



**DIRECTORATE-GENERAL FOR EXTERNAL POLICIES**  
**POLICY DEPARTMENT**



**HUMAN RIGHTS  
IMPLICATIONS OF THE  
USAGE OF DRONES AND  
UNMANNED ROBOTS IN  
WARFARE**

**DROI**



**DIRECTORATE-GENERAL FOR EXTERNAL POLICIES OF THE UNION**

**DIRECTORATE B**

**POLICY DEPARTMENT**

**STUDY**

## **HUMAN RIGHTS IMPLICATIONS OF THE USAGE OF DRONES AND UNMANNED ROBOTS IN WARFARE**

### **Abstract**

In recent years, the use of drones and other unmanned robots in warfare and other situations of violence has increased exponentially, and States continue to invest significantly into increasing the operational autonomy of such systems. The present study provides an overview of the current and likely future use of such systems and examines the relevant legal implications under human rights law, international humanitarian law and the UN Charter. The study concludes that the present sense of uncertainty as to the applicable legal standards, the rapid development and proliferation of drone and robotic technology, and the perceived lack of transparency and accountability of current policies have the potential of polarizing the international community, undermining the rule of law and, ultimately, of destabilizing the international security environment as a whole. Accordingly, the study develops the following policy recommendations for European foreign policy:

1. First, the EU should make the promotion of the rule of law in relation to the development, proliferation and use of unmanned weapons systems a declared priority of European foreign policy.
2. In parallel, the EU should launch a broad inter-governmental policy dialogue aiming to achieve international consensus: (a) on the legal standards governing the use of currently operational unmanned weapon systems, and (b) on the legal constraints and/or ethical reservations which may apply with regard to the future development, proliferation and use of increasingly autonomous weapon systems.
3. Based on the resulting international consensus, the EU should work towards the adoption of a binding international agreement, or a non-binding code of conduct, aiming to restrict the development, proliferation or use of certain unmanned weapon systems in line with the legal consensus achieved.

This study was requested by the European Parliament's Subcommittee on Human Rights.

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## EXECUTIVE SUMMARY

In recent years, the use of drones and other unmanned robots in warfare and other situations of violence has increased exponentially, and States continue to invest significantly into increasing the operational autonomy of such systems. While most unmanned robots are unarmed and fulfil functions that do not give rise to particular legal concerns, the use of weaponized robots, including armed drones, has important legal and policy implications. Given that such unmanned weapon systems involve the application of armed force, the international lawfulness of their use is governed primarily by human rights law and, in situations of armed conflict, by international humanitarian law. When the use of armed robots interferes with the territorial sovereignty of other States, it may also raise issues of legality under the UN Charter.

Although the legal principles resulting from these normative frameworks are universally recognized, their precise application and interpretation with regard to the use of armed drones and other robotic weapons gives rise to a number of controversies. Some of these controversies relate to the lawfulness of robotic weapons technology as such, whereas others relate to the circumstances and manner in which such technology is being used in current State practice. The resulting uncertainty as to the applicable legal standards, in conjunction with the rapid development and proliferation of drone and robotic technology and the perceived lack of transparency and accountability in current policies, has the potential of polarizing the international community, undermining the rule of law and, ultimately, of destabilizing the international security environment as a whole. This trend opens avenues for EU foreign policy initiatives aiming to promote transparency, accountability and the rule of law in relation to the use of unmanned weapon systems in armed conflict or other situations of violence:

EU Policy: In a first step, the EU should make the promotion of transparency, accountability and the rule of law in relation to the development, proliferation and use of new weapons technologies a declared priority of European foreign policy. Accordingly, the EU should make the use of unmanned weapon systems by the EU and its member States subject to a policy of transparency and accountability, which should also cover support of, or cooperation with other States related to such systems. Transparency may be subject to the legitimate security interests of States, but must also allow for effective and independent oversight (i.e. accountability) as required by the principles of democracy and the rule of law. In support of this policy, the EU should develop a set of recommendations as to how States, within their national governance systems, could ensure effective and independent oversight over relevant national policies and practices without compromising national security.

Intergovernmental Consensus Building Process: In parallel, the EU should launch a broader intergovernmental policy dialogue, supported by a series of legal and technical expert meetings or committees, aiming to achieve international consensus: (a) on the international legal standards governing the use of currently operational unmanned weapon systems, and (b) on the legal constraints and/or ethical reservations which may apply with regard to the future development, proliferation and use of increasingly autonomous weapon systems.

International Regulatory Instrument: Based on the outcome of the preceding consensus building process, the EU should work towards the adoption of a binding international agreement, or a non-binding code of conduct, aiming to restrict the development, proliferation and/or use of certain unmanned weapon systems in line with the legal consensus achieved.

## ABBREVIATIONS

ACHPR	African Charter on Human and Peoples Rights
ACHR	American Convention on Human Rights
ACiHPR	African Commission on Human and Peoples Rights
ADRDM	American Declaration of the Rights and Duties of Man
ARSIWA	Articles on the Responsibility of States for Wrongful Acts
CCW	Convention on Certain Conventional Weapons
CIA	Central Intelligence Agency
DoD	US Department of Defense
ECHR	European Convention for Human Rights and Fundamental Freedoms
ECiHR	European Commission of Human Rights
ECtHR	European Court of Human Rights
HRW	Human Rights Watch
IACiHR	Inter-American Commission on Human Rights
IACtHR	Inter-American Court on Human Rights
ICCPR	International Covenant on Civil and Political Rights
ICC Statute	Statute of the International Criminal Court
ICJ	International Court of Justice
ICRC	International Committee of the Red Cross
IISS	International Institute for Strategic Studies
ILC	International Law Commission
NYU	New York University
PCIJ	Permanent Court of International Justice
U(C)AS	Unmanned (Combat) Aircraft Systems
U(C)AV	Unmanned (Combat) Aerial Vehicle
UDHR	Universal Declaration of Human Rights.
UK	United Kingdom
UN	United Nations
UNHRC	UN Human Rights Committee
UNWCC	United Nations War Crimes Commission
US	United States

## 1. OVERVIEW OF CURRENT PRACTICE

### 1.1 Terminology

The present paper focuses on examining the human rights implications of the use of drones and other unmanned robots in warfare. It will be based on the following terminological understandings:

**Drone:** Specific type of unmanned robot, namely unmanned aerial vehicles (UAV). When armed, drones are also referred to as “unmanned combat aerial vehicles” (UCAV).

**Robot:** Machine which, through remote-control or based on pre-programmed patterns, can carry out tasks of a certain complexity with various degrees of autonomy from human supervision. If these tasks involve the use of armed force, they can be described as “robotic weapons” or “unmanned weapon systems”. Robotic weapons can be divided into three basic categories, depending on the degree of direct control exercised by a human operator:

1. **Human-controlled (“human-in-the-loop”) systems:** Robotic weapons which are remotely controlled by a human operator. While such robots may be able to independently perform selected tasks delegated to them by their operator (e.g. navigation, systems control, target detection, and weapons guidance), they cannot attack without the real-time command of their human operator.
2. **Human-supervised (“human-on-the-loop”) systems:** Robotic weapons which can carry out a targeting process independently from human command, but which remain under the real-time supervision of a human operator who can override any decision to attack.
3. **Autonomous (“human-out-of-the-loop”) systems:** Robotic weapons which can search, identify, select, and attack targets without the real-time control by a human operator. Such weapon systems can be described as “automated” when their capability to autonomously detect and attack targets is confined to a comparatively restricted, predefined and controlled environment. When they are capable of autonomously performing these tasks in an open and unpredictable environment they are described as “fully autonomous”.<sup>1</sup>

**Warfare:** situations of “armed conflict” within the meaning of international humanitarian law. Given the controversy surrounding the concept of “armed conflict” the following analysis will also examine “warlike” contexts in which the means and methods of warfare are being used *de facto*.

**Human rights** (as opposed to the technical term “human rights law”): The values proclaimed in the Universal Declaration of Human Rights of 1948 “as a common standard of achievement for all peoples and all nations”, irrespective of whether, formally, the legal protection of these values is provided by human rights law, international humanitarian law or a different body of international law, and irrespective also of whether, formally, the source of such legal protection can be found in a treaty, in custom or in a general principle of law.

<sup>1</sup> For similar categorizations see: US Department of Defense, “Unmanned Systems Integrated Roadmap FY2011-2036”, p. 46 (for unmanned systems in general); UK Ministry of Defence, “The UK Approach to Unmanned Aircraft Systems”, pp. 2-2/2-3 (for unmanned aircraft); HRW/IHRC, “Losing Humanity”, pp. 2, 12 (for robotic weapons).



## 1.2 Unmanned Aerial Vehicles (Drones)

### 1.2.1 Use of Drones as a Means of Warfare

The use of drones as a means of warfare traces back to World War II and beyond, becoming increasingly significant in the course of the second half of the 20<sup>th</sup> century.<sup>2</sup> While initial generations of military drones were used primarily for aerial surveillance, their functions gradually expanded to areas such as search and rescue, communications systems relay, suppression of hostile air defense, and direct attacks against selected targets.<sup>3</sup> In the course of the last decade, the use of armed drones has increased exponentially, beginning with the Second Intifada in the Israeli-occupied areas (since 2000), continuing in the Second Gulf War (2003 - 2011), and reaching its current peak in the course of the United States' confrontation with Al-Qaeda and affiliate groups in Afghanistan, Pakistan, Yemen and Somalia (since 2001). What is new today is the systematic use of armed drones for the targeted killing of pre-selected individuals in the territory of other States. Unprecedented is also the relative importance which this mode of operation has obtained in certain contexts compared to other, alternative means and methods of warfare.

By 2012, the US Department of Defence was said to dispose of some 7,000 drones<sup>4</sup> flying roughly 20,000 sorties per year, with a total of 1 million "combat hours" achieved already in 2010.<sup>5</sup> It is further estimated that, between 2004 and 2012, drones operated by the CIA have carried out approximately 350 attacks in Pakistan alone, killing between 2000 and 3000 individuals.<sup>6</sup> Although the accuracy of some of these numbers remains uncertain, they provide an approximate picture as to the importance which armed drones have attained in operational practice.

