

<sup>30</sup> Commentary on the Additional Protocols of 8 June 1977 to the Geneva Conventions of 12 August 1949, Geneva 1987, p. 398, para 1402.

<sup>31</sup> Section A: 1) d) of HPCR Manual on International Law Applicable to Air and Missile Warfare, 2009, p. 1.

<sup>32</sup> This has to be interpreted in a very wide sense, as even aircraft providing targeting data is considered as a mean of warfare, for example AWACS. Commentary on the HPCR Manual on International Law Applicable to Air and Missile Warfare, version 2.1. March 2010, p. 41, 55.

<sup>33</sup> Commentary on the HPCR Manual on International Law Applicable to Air and Missile Warfare, version 2.1. March 2010, p. 43-44.

So far UAVs have been defined as capable of qualifying self to fall into category of “mean” of combat. The crucial question then turns to evaluation whether according to the Article 35 API, the manner of UAVs employment may or may not be considered as prohibited “method” of warfare. Unfortunately, the Article 35 API merely lays down the rule and remains quiet on conditions of its application.<sup>34</sup> Thus what is then the decisive criterion limiting parties their freedom of choice of a weapon system? Decisive factors then seem to be aspects contained in the second and third paragraph of the Article 35 API.

First aspect represents the prohibition contained in the second paragraph of Article 35. It states that it is prohibited “*to employ weapons, projectiles and material and methods of warfare of a nature to cause superfluous injury or unnecessary suffering.*”<sup>35</sup> From its grammatical interpretation it is evident, that the key leading to understanding of its “content” lay in the de-coding of other general term “*superfluous injury or unnecessary suffering*”. Based on classification of UAVs capabilities for combat engagement, firstly it is necessary to test, whether UAV’ s use for combat purposes can cause such prohibited consequences. Therefore, if we leave aside UAVs surveillance and intelligence gathering capabilities and stick to implications of its combat capabilities, it has to be stated that, from the technical point of view, UAV is nothing more than a missile, bombs and rockets container. And thus UAVs in its substance do not differ from any other commonly used weapons system released by a pilot of an aircraft, including gun fired by a soldier or a helicopter.<sup>36</sup>

From the given indication results, that UAV in itself does not represent prohibited mean of warfare. Such conclusion supports a fact that Article 35 API represents a general rule, not prohibiting any specific weapon, and a fact that UAVs do not belong to any category of specifically prohibited weapons, yet, like antipersonnel mines, cluster munitions etc.<sup>37</sup> On the other hand, one has to be cautious to make pre-mature general consequences as a weapon may not always be used by its common or originally intended manner. For example a UAV could be intentionally directed by an operator to civilian object as a weapon,<sup>38</sup> as on a very same basis terrorists intentionally used the hijacked aircrafts as a weapon during terrorists attacks of September 11.

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<sup>34</sup> Commentary on the Additional Protocols of 8 June 1977 to the Geneva Conventions of 12 August 1949, Geneva 1987, p. 397, para 1399.

<sup>35</sup> Article 35 para 2 of the Additional Protocol to the Geneva Conventions of 1949, relating to the Protection of Victims of International Armed Conflicts of 1977 (API).

<sup>36</sup> GA UN A/HRC/14/24/Add.6, Report of the Special Rapporteur on extrajudicial, summary or arbitrary executions, Philip Alston, Study on Targeted Killing, May 28, 2010, p. 24, point 79.

<sup>37</sup> Prohibition to use specific weapons follows either from customary law or is contained in other specific international conventions such as Convention on Prohibition or Restriction on the Use of Certain Conventional Weapons (1980), Convention on Prohibition of Anti-Personnel Mines (1997), Convention on Cluster Munitions (2008) etc.

<sup>38</sup> Ondřej/Šturma, Bílková/Jílek a kol., *Mezinárodní humanitární právo*, C.H.Beck, 2010, p. 246.

As far as UAV's effect to cause prohibited superfluous injuries or unnecessary suffering concerns, the answer to this question is more of nature and effects that is capable to cause the loaded ammunition to it, then to a skeleton for delivering it, which UAVs in fact represents. The conclusion drawn from this point of view is thus, that there is in fact not principal difference between normal piloted aircrafts and armed UAVs.

The third paragraph of Article 35 API concerns of protection of natural environment, as it prohibit to employ means and methods of warfare causing or able to cause "*widespread, long term and sever damage*" to the natural environment.<sup>39</sup> The prohibition herein contained would be particularly interesting in case of taking all UAVs advantages (long running cycle, relatively low costs for acquiring it and operating it and mainly very quiet operation) and employing UAV by terrorists group or other non-state actor for spreading for example chemical agents.