In many key areas such as autonomy, speed, manoeuvrability and firepower, currently operational drones still do not match manned military jets and, therefore, cannot replace these in conventional warfare between sophisticated armed forces.<sup>7</sup> With the growing asymmetry of conflicts in the post-Cold War world, however, States are increasingly confronted with loosely organized, transnationally operating armed groups lacking the capability to directly and effectively respond to conventional military operations, including aerial surveillance and attacks. In asymmetric confrontations with such "low-tech" enemies, advantages in terms of weight, cost and risk reduction mean that armed drones are quickly becoming the weapon of choice, particularly in permissive airspace outside the territorial control of the operating State.

As a consequence, approximately 50 States currently either possess drones or are in the process of developing or acquiring them for purposes of reconnaissance, intelligence-gathering and targeting, thus illustrating a trend towards the worldwide proliferation and acceptance of this technology.<sup>8</sup> While

<sup>2</sup> States having employed drones for military purposes during that period include, for example, the United States in the Vietnam War (1965-1975), the First Gulf War (1991) and the wars in Bosnia (1995) and Kosovo (1999), Israel in the Lebanon War (1982) and Iran in its war with Iraq (1980-88).

<sup>3</sup> US Department of Defense, "Unmanned Systems Integrated Roadmap FY2011-2036", p 21.

<sup>4</sup> Stanford/NYU, "Living under Drones", p. 8, with reference.

<sup>5</sup> US Department of Defense, "Unmanned Systems Integrated Roadmap FY2011-2036", p 22.

<sup>6</sup> New America Foundation, *The Year of the Drone*. See also: The Bureau of Investigative Journalism, *Pakistan drone statistics visualised*.

<sup>7</sup> For example, in December 2002, a US "Predator" drone and an Iraqi MiG-25 fighter jet fired missiles at each other over southern Iraq, resulting in the destruction of the Predator. See: "Pilotless Warriors Soar to Success", CBS News, 11 February 2009 (<http://www.cbsnews.com/stories/2003/04/25/tech/main551126.shtml>); David Axe, WIRED, 11 November 2012, "Predator Drones Once Shot Back at Jets", (<http://www.wired.com/dangerroom/2012/11/predator-defenseless/>).

<sup>8</sup> IISS, "The Drones of War". For the IISS' conservative estimate as to the current stock of drones owned by 11 different States see: The Guardian (3 August 2012), "Drones by country: who has all the UAVs?" (<http://www.guardian.co.uk/news/datablog/2012/aug/03/drone-stocks-by-country>).



some States, such as Israel, the United Kingdom, Australia and Germany are already known to have conducted or contributed to armed drone attacks,<sup>9</sup> others including Russia, Turkey, China, India, Iran, and France, are reported either to have or to be seeking to acquire drones capable of being armed with laser-guided missiles.<sup>10</sup>

As predicted by the UN Special Rapporteur on Extrajudicial, Summary or Arbitrary Executions,<sup>11</sup> drone technology has by now been obtained and used also by non-state armed groups. Thus, in October 2012, Hezbollah claimed responsibility for the launch of an Iranian manufactured Shahed-129 reconnaissance and combat drone, which was shot down by Israel after flying 25 miles into its territory.<sup>12</sup>

### 1.2.2 Use of Drones Outside Armed Conflict

Although this paper focuses on warfare and “warlike” contexts, it is important to note that drones are also increasingly employed for domestic law enforcement purposes, including border and road patrols, infrastructure protection, and the detection, identification and surveillance of objects and individuals.<sup>13</sup> So far, there has been no known use of armed drones in the context of domestic law enforcement and border protection, although the United States appear to have contemplated using them in support of counter-narcotics operations in Mexico.<sup>14</sup> Particularly in view of the increasing militarization of many law enforcement agencies, the use of armed drones in the fight against organized crime and in counter-piracy may well become a reality before long. Overall, the increasing use of drones for law enforcement purposes raises important questions of appropriate regulation and oversight, particularly concerning the authorization of individual surveillance, the protection of privacy rights and, in the case of armed drones, of the right to life.

Just as is the case for non-state groups in armed conflict, the technology necessary to build and operate drones is also accessible to criminals, other private individuals, corporations and organizations, and the distinction between drones and private remotely controlled aircraft may become increasingly blurred. The uncontrolled proliferation of such devices and their combination with powerful miniature cameras, data processing tools and communication systems may not only pose a challenge to civil air traffic control, but also raises questions of privacy protection between private individuals, espionage and other issues of private and public safety. Here, too, the daunting prospect of privately operated drones being equipped with light weapons unfortunately cannot be discarded as entirely unrealistic.

<sup>9</sup> Alston, *The CIA and Targeted Killings Beyond Borders*, p. 436.

<sup>10</sup> Report of the Special Rapporteur (Alston), *Targeted Killings*, § 27.

<sup>11</sup> Report of the Special Rapporteur (Alston), *Targeted Killings*, § 27.

<sup>12</sup> Reuters, 14.12.2012, “Iran says Hezbollah drone sent into Israel proves its capabilities” (<http://www.reuters.com/article/2012/10/14/us-lebanon-israel-drone-iran-idUSBRE89D09N20121014>).

<sup>13</sup> Campoy, Ana, *The Wall Street Journal* (13.12.2011), “[The Law's New Eye in the Sky](http://online.wsj.com/article/SB10001424052970204319004577088891361782010.html#)” (<http://online.wsj.com/article/SB10001424052970204319004577088891361782010.html#>).

<sup>14</sup> Entous, Adam, *Special Report: How the White House learned to love the drone*, Reuters, 18 May 2010, referred to in Alston, *The CIA and Targeted Killings Beyond Borders*, N 132

### 1.2.3 Current and Future Degree of Operational Autonomy

There are currently dozens of types of drones in service, all of which differ greatly in terms of size, shape, weight, cost, range and capability.<sup>15</sup> Systems range from palm-sized micro-platforms to very large wingspan aircraft with global reach.<sup>16</sup> From a technological perspective, all currently operational drones have in common that they depend on real-time control by a human operator.<sup>17</sup> Such “human in the loop”-drones may perform certain navigational, communications or data processing functions automatically (i.e. according to a pre-defined and programmed pattern), and the range of these functions is set to increase significantly in the future. Fully autonomous technology, however, which would enable drones to make and implement targeting decisions without human intervention, does not exist at this time.<sup>18</sup>

Nevertheless, drone operating States have made it clear that they intend to significantly increase the autonomy of future systems and are prepared to make the necessary investments.<sup>19</sup> Most notably, of a total budget for unmanned systems of USD 32.7 billion for 2011, the US Department of Defence allocated almost 95% (USD 30.8 billion) for the development and acquisition of unmanned aircraft systems. As a consequence, the US Air Force estimates that, by 2047, advances in computing speeds and capacity will have reduced current decision making processes of drones to “micro or nanoseconds”, and that advances in artificial intelligence will enable them “to make combat decisions and act within legal and policy constraints without necessarily requiring human input”, thus effectively confining humans to what could, at best, be described as a supervisory function (“on the loop”).<sup>20</sup>

While a detailed discussion of current drone research would exceed the scope of this paper, three examples of on-going development projects may illustrate the type of drones which may realistically be expected to become operational reality within the next 5 to 10 years:<sup>21</sup>

- Micro surveillance and combat drones: The “Nano Hummingbird” is a prototype of a remotely controlled nano air vehicle designed to resemble a live hummingbird and developed for the US Defense Advanced Research Projects Agency (DARPA). By early 2011, this remotely controlled drone with a wingspan of 16 cm and a total weight of 19 grams has successfully demonstrated its capability to fly indoor and outdoor reconnaissance missions for 8 to 11 minutes at speeds up to 17 km/h and to relay real-time video from a tiny on-board camera back to its operator.<sup>22</sup> The UK Ministry of Defence estimates that miniaturization of sensors and systems will increasingly enable such micro drones to self-orientate and navigate both outdoors and inside buildings and that, in addition to reconnaissance missions, they may be weaponized to act as anti-personnel devices,<sup>23</sup> presumably by way of poisonous injection.<sup>24</sup>

<sup>15</sup> For an overview of the various categories of currently operational drones see: UK Joint Doctrine Note, p. 2-7; US Department of Defense, “Unmanned Systems Integrated Roadmap FY2011-2036”, p. 21.

<sup>16</sup> UK Ministry of Defence, “The UK Approach to Unmanned Aircraft Systems”, p. 3-1; IISS, “The Drones of War”.

<sup>17</sup> US Department of Defense, “Unmanned Systems Integrated Roadmap FY2011-2036”, p. 17; UK Ministry of Defence, “The UK Approach to Unmanned Aircraft Systems”, p. 2-3/2-4.

<sup>18</sup> UK Ministry of Defence, “The UK Approach to Unmanned Aircraft Systems”, p. 2-4

<sup>19</sup> According to the US Department of Defense, “Unmanned Systems Integrated Roadmap FY2011-2036”: “DoD must continue to pursue technologies and policies that introduce a higher degree of autonomy to reduce the manpower burden and reliance on full-time high-speed communications links while also reducing decision loop cycle time” (p. vi).

<sup>20</sup> US Air Force, “UAS Flight Plan 2009-2047”, p. 41.

<sup>21</sup> For a broader overview see, as a whole: US Air Force, “UAS Flight Plan 2009-2047”; UK Ministry of Defence, “The UK Approach to Unmanned Aircraft Systems”, pp. 4-3 to 4-14.

<sup>22</sup> Developed under the auspices of the US Defense Advanced Research Projects Agency’s Nano Air Vehicle program, this remotely controlled military drone with a wingspan of 16 cm and a weight of 19 grams resembles a live hummingbird and relays real-time video from a tiny on-board camera back to its operator (<http://www.darpa.mil/NewsEvents/Releases/2011/11/24.aspx>)

<sup>23</sup> UK Ministry of Defence, “The UK Approach to Unmanned Aircraft Systems”, p. 6-3

- Long range, high-speed combat drones: The “TaraniS” is a jet-propelled combat drone prototype currently being tested by the United Kingdom with the declared aim “to see if an autonomous and stealthy unmanned aircraft capable of striking targets with real precision at long range, even in another continent, is even possible”.<sup>25</sup> According to its developer BAE, TaraniS “will demonstrate the ability of a UCAS (Unmanned Combat Air Systems) to: fend off hostile attack; deploy weapons deep in enemy territory and relay intelligence information. Additionally, both the shape and internal technologies help TaraniS to remain undetected by enemies”.<sup>26</sup> TaraniS is designed to reach a specified area via a pre-programmed flight path, relaying intelligence to mission command. On site, TaraniS would search and identify targets, which would be verified and cleared for attack by mission command. At least at this experimental stage, TaraniS cannot be described as truly autonomous, as the system remains under constant control of a human mission commander, including for the verification of targets and the authorization of attacks.<sup>27</sup>
- Aircraft carrier based combat drones: The Northrop Grumman X-47B is a fighter-sized drone prototype commissioned by the US Navy to demonstrate autonomous launch and landing capability on aircraft carriers, one of the most difficult maneuvers in manned aviation. During flight, the X-47B no longer depends on remote-piloting by a human operator, but is designed to navigate autonomously and even to conduct aerial refueling without human intervention. The role of the operator is reduced to supervising the pre-programmed mission through basic commands rather than actual piloting. Current prototypes are already designed with space, weight and power provisions for weapons and intelligence, surveillance and reconnaissance sensors.<sup>28</sup>

Officially, the UK Ministry of Defence “currently has no intention to develop systems that operate without human intervention in the weapon command and control chain”, but it adds: “As technology matures and new capabilities appear, policy-makers will need to be aware of the potential legal issues and take advice at a very early stage”.<sup>29</sup> Similar official positions have been expressed by the US Department of Defense: “Policy guidelines will especially be necessary for autonomous systems that involve the application of force,”<sup>30</sup> and by the US Air Force: “Authorizing a machine to make lethal combat decisions is contingent upon political and military leaders resolving legal and ethical questions. These include the appropriateness of machines having this ability, under what circumstances it should be employed, where responsibility for mistakes lies and what limitations should be placed upon the autonomy of such systems”.<sup>31</sup> While neither the United States nor the United Kingdom commit to refraining from the development of fully autonomous weapon systems in the future, both States recognize that serious thought will have to be given to the legal and policy implications of such a development.

For the time being, no currently operational drone can reliably distinguish between legitimate military targets and civilian persons and objects, take precautions to avoid erroneous targeting, or assess the proportionality of expected collateral civilian harm. In order to become fully autonomous robots, drones would have to be equipped with highly accurate and discriminative sensing and vision systems

<sup>24</sup> But note that the use of poison as a means of warfare is prohibited. ICRC, Customary IHL, Rule 72; Art. 23 [1] (a) Hague Regulations; Art. 2 Chemical Weapons Convention; Art. 8 [2] (b) (xvii) ICC Statute.

<sup>25</sup> BAE, “TaraniS” product webpage (<http://www.baesystems.com>).

<sup>26</sup> BAE, “TaraniS - Looking to the Future”, Infographic & Fact Sheet (<http://www.baesystems.com>).

<sup>27</sup> BAE, “TaraniS - Looking to the Future” Infographic & Fact Sheet (<http://www.baesystems.com>).

<sup>28</sup> Northrop Grumman, X-47B UCAS Fact Sheet “Unmanned Combat Air System Carrier Demonstration (UCAS-D)” ([http://www.as.northropgrumman.com/products/nucasx47b/assets/X-47B\\_Navy\\_UCAS\\_FactSheet.pdf](http://www.as.northropgrumman.com/products/nucasx47b/assets/X-47B_Navy_UCAS_FactSheet.pdf)).

<sup>29</sup> UK Ministry of Defence, “The UK Approach to Unmanned Aircraft Systems”, p. 5-4.

<sup>30</sup> US Department of Defense, “Unmanned Systems Integrated Roadmap FY2011-2036”, p. 50.

<sup>31</sup> US Air Force, “UAS Flight Plan 2009-2047”, p. 41.

capable of reliably identifying intended targets based on very limited and often misleading information. Moreover, a fully autonomous drone-robot would need “situational awareness” enabling it to evaluate an extremely complex set of unpredictable circumstances and, through independent reasoning, come to an appropriate conclusion in line with its mission goals, applicable law and underlying military and humanitarian values. As has been pointed out, such fully autonomous robotic systems belong to the realm of “hope ware” rather than software and, save for a technological quantum leap, are unlikely to become reality for several decades to come.<sup>32</sup> Even intermediate human-supervised systems, in which autonomous targeting decisions taken by drones can be overridden by a human controller (“man on the loop”), can be problematic in practice. First, the technological challenges to autonomous target identification and selection are essentially the same and, second, such systems generally require the human controller to decide within a few seconds or less on the appropriateness of an extremely complex robotic targeting decision without being able to sufficiently review, process and understand the underlying data.<sup>33</sup>

In any case, for the foreseeable future, the lawful application of military force through armed drones will always require the direct involvement of a human controller.<sup>34</sup>

#### 1.2.4 Summary and Outlook

The current evolution of the international security environment suggests that the trend away from traditional State-on-State wars and towards asymmetric confrontations with transnationally dispersed armed groups is set to continue. It is part of the pattern of such asymmetric conflicts that technologically inferior belligerents tend to operate from areas marked by either weakened public authority or governmental complacency, thus making traditional law enforcement increasingly difficult for the concerned public authorities. It is therefore likely that, in their confrontations with organized non-state actors operating outside their territorial control, an increasing number of States will seek to employ drone technology.

While the development of fully automated robotic drones requires a technological quantum leap unlikely to materialize in the foreseeable future, the speed, data processing capacity and operational autonomy of drones may be expected to improve significantly in the future, thus expanding their advantages over manned jet fighters in areas such as long-term surveillance and targeted attacks in permissive airspace. It is realistic to assume that part of the functions fulfilled by manned military aircraft today will gradually be taken over by unmanned systems, particularly as they become capable of travelling greater distances at higher altitudes and speeds.<sup>35</sup>

In sum, the military use of remotely-controlled armed drones is likely to further increase in the future and to become a veritable cornerstone of sophisticated military capability. By now, the integration of drone technology into modern military strategy and tactics has advanced to a point where this trend has become irreversible.

<sup>32</sup> Sharkey, *Drones proliferation and protection of civilians*, pp. 112-113.

<sup>33</sup> See, e.g. the discussion on automatic defense systems in Section 1.3.1 below.

<sup>34</sup> US Department of Defense, “Unmanned Systems Integrated Roadmap FY2011-2036”, p. 17

<sup>35</sup> Sharkey, *Drones proliferation and protection of civilians*, pp. 117-118

### 1.3 Other Unmanned Robots

The current publicity and attention given to the use of drones should not divert attention from the fact that a wide variety of armed and unarmed robots are currently being used in the other domains of warfare, namely land, sea, space and cyberspace. While it would exceed the scope of this paper to provide a comprehensive account of such robotic systems, the following examples may illustrate the current state of practice.

#### 1.3.1 Land-based Robots

Land based robots, referred to as “Unmanned Ground Systems/Vehicles” (UGS/V), are used to perform a wide variety of tasks, most of which are unarmed. This may include, for example, observation and reconnaissance, detection and neutralization of mines, improvised explosive devices (IED) and hazardous substances, wireless communications relay, as well as removal of obstacles and transport of supplies. Such unarmed systems have proven extremely valuable in reducing the exposure of operational soldiers in high-risk environments. For example, in Iraq and Afghanistan, the United States deployed approximately 8,000 land-based robots of various types which, by September 2010, had been used in over 125,000 missions. Explosive ordnance teams, for instance, detected and neutralized more than 11,000 IEDs using robots, such as the “Talon Ordnance Disposal Robot”.<sup>36</sup>

Land-based robots have also been weaponized for use in remote-controlled, semi-autonomous and full-automatic mode. Robotic weapons that are widely used today are “automatic weapons defense systems”. Designed to automatically detect and intercept incoming missiles, artillery shells or mortar grenades, these systems must complete their detection, evaluation and response process within a matter of seconds, thus rendering any meaningful supervision by human operators impossible. Currently operational examples of such systems are the United States’ “Counter Rocket, Artillery, and Mortar System” (C-RAM) and the German “NBS Mantis”, both armed with machine guns, and the Israeli “Iron Dome” armed with interceptor missiles.<sup>37</sup> While all of these systems are human-supervised in theory, they can only be effective in practice when operated in full-automatic mode. As confirmed by the UK Ministry of Defence, “it can be clearly shown that there is insufficient time for a human initiated response to counter incoming fire. The potential damage caused by not using C-RAM in its automatic mode justifies the level of any anticipated collateral damage.”<sup>38</sup> While highly effective in operational practice, automatic weapons defense systems not only illustrate the inherent limits to direct human supervision of robotic weapons (“human-on-the loop”), but also the potential price to be paid by the civilian population for their speed, effectiveness and incapacity of distinguishing between civilian and combatants if such systems are used in contexts where their effects cannot sufficiently be controlled.

Another type of widely used land-based robotic weapons are sentry robots. For example, South Korea deployed the SGR-1, a stationary sentry robot, along the Demilitarized Zone in 2010. Equipped with daylight and infrared cameras, the robot uses heat and motion sensors and pattern recognition software to spot humans up to a distance of 3km during the day and 1.5km during the night. The SGR-1 is also equipped with a microphone and speakers, so that it can ask and verify passwords from detected humans and, if necessary, sound an alarm. Upon authorization of human operators in a command center it can fire rubber bullets or a 5.56 mm machine gun. While the autonomy of the SGR-1 sentry

<sup>36</sup> US Department of Defense, “Unmanned Systems Integrated Roadmap FY2011-2036”, p. 22-23.