To finalize issue of basic rule on limitation to choose of means and method of warfare, it shall be emphasized, that LOAC foster such rule by requiring parties to conduct legal review of lawfulness of acquiring/developing "new weapons".<sup>40</sup> The rule contained in Article 36 API relates to necessity to introduce measures with aim to prevent states to acquire and develop weapons which turned to be illegal under international law. The assessment covers weapons of all types, including it's various modes of employment. Moreover it covers weapons, which are intended to be acquired by the states for the first time, without "*necessarily being 'new' in a technical sense*";<sup>41</sup> and even review of existing weapon that is modified in a way that alters its function.<sup>42</sup>

### 3. The prohibition of certain methods of warfare

From the above mentioned concludes, that UAVs may be considered as "mean" of combat under international law. The evaluation revealed that UAVs as such are impossible to qualify as prohibited means of warfare, because they represent more a skeleton or a container for a concrete and specific weapon or weapon system, which then through its effects may turn to appear under prohibited means of warfare (e.g. inaccuracy consisting in indiscriminate nature of the weapon, capability to cause superfluous injury etc). With that regard, the critical point concerning UAVs

<sup>39</sup> Article 35 para 3 of the Additional Protocol to the Geneva Conventions of 1949, relating to the Protection of Victims of International Armed Conflicts of 1977 (API).

<sup>40</sup> Article 36 of the Additional Protocol to the Geneva Conventions of 1949, relating to the Protection of Victims of International Armed Conflicts of 1977 (API) states: "*In the study, development, acquisition or adoption of a new weapon, means or method of warfare, a High Contracting Party is under an obligation to determine whether its employment would, in some or all circumstances, be prohibited by this Protocol or by any other rule of international law applicable to the High Contracting Party*".

<sup>41</sup> Commentary on the Additional Protocols of 8 June 1977 to the Geneva Conventions of 12 August 1949, Geneva 1987, p. 425, para 1472.

<sup>42</sup> 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, p. 8.

conformity with LOAC shifts to evaluation of its specific use or employment. For that reasons, UAVs LOAC concerns will be now conceived via examination of principle of distinction and principle of proportionality.

### **3.1 Principle of distinction**

Even though warfare remains a violent clash of interests between organized groups characterized by the use of force,<sup>43</sup> current features of conducting armed conflicts place on its actor's aggravated requirements and due consideration when comes in the use of (deadly) force. One of the core LOAC principles, a "principle of distinction", require parties to the conflict to always distinguish between "*civilian population and combatants and between civilian objects and military objectives*".<sup>44</sup> Although the protection of civilians is one of the main goals of LOAC<sup>45</sup> unfortunately the statistics of war casualties' show that civilians happen to become almost a "centre" of military operations.<sup>46</sup> For example, in Afghanistan, as far as aerial attacks concerns, even though in comparison with 2009, the number of casualties in 2010 decreased, it still caused 171 deaths.<sup>47</sup> Concerning civilian casualties directly resulting from US air strikes conducted by UAVs in Pakistan/Afghanistan border results that 14 civilian casualties have been confirmed and 801 casualties were identified as members of Taliban/Al-Qaeda.<sup>48</sup>

As it is evident from the numbers, even though a principle of distinction may seem clear enough in theory, in practice it does not appear so clear cut. Be it for various or different reasons, especially conflicts in Israel, Iraq and Afghanistan showed the difficulty of its application. One of the latest examples of problems with civilian casualties caused by NATO forces in Afghanistan and effective application of principle of distinction is so called "KUNDUZ" air strike.<sup>49</sup> Even though ISAF commander gen. McChrystal in 2009 issued a tactical directive stressing importance

<sup>43</sup> US Counterinsurgency Manual, FM 3-24/MCWP 3-33.5 of 15 December 2006, point 1-1.

<sup>44</sup> Article 48 of the Additional Protocol to the Geneva Conventions of 1949, relating to the Protection of Victims of International Armed Conflicts of 1977 (API).

<sup>45</sup> ICRC, Interpretative Guidance on the Notion of Direct Participation in Hostilities, 2009, p. 4.