<sup>37</sup> HRW/IHRC, “Losing Humanity”, pp. 10-11.

<sup>38</sup> UK Ministry of Defence, “The UK Approach to Unmanned Aircraft Systems”, p. 5-2

robot is at present limited to surveillance, it is reported to be equipped with an automatic mode, in which it autonomously decides to fire its weapons against detected persons.<sup>39</sup>

Finally, land-based robotic weapons can also be mobile. For instance, in guarding its borders with the Gaza Strip, Israel uses not only stationary sentry robots similar to the SGR-1, but also the “Guardium”, a remotely operated robotic vehicle which can be armed with lethal and non-lethal weapon systems.<sup>40</sup> According to its developer, the Guardium is “semi-autonomous” in the sense that it is “designed to perform routine missions, such as programmed patrols along border routes, but also to autonomously react to unscheduled events, in line with a set of guidelines specifically programmed for the site characteristics and security doctrine”.<sup>41</sup>

### 1.3.2 Maritime Robots

Sea based robots are referred to as “Unmanned Maritime Systems” (UMS). Mobile systems are categorized as either “Unmanned Surface Vehicles” (USV) or “Unmanned Underwater Vehicles” and are usually employed for mine-detection and neutralization, but also in submarine warfare.<sup>42</sup> The most widely used weaponized robot is the stationary “Phalanx” automatic weapons defense system, which was introduced by the US Navy already in the 1980s. Today, the Phalanx is also used by the UK Navy and several other naval forces. A precursor to current land-based systems, the Phalanx was designed to detect and neutralize hostile anti-ship missiles and fixed wing aircraft through machine gun fire before they reach the defended ship.<sup>43</sup> According to the US Navy, “Phalanx is the only deployed close-in weapon system capable of autonomously performing its own search, detect, evaluation, track, engage and kill assessment functions”, and the capability of current versions has been extended to counter “asymmetric threats” such as speed-boats, helicopters, and drones.<sup>44</sup> Although normally operating in environments less prone to result in civilian casualties than their land-based equivalents, the Phalanx further illustrates the trend towards fully automatic defensive systems with only limited potential for human supervision.

### 1.3.3 Summary and Outlook

Today, unmanned robots have been introduced in all domains of warfare, and there is a clear trend towards increasing the operational autonomy of such systems in the future. In its “Unmanned Systems Integrated Roadmap FY2011-2036”, the US Department of Defence formulates the following vision for the armed services of all domains:

“The Department of Defense’s vision for unmanned systems is the seamless integration of diverse unmanned capabilities that provide flexible options for Joint Warfighters while exploiting the inherent advantages of unmanned technologies, including persistence, size, speed, maneuverability, and reduced risk to human life. DOD envisions unmanned systems seamlessly operating with manned

<sup>39</sup> Sharon Weinberger, BBC, 28.09.2012, “Next generation military robots have minds of their own” (<http://www.bbc.com/future/story/20120928-battle-bots-think-for-themselves/print>). See also: HRW/IHRC, “Losing Humanity”, pp. 13-15.

<sup>40</sup> HRW/IHRC, “Losing Humanity”, pp. 15-16.

<sup>41</sup> G-NIUS Unmanned Ground Systems, “Guardium UGV”, product brochure (<http://g-nius.co.il/pdf/brochures/GuardiumUGV.pdf>).

<sup>42</sup> US Department of Defense, “Unmanned Systems Integrated Roadmap FY2011-2036”, pp. 24-26.

<sup>43</sup> Royal Navy, weapon system description, (<http://www.royalnavy.mod.uk/The-Fleet/Ships/Weapons-Systems/Phalanx>); [http://www.navweaps.com/Weapons/WNUS\\_Phalanx.htm](http://www.navweaps.com/Weapons/WNUS_Phalanx.htm)

<sup>44</sup> US Navy Fact File, “MK 15 - Phalanx Close-In Weapons System (CIWS)”, ([http://www.navy.mil/navydata/fact\\_display.asp?cid=2100&tid=487&ct=2](http://www.navy.mil/navydata/fact_display.asp?cid=2100&tid=487&ct=2)).



systems while gradually reducing the degree of human control and decision making required for the unmanned portion of the force structure".<sup>45</sup>

While the current emphasis on the development and use of drones may continue for some time, there can be no doubt that robotic weapons technology will be gradually integrated throughout the spectrum of military and security forces. Even at the current pace of research and development it is foreseeable that future unmanned systems will operate with unprecedented levels of autonomy.<sup>46</sup> This development may well entail a more fundamental revolution of warfare than the advent and integration of air warfare a century ago or of the internet in the past two decades.

## 2. APPLICABLE LEGAL FRAMEWORKS

From the perspective of international law, most functions currently assigned to unmanned systems in warfare remain unproblematic. Where legal issues do arise, they are often variations of those associated with manned systems.<sup>47</sup> It is really when unmanned robots are armed that they begin to raise serious legal questions, and these concerns intensify with the increasing degree of robotic autonomy in making decisions with regard to the use of force. The most important international legal frameworks which govern the use of force are human rights law and, in situations of armed conflict, international humanitarian law. Where States use armed force extraterritorially, it may also give rise to issues of sovereignty and the UN Charter prohibition on interstate force.<sup>48</sup>

### 2.1 Human Rights Law

#### 2.1.1 Applicability in Armed Conflict and Interrelation with Humanitarian Law

In principle, human rights law is designed to apply at all times, including situations of armed conflict.<sup>49</sup> Although legally indisputable, some States seem to reject this view, presumably based on genuine concerns that it would subject their military operations to an unrealistically strict legal regime.<sup>50</sup> As will be shown, these concerns are unjustified, because they disregard the wide margins of interpretation provided by human rights treaties, which can accommodate the requirements of almost any military or security operation. In any event, today, international legal consensus as to the continued applicability of human rights law in armed conflict is both authoritative and overwhelming.<sup>51</sup>

<sup>45</sup> US Department of Defense, "Unmanned Systems Integrated Roadmap FY2011-2036", p. 3.

<sup>46</sup> Sharkey, *Drones proliferation and protection of civilians*, pp. 117-118.

<sup>47</sup> Consider, e.g. the detection and neutralization of mines, other explosive devices, and hazardous substances, or unmanned reconnaissance and intelligence gathering. Affirming the general point: UK Ministry of Defence, "The UK Approach to Unmanned Aircraft Systems", p. 5-1; Boothby, *The Law of Targeting*, p. 280.

<sup>48</sup> For comprehensive analyses of the legal regimes governing targeted killings, including through armed drone attacks see, as a whole: Melzer, *Targeted Killing in International Law*; Chesney, *Who May Be Killed?*; Report of the Special Rapporteur (Alston), Targeted Killings.

<sup>49</sup> See the express references to "war" in human rights treaties (Art. 27(1) ACHR, Art. 15(1) ECHR). See also the express or implicit references to human rights in humanitarian law treaties (Preamble Protocol II, Arts 51(1) and 72 Protocol I).

<sup>50</sup> For a policy explanation supporting the United States' rejection of the ICCPR applicability during armed conflict see: Anderson, *Targeted Killing in U.S. Counterterrorism Strategy and Law*, pp. 14; 34. For a critique of that position, see: Melzer, *Targeted Killing in International Law*, pp. 79-80.

<sup>51</sup> See, most notably, the practice of the International Court of Justice (e.g. *Nuclear Weapons Opinion*, § 25; *Wall Opinion*, §§ 105 f.; *Congo case*, § 216), the UN Human Rights Committee (e.g. General Comments No. 29, 2001, § 3; No. 31, 2004, § 11), the Inter-American Commission on Human Rights (e.g. *Coard case*, § 39; *Abella (La Tablada) case*, § 158), the UN General Assembly (e.g. Resolutions 2252 of 4 July 1967; 2444 of 19 December 1968; 2675 of 9 December 1970; 58/96 of 9 December 2003, §§ 3, 5; 58/99 of 9 December 2003, §§ 2, 5), and the UN Security Council (e.g. Resolutions 237 of 14 June 1967; 1041 of 29 January 1996; Presidential Statement of 12 February 1999, UN Doc. S/PRST/1999/6, §§ 2 and 7).



It is also generally recognized that, in time of war or other public emergency threatening their security or independence, States may take measures derogating from their human rights obligations to the extent and for the period of time strictly required by the exigencies of the situation.<sup>52</sup> The most important human right affected by the use of drones and other armed robots in warfare is, of course, the human right to life.

Under the European Convention, the right to life is protected by a prohibition of “intentional” deprivations of life,<sup>53</sup> whereas the American Convention and the UN Covenant (ICCPR) prohibit “arbitrary” deprivations of life.<sup>54</sup> The European Convention permits derogations from the prohibition of intentional killing, but only within the limits of “lawful acts of war”.<sup>55</sup> Under the American Convention and the UN Covenant, the prohibition of arbitrary deprivation of life cannot be derogated from, which means that the permissibility of lethal force depends on what is considered to be “arbitrary”.<sup>56</sup> For the context of warfare, this question has been authoritatively addressed by the International Court of Justice:

*“The Court observes that the protection of the International Covenant of Civil and Political Rights does not cease in times of war, except by operation of Article 4 of the Covenant whereby certain provisions may be derogated from in a time of national emergency. Respect for the right to life is not, however, such a provision. In principle, the right not arbitrarily to be deprived of one’s life applies also in hostilities. The test of what is an arbitrary deprivation of life, however, then falls to be determined by the applicable *lex specialis*, namely, the law applicable in armed conflict which is designed to regulate the conduct of hostilities. Thus whether a particular loss of life, through the use of a certain weapon in warfare, is to be considered an arbitrary deprivation of life contrary to Article 6 of the Covenant, can only be decided by reference to the law applicable in armed conflict and not deduced from the terms of the Covenant itself.”*<sup>57</sup>

Under all three treaties, therefore, the question as to whether the use of drones and other unmanned robots as a means of warfare (i.e. during the conduct of hostilities) violates the human right to life must be determined by reference to the *lex specialis* of international humanitarian law.<sup>58</sup>

But not every use of force occurring during an armed conflict necessarily constitutes an “act of war” governed by the law of hostilities. As the International Court of Justice observed in its *Legal Consequences of a Wall Opinion*: “As regards the relationship between international humanitarian law and human rights law, there are thus three possible situations: some rights may be exclusively matters of international humanitarian law; others may be exclusively matters of human rights law; yet others may be matters of both these branches of international law. In order to answer the question put to it, the Court will have to take into consideration both these branches of international law, namely human rights law and, as

<sup>52</sup> See Arts 15(1) ECHR; 4(1) ICCPR; 27(1) ACHR.

<sup>53</sup> Art. 2(1) ECHR.

<sup>54</sup> Art. 6(1) ICCPR; Art. 4(1) ACHR.

<sup>55</sup> Art. 15(2) ECHR.

<sup>56</sup> Arts 4(2) ICCPR; 27(2) ACHR.

<sup>57</sup> ICJ, Nuclear Weapons Opinion, § 25.

<sup>58</sup> Other rights which may be affected the use of robotic weapons in warfare, but which will not be further examined here include the right to privacy, the freedom of movement, and the freedom of assembly. These rights and freedoms remain subject to derogation, albeit only “to the extent and for the period of time strictly required by the exigencies of the situation” and “provided that such measures are not inconsistent with its other obligations under international law” including, most notably, international humanitarian law (Arts 15(1) ECHR; 4(1) ICCPR; 27(1) ACHR). Therefore, the permissibility of derogatory measures in armed conflict will always remain subject to the restraints imposed by humanitarian law.

*lex specialis, international humanitarian law*".<sup>59</sup> Indeed, whenever States resort to force outside the conduct of hostilities, for instance against suspected criminals or as a measure of crowd control or border security, they must comply with law enforcement standards. While humanitarian law continues to apply for the entire duration of an armed conflict, the specific standards governing the use of force outside the conduct of hostilities are derived primarily from human rights law and, even more importantly, human rights *case law*. As will be shown, law enforcement standards allow for a considerable margin of interpretation and, thus, are not necessarily synonymous with the strict conditions and modalities commonly applied to the use of force in peacetime policing.

### 2.1.2 Extraterritorial Applicability

The question of the applicability of human rights law during armed conflict must be distinguished from the question of its extraterritorial applicability. Although the European Convention and other human rights treaties continue to apply during armed conflicts, they generally limit their protection to individuals subject to the "jurisdiction" of a State party.<sup>60</sup> When examining the human rights implications of the current extraterritorial drone attacks, for example, it must therefore first be clarified to what extent such operations are capable of bringing the affected persons within the jurisdiction of the operating State.

Authoritative human rights case law suggests that, for the purposes of human rights law, the notion of "jurisdiction" has both a (primary) territorial and a (secondary) personal dimension. Thus, all persons finding themselves within the national borders of a State are presumed to come within its (territorial) jurisdiction.<sup>61</sup> This presumption may be fully or partly disproved in exceptional circumstances where a State is unable to exercise its authority over all or part of its territory, most notably due to alien occupation or internal strife,<sup>62</sup> but arguably also based on local self-governance arrangements such as those applicable in the Federally Administered Tribal Areas of North-western Pakistan, where most of the current drone attacks are being carried out.<sup>63</sup>

The territorial jurisdiction of a State extends beyond its national borders where, through effective control of the relevant territory and its inhabitants, it exercises all or some of the public powers normally reserved to the local government, whether as a consequence of military occupation, or through the consent, invitation or acquiescence of the territorial State.<sup>64</sup> Accordingly, any use of force carried out within territory under the effective control of the operating State, whether national, occupied or otherwise administered, brings the affected persons within the jurisdiction and, thus, human rights protection of the operating State. Where a State invites, tolerates or consents to the use of force by a third State within its territory, such operations would also engage the human rights obligations of the territorial State.

<sup>59</sup> ICJ, *Legal Consequences of a Wall Opinion*, § 106. Confirmed in ICJ, *Congo Case*, § 216. The UN Human Rights Committee also recognized the relevance of the *lex specialis* of IHL for the interpretation of human rights during armed conflicts. See: UNHRC, General Comment No. 31 (2004), § 11.

<sup>60</sup> See: Arts 1 ECHR; 2 [1] ICCPR; 1 [1] ACHR. The only exception is the African Charter, which seems to establish an unlimited obligation of the contracting states to "recognize" and to "adopt legislative or other measures to give effect to" the rights, duties and freedoms enshrined in the Charter (Article 1 ACHPR).

<sup>61</sup> ECtHR, *Al-Skeini Case*, § 131; ECtHR, *Ilaşcu Case*, § 312.

<sup>62</sup> ECtHR, *Ilaşcu Case*, §§ 312 f.

<sup>63</sup> Of course, such arrangements limit the jurisdiction of the territorial - and not the operating - State.

<sup>64</sup> ECtHR, *Loizidou Case (Preliminary Objections)*, § 62; ECtHR, *Bankovic Case*, § 71; ECtHR, *Issa Case* § 69; ECtHR, *Al-Skeini case*, §§ 135, 149-150; ICJ, *Legal Consequences of a Wall Opinion*, §§ 111 and 113; ICJ, *Congo Case*, § 216; UNHRC, General Comment No. 31 (2004), § 10.

Even in the absence of territorial control, States remain bound by human rights law to the extent that their agents do, in fact, exercise physical power, authority or control over individuals.<sup>65</sup> In other words, “jurisdiction” is not necessarily territorially defined, but may also refer to the existence of a relationship between a State and an individual exposed to its authority, power and control.<sup>66</sup> Most notably, it has been recognized that persons arrested, abducted or otherwise held in physical custody are under the “jurisdiction” of the detaining State, regardless of territorial considerations.<sup>67</sup> Very few human rights cases have gone as far as suggesting that a State’s human rights obligations could also be violated through the use of military force involving neither territorial control nor personal custody,<sup>68</sup> a scenario which would be particularly relevant for extraterritorial drone operations. While accountability in such situations seems to be based on the argument that human rights treaties “cannot be interpreted so as to allow a State party to perpetrate violations of the Convention on the territory of another State, which it could not perpetrate on its own territory”,<sup>69</sup> no generally recognized human rights doctrine has so far been developed in this respect.

Two cases involving the extraterritorial use of force by military aircraft deserve special attention, because they illustrate a jurisdictional controversy of particular relevance for current drone operations. First, in the *Alejandro case*, the Inter-American Commission came to the conclusion that the shooting down of two small private airplanes by Cuban military aircraft in international airspace violated the right to life enshrined in the American Declaration of the Rights and Duties of Man.<sup>70</sup> Although the American Declaration does not expressly use the notion of “jurisdiction”, the decisive point is that, in the view of the Commission, Cuba retained its human rights obligations towards individuals affected by its use of military force in international airspace even though, at the time of attack, they were neither within the physical custody nor within the territorial control of the Cuban State. Second, in the *Bankovic case*, the European Court held that persons killed or injured during NATO’s aerial attack on the Serbian radio and television service RTS in Belgrade could not be considered to have been within the “jurisdiction” of the States participating in the NATO campaign. Contrary to the Inter-American Commission in the *Alejandro Case*, the European Court was of the view that, in the absence of effective control over the territory of Yugoslavia, NATO’s limited air space control was not sufficient to give rise to “jurisdiction” for the purposes of human rights law.<sup>71</sup>

Arguably, the different conclusions reached in the *Bankovic* and *Alejandro* cases as to whether extraterritorial air operations give rise to “jurisdiction” and, thus, human rights obligations could be rooted in the different nature of the respective air operations rather than in a fundamental divergence

<sup>65</sup> ECtHR, *Al-Skeini Case*, § 136; UNHRC, *Burgos Case*, § 12.3.; IACiHR, *Coard Case*, § 37; ECiHR, *G. v. UK and Ireland*, § 25; ECtHR, *Issa Case* § 71.

<sup>66</sup> ECtHR, *Al-Skeini Case*, § 136; UNHRC, *Burgos Case*, § 12.2.; IACiHR, *Alejandro Case*, § 23; IACiHR, *Coard Case*, § 37.

<sup>67</sup> UNHRC, *Burgos Case*, §§ 12.1. ff.; UNHRC, General Comment No. 31 (2004), § 10; IACiHR, *Guantanamo Detainees Case (Precautionary Measures)*; ECtHR, *Issa Case* § 77; ECtHR, *Öcalan Case (Chamber)*, § 93; ECtHR, *Öcalan Case (Grand Chamber)*, § 91.

<sup>68</sup> ECtHR, *Issa Case* §§ 81 f.; IACiHR, *Salas Case*, § 6; IACiHR, *Alejandro Case*, § 25.

<sup>69</sup> ECtHR, *Issa Case* §§ 69 and 71. The same argument (and wording!) was used already in UNHRC, *Burgos Case*, § 12.3; UNHRC, *Celiberti Case*, § 10.3.

<sup>70</sup> IACiHR, *Alejandro Case*, §§ 37, 45. Cuba not being a State party to the ACHR, the Commission based its evaluation on the right to life as enshrined in Article I of the American Declaration of the Rights and Duties of Man (ADRDM) and recalled that, according to the Inter-American Court, the ADRDM is a source of international obligations for all OAS member States (IACiHR, *Alejandro Case*, § 38, referring to IACtHR, *Interpretation of the American Declaration Opinion*, §§ 45, 47).