<sup>46</sup> For example, total 2.777 civilians were confirmed death in Afghanistan in 2010 relation to ongoing armed conflict. Even though 75% of them was attributed to Anti-Government elements. Afghanistan, Annual Report 2010, Protection of Civilians in Armed Conflict, UNAMA, AIHRC, 3/2011, <http://www.unhcr.org/refworld/docid/4d7744972.html>

<sup>47</sup> Afghanistan, Annual Report 2010, Protection of Civilians in Armed Conflict, UNAMA, AIHRC, 3/2011, <http://www.unhcr.org/refworld/docid/4d7744972.html>

<sup>48</sup> Even though the strikes were actually effectuated on a Pakistan territory, they were launched in relation to conflict in Afghanistan. The Long War Journal, Charting the data for US airstrikes in Pakistan 2004-2011. [www.longwarjournal.org/pakistan-strikes.php](http://www.longwarjournal.org/pakistan-strikes.php). Information as of January 3rd, 2011.

<sup>49</sup> During night from September 3rd to 4th, 2009 German Col. Klein ordered to F-15 American pilots engage and neutralize two vehicles (cisterns) transporting fuel as according to information that he acquired they are in hand of Taliban's and as a weapon shall be misused to attack a nearby German PRT camp located in Kunduz province. Even though it was evident that around the vehicles a dozen of persons are present, he was told that all of them are members of Taliban and thus insurgents. More information available for example at ATM review No. 2/2010, p. 12-15.

of avoiding civilian casualties,<sup>50</sup> only two months after such proclamation, NATO forces have been accused of allegations of serious LOAC violations, they have so far faced. The reason was that the air strike, however not effectuated by UAVs, but launched from a piloted F-15, resulted in at least 90 casualties reported, of which at least were 30 civilians.<sup>51</sup> Having this example, these air strikes clearly showed not only how difficult is to determine whether adversary is a peaceful civilian or an insurgent, but in fact revealed a lot of similarities with UAVs, if they would be employed in that case. The main reason is that under both instruments the decision is based on given information. This is caused by the reality governing modern battlefield, where for more than a decade even a pilot of the manned aircraft usually relying on information provided to him. This is simply caused by a high altitudes and speed of modern aircrafts. And is one of reasons why slower aircrafts like A-10 Thunderbolts II are widely deployed, as well. But, for example in Afghanistan, because of asymmetric warfare environment operational engagement of these special purpose airplanes often depends on information provided by ground observers like FAC (Forward Air Controller), who is their “eyes on the ground”. The natural question raised with that regard is: does still employment of UAVs shall represent controversy comparing to manned aircraft? From the legal point the answer will then certainly be negative one. However, no one challenge whether it should be issue because of sociological, ethical or even a moral impact of warfare.

### **3.2 Principle of proportionality**

Even though, “total avoidance of damage to the civilian population is the ideal standard combatants should seek to attain in all cases”,<sup>52</sup> in support of practical applicability of principle of distinction, nothing in LOAC prohibits causing incidental collateral damage. The rationale behind is two fold. Firstly, the aim is to maintain LOAC serving to both sides and not obstructing leading of military operations, as actually the whole LOAC is in fact a result of balance between military requirements and requirements of humanity.<sup>53</sup> Secondly, the reason behind seems to be more practical nature. Unlike police forces, armed forces operate often under very limited infrastructure with limited possibilities to acquire all information necessary for their decision. Thus, in fact they operate more with “probabilities” when planning and directing military operations, than with 100% certainty.

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<sup>50</sup> Gen. McChrystal revised Tactical Directive, July 2nd 2009: “We must avoid the trap of winning tactical victories – but suffering strategic defeats – by causing civilian casualties or excessive damage and thus alienating the people.” [www.nato.int/isaf/docu/official\\_texts/Tactical\\_Directive\\_090706.pdf](http://www.nato.int/isaf/docu/official_texts/Tactical_Directive_090706.pdf).

<sup>51</sup> The accurate number of casualties was never officially confirmed. Different sources operate with a very varying numbers ranging from 30 to 70 death civilians. More information available at [www.natoaktual.cz](http://www.natoaktual.cz), „Smrtící nálet na cisterny v Afghánistánu byl podle tajné zprávy přiměřený“ on October 30th, 2009.

<sup>52</sup> F. Kalshoven, L. Zegveld: Constraints on the Waging of War, ICRC, 2001, p. 107

<sup>53</sup> Commentary on the Additional Protocols of 8 June 1977 to the Geneva Conventions of 12 August 1949, Geneva 1987, p. 683, para 2206.