<sup>71</sup> ECtHR, *Bankovic Case*, §§ 74-76. The Court also rejected the idea that human rights obligations existed “in a manner proportionate to the level of control exercised in any given extra-territorial situation” (§ 75) and introduced its controversial “legal space” doctrine (§ 80). Neither of these arguments shall be elaborated on here, as both have been moderated and revoked to a considerable extent by the European Court’s own case law (see, most notably, the *Illascu case*, §§ 312-313, *Issa case*, §§ 69-71, *Öcalan Case (Chamber)*, § 88 and *Öcalan Case (Grand Chamber)*, § 85, and *Al-Skeini case*, § 137).

of views of the two human rights bodies. Indeed, it remains highly controversial to what extent collective and depersonalized acts of war, such as large scale aerial bombardments outside territory under effective control, may give rise to “jurisdiction” over the affected persons. Conversely, it is much more likely that individualized operations, such as the deliberate killing of selected individuals through extraterritorial drone attacks, would be considered to bring the affected persons within the jurisdiction of the operating State.<sup>72</sup> In the final analysis, however, it must be recognized that this question has not yet been settled authoritatively for the various universal and regional treaties.

The question concerning the extraterritorial applicability of human rights treaties is important because it determines whether a particular treaty-based human rights body is authorized to examine a particular individual complaint. In principle, however, this jurisdictional question has no bearing on the substantive lawfulness of extraterritorial operations involving the use of force against individuals. As will be shown, the international law prohibition on murder and extrajudicial killings does not depend on the applicability of particular human rights treaties, but can safely be regarded as part of customary law, and even as a general principle of law binding upon all States at all times and in all places.

### 2.1.3 Protection of the Right to Life under Custom and General Principles of Law

Individual human rights are inherent in human nature and, therefore, are neither the product of human rights treaties, nor dependent on artificial jurisdictional concepts. When the UN General Assembly proclaimed the Universal Declaration of Human Rights of 1948 “as a common standard of achievement for all peoples and all nations”, the human rights and fundamental freedoms enshrined therein, including the right to life,<sup>73</sup> were meant to be promoted and respected universally. The Declaration expressly excludes any interpretation that would allow States to “engage in any activity or to perform any act aimed at the destruction of any of the rights and freedoms” listed in its text.<sup>74</sup> While the Declaration is not a binding instrument, it certainly is a strong indicator of a shared legal opinion of the international community. Additionally, the United Nations Organization has developed a broad range of international standards, guidelines and model treaties that represent internationally agreed upon principles of desirable practice based on the rule of law. Two of these instruments, namely the UN Code of Conduct for Law Enforcement Officials (1979) and the UN Basic Principles on the Use of Force and Firearms by Law Enforcement Officials (1990) reflect a set of universally accepted conditions and modalities for the resort to lethal force under the law enforcement paradigm.

The obligation of States to refrain from arbitrary deprivation of life has also been affirmed and reaffirmed in a continuously growing panoply of other instruments, such as humanitarian law treaties, national legislation, international and domestic judicial, quasi-judicial and administrative decisions, as well as statements, recommendations and declarations of governments, regional and international organizations or conferences. The consistent protection of individuals against arbitrary deprivation of life in existing human rights treaties as well as in international humanitarian law strongly suggests that this right has attained customary nature. This does not imply, of course, that States would be obliged to actively protect the right to life outside their territorial jurisdiction, but it does require that States refrain from deliberately infringing the right to life in their extraterritorial activities.<sup>75</sup>

<sup>72</sup> For a comprehensive argument in support of this view, see: Melzer, *Targeted Killing in International Law*, pp. 135-139. See also the “functional” approach to jurisdiction proposed by Judge Bonello in his separate opinion annexed to the judgment of the European Court in the *Al-Skeini* Case.

<sup>73</sup> Art. 3 UDHR.

<sup>74</sup> Art. 30 UDHR.

<sup>75</sup> For a detailed analysis and numerous references with regard to the protection of the right to life in custom and general principles of law, see: Melzer, *Targeted Killing in International Law*, pp. 177-221.

According to the International Court of Justice, the prohibition of murder and extrajudicial killing of persons not engaged in military hostilities can also be derived from a general principle of law. In its *Nicaragua case* (1986), the Court determined that the provisions of Article 3 Geneva Conventions I-IV “are rules which, in the Court’s opinion, reflect what the Court in 1949 called ‘elementary considerations of humanity’”.<sup>76</sup> In the relevant judgment in the *Corfu Channel case* (1949), the Court also made clear that such elementary considerations of humanity were “even more exacting in peace than in war”.<sup>77</sup> The fact that the Court did not find it necessary to assess State practice in order to prove the binding nature of these provisions suggests that it did not construe them as obligations of customary law (State practice and *opinio juris*), but derived them directly from “general principles of law recognized by civilized nations” within the meaning of Article 38(1)(c) ICJ Statute. Moreover, since the provisions expressed in Article 3 Geneva Conventions I-IV are considered to be “even more exacting in peace than in war”, and to apply “at any time and in any place whatsoever”<sup>78</sup> they remain binding also extraterritorially and in situations not reaching the threshold of an armed conflict. In conclusion, the prohibition of murder and extrajudicial execution reflects a universal standard applicable whenever and wherever States resort to lethal force outside the conduct of hostilities.

## 2.2 International Humanitarian Law

The most important treaties of international humanitarian law providing protection to persons affected by situations of armed conflict are the four Geneva Convention of 1949, their first and second Additional Protocols of 1977 and a number of instruments prohibiting or restricting specific weapons. Additionally, there is an extensive body of customary humanitarian law, which is binding on all belligerent parties irrespective of applicable treaty law.<sup>79</sup> The most important prerequisite for the applicability of international humanitarian law is the existence of an “armed conflict”. Although adopted in the Geneva Conventions more than half a century ago, the precise meaning and scope of this notion has become the subject of renewed controversy. Most notably, the United States’ concept of a global “War on Terror” against Al-Qaeda and affiliated groups has sparked an intense controversy as to whether the US counter-terrorist campaign could accurately be described as an “armed conflict” and, if so, whether this meant that humanitarian law would automatically apply wherever the US decided to target or detain suspected terrorists.<sup>80</sup> This warrants a closer examination both of the legal concept of armed conflict and of the territorial scope of applicability of humanitarian law.

### 2.2.1 The Concept of “Armed Conflict”

The existence of an armed conflict within the meaning of humanitarian law depends on factual criteria. Where these criteria are met, humanitarian law applies irrespective of policy preference, political recognition or a formal declaration of war. The relevant criteria differ depending on whether the armed conflict is of international or non-international character. The two categories of international and non-international armed conflict are absolutely complementary in that, under current customary and treaty law, no other type of armed conflict can exist:<sup>81</sup>

<sup>76</sup> ICJ, *Nicaragua Case (Merits)*, § 218.

<sup>77</sup> ICJ, *Corfu Channel Case*, p. 22.

<sup>78</sup> Article 3(1) Geneva Conventions I-IV.

<sup>79</sup> See, as a whole, ICRC, *Customary Humanitarian Law*.

<sup>80</sup> Today, the United States no longer uses the notion of the “War on Terror” officially but still asserts that it is engaged in an “armed conflict” against al-Qaeda, the Taliban and associated forces. See: US Department of State, Speech Koh (2010); US White House, Speech Brennan (2012).

<sup>81</sup> ICRC, “How is the Term ‘Armed Conflict’ Defined in International Humanitarian Law?”. This does not preclude, of course, that a situation of non-international armed conflict can evolve to one of international armed conflict and vice versa.



International armed conflicts exist whenever there is resort to armed force between two or more States.<sup>82</sup> There is no need for such force to be directed against the political or military structures of the injured State, or for the latter to protest or fight back. A simple instance of one State using armed force within the sphere of sovereignty of another State without the latter's consent is sufficient to trigger the applicability of humanitarian law. In order to be valid, consent must be genuine, whether openly declared or expressed tacitly through conclusive behaviour. There also is no need for human soldiers to cross an international border. Just as an intercontinental missile attack would trigger an international armed conflict irrespective of a ground invasion, so would the use of armed force through drones or other unmanned robots within the sphere of sovereignty of another State.

Non-international armed conflicts are protracted armed confrontations occurring between governmental armed forces and organized armed groups, or between such groups.<sup>83</sup> While the International Committee of the Red Cross (ICRC) and some other sources add that the armed confrontation must arise on the territory of a State party to the Geneva Conventions, it is important to note that this criterion is not constitutive of an armed conflict *per se*, but is relevant only for determining the treaty law applicable to the conflict in question. Of course, non-international armed conflicts can also arise as a matter of customary law.<sup>84</sup> The armed violence must reach a minimum level of intensity and/or duration and the belligerent parties must show a minimum of organisation. Although difficult to define with precision, the threshold requirements of intensity and organization are necessary to distinguish organized military hostilities, which are governed by humanitarian law, from "situations of internal disturbances and tensions, such as riots, isolated and sporadic acts of violence and other acts of a similar nature", which do not amount to armed conflicts.<sup>85</sup>

This distinction is difficult to make in practice, and it cannot be ignored that the political will of the involved State to recognize a situation of armed conflict, although technically irrelevant, plays a decisive role in defining the legal framework which will end up being applied to a particular context. Clearly, such political assessments bear the risk of being either under-inclusive or over-inclusive. The current counter-narcotics operations in Mexico, for example, are reported to involve more than 50,000 troops and have resulted in thousands of casualties over a period of several years. Although this situation would justify the application of humanitarian law in terms of both, the legal thresholds and the humanitarian consequences, the Mexican government so far has not recognized being involved in an internal armed conflict. Conversely, the US concept of a "Global War on Terror" tended to over-expand the applicability of humanitarian law to any counter-terrorism operation irrespective of whether the legally required thresholds for an armed conflict are met.