Therefore, under very strict and limited conditions, LOAC permits causing collateral damage. The standard is that only “*incidental loss of civilian life, injury to civilians and damage to civilian objects or other protected objects or a combination thereof, caused by an attack on a lawful target*”<sup>54</sup> could legitimize the damages caused in relation with military attack, under condition that “*they are not excessive in relation to the concrete and direct military advantage anticipated*”.<sup>55</sup>

To support practical applicability of principle of distinction and to avoid excessive collateral damage, LOAC contains a various concrete provisions concerning restricting and directing military commanders, planners and combatants in their actions. Especially, it is concerned with prohibition of indiscriminate attacks contained in the Article 51 of API and requirement to comply with preventive precautions in attack sets in the Article 57 of API. Both articles address its concerns and clarifications in practical application of the principle of proportionality.

The Article 51 of API is viewed as containing the most important paragraphs in the Protocol, as it explicitly confirms the customary rule concerning general protection of civilians against danger arising from hostilities.<sup>56</sup> Moreover, unlike other rules in the Protocol, e.g. Article 35, it is accompanied by rules of its application.<sup>57</sup> Concerning employing UAVs as a means and methods of warfare the special importance of this article is in its Para 5 and 6, which refers to prohibition to launch indiscriminate attacks.

Indiscriminate attack is attack that is launched in such a manner that it would not be directed at a specific military objective<sup>58</sup> and consequently is of nature to strike without distinction.<sup>59</sup> Such attack effectuated by UAV would in practice signify that a UAV would have to be intentionally directed by its operator to a civilian object,<sup>60</sup> which, as it was mentioned already above is not a purely theoretical concept due to attacks of September 11. The other example of using UAVs in indiscriminate nature is rather “hypothetical” and concerns more advanced type of UAVs (automatic, independent in its decision), then current of UAVs types, where the decision and ultimate responsibility of operator or commander is reserved. The problematic case then would represent such advanced autonomous machines would not be possible

<sup>54</sup> Article 51 para 5b) + Article 57 para 2a) iii) of the Additional Protocol to the Geneva Conventions of 1949 relating to the Protection of Victims of International Armed Conflicts of 1977 (API).

<sup>55</sup> Article 51 para 5b) + Article 57 para 2a) iii) of the Additional Protocol to the Geneva Conventions of 1949 relating to the Protection of Victims of International Armed Conflicts of 1977 (API).

<sup>56</sup> Commentary on the Additional Protocols of 8 June 1977 to the Geneva Conventions of 12 August 1949, Geneva 1987, p. 615, para 1923.

<sup>57</sup> Commentary on the Additional Protocols of 8 June 1977 to the Geneva Conventions of 12 August 1949, Geneva 1987, p. 615, para 1923.

<sup>58</sup> Article 52 para 2 API states that: “attacks shall be limited strictly to military objectives“. Military objectives are combatants (as defined in Article 43 API) and military objects (as defined in Article 52 para 2 API).

<sup>59</sup> Article 48 of the Additional Protocol to the Geneva Conventions of 1949 relating to the Protection of Victims of International Armed Conflicts of 1977 (API).

<sup>60</sup> Article 51 para 4a) of the Additional Protocol to the Geneva Conventions of 1949 relating to the Protection of Victims of International Armed Conflicts of 1977 (API).

to direct at a specific military objective.<sup>61</sup> Finally, the last example of indiscriminate attack in course of employing UAVs represents a case of engagement of UAVs loaded with unsuitable ammunition, which when released could have caused indiscriminate effects.<sup>62</sup> As other example may be stated a possible consequence of use of such unsuitable ammunition, because of effects of the explosion capable to cause excessive collateral damages, etc.

As far as precautionary measures concerns, Article 57 API places on a military commander a relatively significant responsibility on precautions that he is obliged to undertake when planning or deciding an attack.<sup>63</sup> Thus, it requires to “*doing everything feasible to verify*”<sup>64</sup> that target is only a military objective and to take “*all feasible precautions in the choice of means and methods of attack*” with aim to minimize collateral damage.<sup>65</sup> As almost usually the given articles are a very general in its wording. Question in practice then appears: what does it means “doing everything feasible”? Which concrete steps or process has to be fulfilled to satisfy such general condition?

As all this precautionary measures are placed to foster protection of civilian population and civilians vis-a-vis an effective application of principle of distinction and principle of proportionality, the prevailing content is that it means doing everything “*practically possible, taking into account all circumstances prevailing at the time, including humanitarian and military considerations*”.<sup>66</sup> Thus in course of planning and deciding military operations, the staff is required to compile and consequently seriously verify all information available to them, from all possible source at the relevant time, when planning or deciding an attack and based on all information available at place where conducting their operations. Practice of states with that regard clearly shows that “*the mere fact that such information exists somewhere is irrelevant for determining feasibility*”.<sup>67</sup> Having in mind UAVs capabilities and manner of its employment, when for example the possibility to evaluate object based on direct ground information is limited, and planning and deciding upon an attack is usually performed in a long distance located operation centers (as already mentioned above

<sup>61</sup> Article 51 para 4b) of the Additional Protocol to the Geneva Conventions of 1949 relating to the Protection of Victims of International Armed Conflicts of 1977 (API).

<sup>62</sup> Article 51 para c) of the Additional Protocol to the Geneva Conventions of 1949 relating to the Protection of Victims of International Armed Conflicts of 1977 (API).

<sup>63</sup> According to article 49 of the Additional Protocol to the Geneva Conventions of 1949, relating to the Protection of Victims of International Armed Conflicts of 1977 (API), “attack” means acts of violence against the adversary, whether in offence or in defence.

<sup>64</sup> Article 57 para 2a) i) of the Additional Protocol to the Geneva Conventions of 1949 relating to the Protection of Victims of International Armed Conflicts of 1977 (API).

<sup>65</sup> Article 57 para 2a) ii) of the Additional Protocol to the Geneva Conventions of 1949 relating to the Protection of Victims of International Armed Conflicts of 1977 (API).

<sup>66</sup> Commentary on the HPCR Manual on International Law Applicable to Air and Missile Warfare, version 2.1. March 2010, p. 38

<sup>67</sup> Commentary on the HPCR Manual on International Law Applicable to Air and Missile Warfare, version 2.1. March 2010, p. 38

this does not apply only for UAVs, but for manned aircrafts as well), the commander has to undergo a particularly difficult as well as accurate assessment of the military objective. When trying to fulfill the requirement “doing everything feasible”, such commander shall not rely only on information obtained from aerial and intelligence reconnaissance, but he/she shall take into account so called “**pattern of life**”, as well.<sup>68</sup> As this requirement in practice means “*taking into account all the circumstances at the time of the attack*”,<sup>69</sup> he/she shall take into account the most ordinary and everyday usual activities of an individuals and a society in area of operations. Thus, the actual content of pattern of life may range from information concerning when and where civilians go to work, when and where they concentrate (public markets), till which means of transport they use mostly etc.

Good example of underestimating precautionary measures seems to represent a “Grdelica Bridge” case.<sup>70</sup> Grdelica Bridge is an unfortunate NATO strike during NATO Operation Allied Force in 1999 in Former Republic of Yugoslavia. The facts are that NATO forces aimed to destroy the train bridge, but because precautionary measures probably were not fully accomplished as pattern of life of that area was not properly checked (e.g. train timetable), the attack resulted unlucky as it deadly hit a civilian train. According to investigations two laser guided munitions released by pilot of F15 aircraft (which was present many miles away of the target with no possibility to directly check the target) hit the train bridge in the very same moment when a train full of civilians was crossing by.

Having mentioned this real case scenario, it is worthy to remind that UAVs characteristics are that it is an unmanned aircraft, which is remotely controlled and piloted. Because, if we compare missile strikes released from piloted aircrafts, which were cases in both here referred examples (Grdelica Bridge and Kunduz air strike) with missile strikes released of UAVs, we have to once again come to conclusion, that legally there is actually no difference between employing UAVs and manned aircraft under LOAC perspective. In both cases a military commander has to undergo a same process of fulfilling extensive requirements of Articles 51 and 57 API. Moreover, in both cases a very similar or sometimes the same of ammunition is actually released to launch attack. Thus, neither with that regard one could ground a solid distinction. UAVs as a means of combat are not releasing different type of ammunition. Finally, as the ultimate aim of LOAC is to spare civilian population of military operations as far as possible, such process would not be complete without verification that targeted objects does not belong under specific protection (object with cultural value and/or

<sup>68</sup> A way in which something happens, moves, develops or is arranged. A S Hornby, Oxford Advanced learner's Dictionary of Current English, 1989, p. 907.

<sup>69</sup> Commentary on the Additional Protocols of 8 June 1977 to the Geneva Conventions of 12 August 1949, Geneva 1987, p. 681, para 2198.