As a general rule, if the applicability of a normative framework is tied to certain conditions, it must be presumed not to apply until there is sufficient evidence that these conditions have been met. Consequently, by default, armed violence on the part of non-state actors must be regarded as a matter of law enforcement until there are sufficient indicators that the thresholds of intensity and organization required for an armed conflict are met. Typically, this implies the presence of organized non-state actors operating under some form of recognizable command structure and using sustained armed violence

<sup>82</sup> See also: ICRC, "How is the Term 'Armed Conflict' Defined in International Humanitarian Law?"

<sup>83</sup> ICRC, "How is the Term 'Armed Conflict' Defined in International Humanitarian Law?"

<sup>84</sup> Any other conclusion would imply that non-international conflicts could never arise in States not (yet) party to the Geneva Conventions. This would mean that neither customary nor treaty humanitarian law could apply and provide protection in the pre-ratification years of the civil wars in Angola (1975-1984), Mozambique (1977-1983), and Myanmar (1948-1992), or in potential future conflicts which could occur in newly formed States, such as South Sudan (2011), the Kosovo (2008) and Palestine (2012).

<sup>85</sup> Art. 1(2) Protocol II.

which can no longer be contained through traditional law enforcement measures but requires a military response.

While it is difficult to judge the degree to which “Al Qaeda and affiliate groups” do, in fact, constitute a coherent and sufficiently identifiable military organization, it must be recognized that, in principle, the concept of (non-international) armed conflict is wide enough to include sustained armed violence between a State and a transnational non-state actor, such as an organized armed group involved in terrorist attacks.

### 2.2.2 (Extra-)Territorial Scope of Applicability of International Humanitarian Law

From a policy perspective, humanitarian law was never designed to prevent armed conflicts or to confine them territorially but, rather, to regulate them *whenever* and *wherever* they occur. From a legal perspective, the prevention and territorial confinement of armed conflicts are not a matter for humanitarian law, but for the UN Charter and the law of neutrality. Moreover, while the latter frameworks do aim to prevent and confine armed conflicts, they do not prevent or confine the applicability of humanitarian law (as a matter of law) when and where armed hostilities do occur (as a matter of fact).

Once the objective criteria for the existence of an armed conflict are met, the applicability of humanitarian law is not territorially delimited but governs the relations between the belligerents irrespective of geographical location. This does not preclude, of course, that the applicability of specific parts of humanitarian law be geographically confined, such as, most notably, the law of belligerent occupation, which applies only in occupied territories.<sup>86</sup> In the absence of express territorial limitations, however, humanitarian law applies wherever belligerent confrontations occur, including international air space, the high seas, cyberspace and, indeed, the territory of third States, whether hostile, co-belligerent, occupied or neutral. What is decisive is not where hostile acts occur but whether, by their nexus to an armed conflict, they actually do represent “acts of war”.

Therefore, any drone attack or other use of robotic weapons for reasons related to an armed conflict is necessarily governed by humanitarian law, regardless of territorial considerations. The separate question of whether the extraterritorial use of robotic weapons is lawful depends not only on humanitarian law, but also on other bodies of international law, such as the UN Charter or the law of neutrality, which may restrict or prohibit hostile acts between belligerent parties even when they are permissible under humanitarian law. As the human rights and humanitarian law implications of armed drones and other robotic weapons cannot be analysed in isolation from the law governing the use of interstate force, the basic interrelation between these bodies of law shall be briefly outlined.

### 2.3 The UN Charter Prohibition on Interstate Force

To the extent that attacks by armed drones and other robotic weapons interfere with the sphere of sovereignty of another State, their international lawfulness depends not only on humanitarian law and human rights law, but additionally also on the law governing the use of interstate force. While all three bodies of law can simultaneously apply to the same operation, each of them regulates the use of force from a different perspective. In essence, human rights law and humanitarian law determine the lawfulness of force with respect to the injured individual, whereas the law of interstate force determines the lawfulness of force with respect to the territorial State. In order to be internationally lawful, the extraterritorial use of robotic weapons must be justified with respect to both, the territorial State and the affected persons.

<sup>86</sup> See Section III (Arts 42-56) Hague Regulations providing protection within occupied territories, and the Fourth Geneva Convention providing protection within the territories of the parties to the conflict and in occupied territories.



In principle, any use of a robotic weapon by one State within the sphere of sovereignty of another comes under the prohibition of interstate force expressed in Article 2(4) UN Charter and, therefore, requires a justification recognized in international law such as the consent given by the territorial State,<sup>87</sup> a UN Security Council authorization,<sup>88</sup> or a situation of self-defence.<sup>89</sup> Although not textually required, the UN Charter provision on self-defence traditionally was interpreted so as to permit the use of interstate force only in case of armed attacks attributable to other States. Since the 9/11 attacks, however, there is an emerging acceptance within the international community of the view: (a) that self-defensive action is permissible also against non-state actors,<sup>90</sup> and (b) that a State's right of territorial inviolability must be understood in light of its corresponding duty to protect the legitimate interests of third States within its sphere of sovereignty. Accordingly, a State unable or unwilling to prevent the use of its territory as a base for hostile activities against third States may have to tolerate necessary and proportionate self-defensive action within its sovereign territory.<sup>91</sup>

In the absence of self-defence, consent or Security Council authorization, however, any use of force in the territory of a third State would amount to a violation of the UN Charter and may qualify as an act of aggression.<sup>92</sup> The fact that the targeted person is a legitimate military target cannot justify an unlawful violation of foreign territorial sovereignty, nor can the existence of a situation of self-defence or territorial State consent justify direct attacks against persons who do not constitute legitimate military targets or, alternatively, who do not represent an imminent threat justifying the resort to lethal force. Rather, in order to be permissible, the extraterritorial use of armed drones and other robotic weapons must be lawful both with regard to the territorial State and with regard to the injured individuals. Given that this paper focuses on the human rights implications of attacks by drones and other armed robots, their potential interference with State sovereignty will be analysed only as far as required to provide context for the subsequent policy recommendations.

### **3. LEGALITY OF ARMED DRONE ATTACKS**

The current discussion on the permissibility of unmanned weapons systems focuses on the systematic use by States of armed drones for the targeted killing of pre-selected individuals in the territory of other States, particularly in the context of the United States' confrontation with Al-Qaeda and affiliate groups in Afghanistan, Pakistan, Yemen and Somalia. The present section of this paper shall therefore more specifically examine the international legal standards governing armed drone attacks against individuals. The aim is not to comprehensively analyse the lawfulness of a particular national policy, but to outline the normative framework governing such policies in general even if, in doing so, reference is made to specific practices which certain States are reported to follow in implementing their national policies.

<sup>87</sup> ILC, ARSIWA, Art. 20.

<sup>88</sup> Chapter VII UN Charter.

<sup>89</sup> Art. 51 UN Charter.

<sup>90</sup> This understanding of self-defence is based on the famous *Caroline* incident (1837), which essentially consisted of a British counter-insurgency operation into US territory without US consent. The British operation was conducted within the territory of a neighbouring State at peace against non-state actors representing a grave and imminent threat to British rule in Canada. The ensuing diplomatic exchange between the British and the US authorities identified conditions and modalities for the permissibility of such action which continue to shape the contemporary right of self-defence.

<sup>91</sup> UN Security Council resolutions 1368(2001) and 1373(2001). See also: Wilmshurst, *Principles on the Use of Force in Self-Defence*, pp. 11-12.

<sup>92</sup> See, most notably, UN Security Council Resolution 611 of 25 April 1988 condemning the assassination by Israel of Abu Jihad in Tunis as an act of aggression.

### 3.1 Drone Attacks as a Means of Warfare

States resorting to drone attacks usually argue that the targeted individuals are legitimate military targets and, thereby, seek justification in international legal standards designed to govern the resort to means and methods of warfare – the “law of hostilities”. The law of hostilities is derived primarily from international humanitarian law but, to a certain extent, may also be complemented by applicable human rights law. The most important prerequisite for the applicability of the law of hostilities is the existence of an armed conflict. But even in armed conflict not every use of force is necessarily part of the hostilities. As far as drone attacks are concerned, the law of hostilities determines whether the targeted individual is a legitimate military target and, if so, provides the legal standards governing attacks directed against that target. If the targeted person fails to qualify as a legitimate military target any direct attack would have to comply with law enforcement standards.<sup>93</sup>

#### 3.1.1 Distinction between Civilians and Combatants

The law of hostilities requires that “the Parties to the conflict shall at all times distinguish between the civilian population and combatants and between civilian objects and military objectives and accordingly shall direct their operations only against military objectives”, whereas “(t)he civilian population as such, as well as individual civilians, shall not be the object of attack”.<sup>94</sup> Consequently, if armed drones are to be used as a means of warfare, they must be capable of distinguishing between members of armed forces and organized armed groups (who may be legitimately targeted) and the peaceful civilian population (which enjoys protection against direct attack). Exceptionally, even civilians may become legitimate military targets, namely when they lose their protection “for such time as they directly participate in hostilities”.<sup>95</sup>

In practice, the determination of whether a targeted person represents a legitimate military target can be extremely difficult, particularly in asymmetric confrontations with organized armed groups that are deliberately intermingling with the civilian population and show no consideration whatsoever for the resulting risk of erroneous attacks against peaceful civilians. Depending on the cultural and political context, there may be various degrees of voluntary or involuntary support or affiliation with such groups that do not necessarily amount to direct participation in hostilities and, therefore, do not entail loss of civilian protection against direct attack. Also, in many contexts, informants, collaborators, factions and gangs are likely to provide false intelligence to armed forces in the hope for an attack against a rival group or individual.

The enormous difficulties associated with implementing the principle of distinction in such contexts may provoke ill-considered simplifications, such as the reported US policy of “signature strikes”, which seems to authorize drone attacks against unidentified individuals who, based on their personal behaviour, contacts or other characteristics are suspected of being “terrorists”, “militants”, or “jihadists” – legally undefined notions which are strictly irrelevant for lawful targeting.<sup>96</sup> Such policies not only undermine the fundamental distinctions underlying the law of hostilities, but also fall dramatically short of the precautions and presumptions which must be applied in situations of doubt.