<sup>70</sup> Grdelica train bombing occurred on April 12, 1999 during Operation Allied Force, a NATO operation against the Federal Republic of Yugoslavia and resulted in direct death of 10 or more civilians. Final Report to the Prosecutor by the Committee Established to Review the NATO Bombing Campaign Against the Federal Republic of Yugoslavia. [www.icty.org](http://www.icty.org).

place of worship)<sup>71</sup> and that they do not contain dangerous forces<sup>72</sup> or not represent medical units.<sup>73</sup>

To finalize, it is evident that a mutual correlation between the terms “means” and “methods” of warfare is relative and it is not easy to keep them a clear cut different,<sup>74</sup> as even use of UAV a legal weapon (means of combat) might result in its unlawful use due to non-compliance with a specific LOAC requirements sets in Article 51 and 57 API.

#### 4. Conclusion

As often is mentioned that *“all predictions agree that if man does not master technology, but allows it to master him instead, he will be destroyed by the technology”*,<sup>75</sup> one must acknowledge the realities of current battlefields and new developments whether he likes it or not. From looking on reality of today’s battlefield (especially in Afghanistan), it is evident that the use UAVs is a very contributive and multifunctional mean of combat. The emphasize placed on development of new technologies, for example like highly autonomous systems (whether aerial or ground) is so manifest that in near future outcomes of such direction will with no doubt represent a real revolution in conducting warfare. Revolution, which will most probably represent a substantial modification in character of waging war and maybe even resulting in change of employing military strategy. One predictable outcome of such automatization of battlefield is already apparent as soldiers are slightly becoming secondary subjects.<sup>76</sup>

As far as the legality of use of UAVs under LOAC it is concerned, this article clearly shows that UAVs use for conducting warfare is not in contradiction with applicable rules and principles, even though LOAC specifically does not regulate employment of new technologies, like UAVs, as such. However, it has to be reminded that UAV’ s may not be employed without a LOAC consideration. In contradiction to such conclusion, it has to be emphasized that when employing UAVs, one shall carefully assess all UAV’ s operational specifics and conduct planning and decision-making process with a great emphasize on all LOAC requirements. Having in mind specifically observation of principle of distinction and proportionality.

<sup>71</sup> Article 53 of the Additional Protocol to the Geneva Conventions of 1949 relating to the Protection of Victims of International Armed Conflicts of 1977 (API).

<sup>72</sup> Article 56 of the Additional Protocol to the Geneva Conventions of 1949 relating to the Protection of Victims of International Armed Conflicts of 1977 (API).

<sup>73</sup> Article 12 of the Additional Protocol to the Geneva Conventions of 1949 relating to the Protection of Victims of International Armed Conflicts of 1977 (API).

<sup>74</sup> Detter, I., *The Law of War*. 2nd Edition. Cambridge University Press, 2000, str. 276. Převzato z Ondřej/Šturma, Bílková/Jílek a kol., *Mezinárodní humanitární právo*, C. H. Beck, 2010, p. 246.

<sup>75</sup> Commentary on the Additional Protocols of 8 June 1977 to the Geneva Conventions of 12 August 1949, Geneva 1987, str. 428, para 1476.

<sup>76</sup> For example a signs of such shift is already evident from the reports of US Air Force, as they are *“training now more drone operators than fighter and bomber pilots”*. E. Helmore, *US Air Force prepares drones to end era of fighter pilots*, 23 August 2009. [www.guardian.co.uk/world/2009/aug/22/us-air-force-drones-pilots-afghanistan](http://www.guardian.co.uk/world/2009/aug/22/us-air-force-drones-pilots-afghanistan).

Such observations are mainly established on assessment of capabilities and modes of employment of current UAVs types conducting combat operations, which are still only remotely-controlled machines and where a role of operator – person (ultimately responsible and accountable for its operation) is preserved. Thus, activities surrounding such types of UAVs operational engagement generally do not differ from firing a long distance rocket from manned aircraft etc.

Until a certain degree of autonomy of UAVs engaging in combat consisting for example in control over battlefield, application of principle of distinction will be upheld to a certain level of “independency” in decision making process, then the existing sets of LOAC principles and rules seem to represent satisfactory regulatory context. However, it might not last too long when this thin line will be crossed and the existing rules might not sufficiently cover UAVs whole combat engagement implications. Such period then will be the right opportunity to introduce adequate set of rules especially focusing on setting exact limits of accountability for its use.