#### 3.1.2 Precautions and Presumptions in Situations of Doubt

In implementing the principle of distinction, those responsible for planning and conducting an attack must take all feasible precautions to avoid erroneous targeting and the infliction of incidental civilian

<sup>93</sup> On the law enforcement paradigm, see below Section 3.2.1.

<sup>94</sup> Arts 48 and 51(2) Protocol I; ICRC, *Customary Humanitarian Law*, Rule 1.

<sup>95</sup> Arts 51(3) Protocol I; 13(3) Protocol II; ICRC, *Customary Humanitarian Law*, Rule 6.

<sup>96</sup> On the practice of signature strikes, see, e.g.: Heller, ‘One Hell of a Killing Machine’.

harm (“collateral damage”). They must also do everything feasible to assess whether the envisaged attack may be expected to cause incidental civilian harm which would be excessive in relation to the anticipated military advantage and, if so, refrain from conducting such an attack.<sup>97</sup> In practice, the extent to which precautions in attack are “feasible” depends on factors such as the availability of intelligence on the target and its surroundings, the level of control exercised over the territory, the choice and sophistication of available weapons, the urgency of the attack and the security risks which additional precautionary measures may entail for the attacking forces or the civilian population.<sup>98</sup> When all feasible precautionary measures have been taken and doubt persists as to the status or activities of the targeted persons or of bystanders, they must be presumed to be protected against direct attack.<sup>99</sup>

If drone attacks are to have any chance of success, they must be planned and organized with pin-point accuracy and based on excellent intelligence. Compared to many types of more traditional military operations, targeted drone attacks have very little tolerance for improvisation, and even minor unexpected events may lead to failure, erroneous targeting or excessive incidental harm. Decisions to carry out a drone attack are not typically taken under the time pressure and personal stress of immediate combat operations, but targeted individuals are often tracked for several days or weeks before being attacked. In many circumstances, the long loiter capacity of drone may significantly extend the period at the disposal of operators to verify targets, assess the likelihood of collateral harm and clarify other factors before taking the decision to attack. As a general rule, the context of targeted killing through drone-attacks allows - and therefore also requires - a particularly high level of precaution.<sup>100</sup>

Nevertheless, the often difficult circumstances of armed conflict also require a degree of tolerance for errors made “within the limits of honest judgment on the basis of the conditions prevailing at the time”.<sup>101</sup> In no case, however, does the law of hostilities permit the targeting of individuals based on the mere suspicion that they may qualify as a legitimate military target, such as appears to be the case with the current US policy of “signature strikes”. The distinctive criterion between “mere suspicion” and erroneous “honest judgment” is not only the degree of subjective conviction or doubt held by the responsible State agent, but also the objective reasonableness of that subjective conviction in view of the circumstances prevailing at the time.

### 3.1.3 Proportionality of Incidental Civilian Harm

The principle of proportionality in the conduct of hostilities prohibits attacks against legitimate military targets if the incidental harm expected to be inflicted on protected persons and objects (“collateral

<sup>97</sup> See also Arts 57(2)(a)(i)-(iii) and 57(2)(b) Protocol I; ICRC, *Customary Humanitarian Law*, Rules 16 -19.

<sup>98</sup> “Feasible” precautions are defined as “those precautions which are practicable or practically possible taking into account all circumstances ruling at the time, including humanitarian and military considerations”. Art. 3 (4) CCW Prot.II (1980); Art. 1(5) CCW Prot.III (1980); Art. 3(10) CCW Amended Prot.II (1996). See also ICRC, *Customary Humanitarian Law*, Vol. I, Rule 15, p. 54.

<sup>99</sup> Art. 50(1) Protocol I. ICRC, *Interpretive Guidance DPH*, Section VIII.2.

<sup>100</sup> In developing guidelines for the lawfulness for targeted killing against civilians directly participating in hostilities, the Israeli High Court of Justice formulated the requirement of precaution as follows: “(F)irst, well based information is needed before categorizing a civilian as falling into one of the discussed categories. Innocent civilians are not to be harmed (...). Information which has been most thoroughly verified is needed regarding the identity and activity of the civilian who is allegedly taking part in the hostilities (...). (...) The burden of proof on the attacking army is heavy (...). In the case of doubt, careful verification is needed before an attack is made” (Israeli High Court of Justice, *The Public Committee Against Torture et al. v. The Government of Israel et al.* (HCJ 769/02), Judgment of 13 December 2006, § 40).

<sup>101</sup> UNWCC, *Wilhelm List (Hostages) case*, p. 69.

damage") would be excessive in relation to the concrete and direct military advantage expected to result from the attack.<sup>102</sup>

The proportionality of incidental harm does not depend on the achievement of a strict numerical balance of some sort, but on the relative military importance of a target. While any legitimate military target may, in principle, be attacked, "high value" targets will justify a greater incidental harm than "low value" targets. The military target value of individuals depends on factors such as their rank, operational function and momentary tactical position and may be subject to change. For example, especially capable military leaders and highly specialized technical personnel are likely to be high value targets as long as their special skills are effectively employed in the conduct of hostilities, but may become low value targets when removed from their influential position. Ultimately, however, no single set of objective criteria is likely to lead to satisfactory results in all situations. Therefore, the requirement of proportionality in attack will always remain a delicate issue to be determined in good faith and on a case-by-case basis.

Although drone attacks are often portrayed as a method of "surgical" warfare,<sup>103</sup> it is probably more realistic to assume that they are neither inherently disproportionate nor inherently proportionate and that, instead, a separate assessment must be made for each operation. Various statistics show that, in practice, drone attacks regularly result in incidental civilian death, injury and destruction. For example, drone attacks conducted by the CIA in Pakistan between 2004 and 2012 are reported to have killed between 2000 and 3000 individuals,<sup>104</sup> with estimates of "collateral damage" (killed civilian bystanders) ranging from 20%<sup>105</sup> to as much as 90%.<sup>106</sup> The CIA itself seems to be convinced that, since May 2010, more than 600 militants have been killed in drone strikes without any incidental civilian harm whatsoever,<sup>107</sup> a conclusion more likely to reflect flawed assessment criteria than factual reality. More precisely, the current US administration seems to have introduced a method for counting civilian casualties which automatically presumes that all males of fighting age present in the area of a planned attack are combatants, unless intelligence collected *after* (sic!) the attack proves otherwise.<sup>108</sup> Clearly, this deplorable approach not only employs inadmissible criteria for the distinction between civilians and combatants, but also circumvents the precautions and presumptions to be applied in situations of doubt and, thereby, effectively removes all meaningful safeguards provided by humanitarian law against the infliction of excessive incidental harm on the civilian population.

On a more general level, States resorting to extraterritorial drone attacks on a regular basis should not lose sight of the fact that, even in warfare, the targeted killing of an enemy is not an end in itself, but should only be undertaken with a view to actually advancing the military effort against the adversary. Long-term strategies which calculate to contain a conflict on a low level of intensity while exposing the civilian population to the constant threat of incidental death, injury and destruction can hardly be reconciled with the delicate equilibrium underlying the principle of proportionality. Arguably, therefore, there may be an actual risk of disproportion in a military strategy which reduces the conduct of

<sup>102</sup> Art. 51(5)(b) Protocol I.

<sup>103</sup> US White House, Speech Brennan (2012): "It's this surgical precision - the ability, with laserlike focus, to eliminate the cancerous tumor called an al-Qa'ida terrorist while limiting damage to the tissue around it - that makes this counterterrorism tool so essential".

<sup>104</sup> New America Foundation, *The Year of the Drone*. See also: The Bureau of Investigative Journalism, *Pakistan drone statistics visualised*.

<sup>105</sup> New America Foundation, *The Year of the Drone*.

<sup>106</sup> Byman, "Do Targeted Killings Work?". For a comparative overview of the "collateral damage" ratios reported by 8 different organizations for the year 2010 see: Beswick, *The Drone Wars and Pakistan's Conflict Casualties*, pp. 6-7.

<sup>107</sup> Shane, Scott, "C.I.A. Is Disputed on Civilian Toll in Drone Strikes", *New York Times*, 11 August 2011.

<sup>108</sup> Becker / Shane, "Secret 'Kill List' Proves a Test of Obama's Principles and Will", *New York Times*, 29 May 2012.

hostilities to the “decapitation” of the adverse forces without a realistic prospect of bringing about a permanent military solution to the conflict.

#### 3.1.4 “No Survivor”-Policies

The purpose of military hostilities in warfare is not to kill combatants, but to defeat the enemy, even if this requires the killing of combatants. It is therefore prohibited to order that there shall be “no survivors” or to conduct hostilities on that basis, to refuse to accept an enemy’s surrender or to attack those who are *hors de combat* due to wounds, sickness, capture, surrender or any other reason.<sup>109</sup> Whether or not the circumstances permit the capture and evacuation of adversaries who are *hors de combat* is immaterial.

Admittedly, the reality of armed drone attacks does not give the targeted individuals a realistic opportunity to surrender. But this does not mean that the use of armed drone, as a weapon system, would necessarily be prohibited under humanitarian law. The law never intended to prohibit surprise attacks or the use of personnel and weapons systems incapable of taking prisoners. Rather, it is part of the reality of warfare that military personnel run the risk of being individually targeted and that it may not at every moment be possible for them to surrender to the enemy. The prohibition of denial of quarter merely requires that the attacking forces remain receptive to a declaration of surrender, and that the means and methods employed are not calculated to prevent their survival.<sup>110</sup>

The problem of drone attacks lies less in the characteristics or shortcomings of the technology itself than in the specific manner in which it is being used in operational reality. It is characteristic for current drone policies that they aim specifically at the killing of the targeted persons. Unable to capture wounded or surrendering enemies, armed drones are reported to routinely carry out follow-up strikes on wounded survivors of first attacks, killing not only the intended targets, but also first responders and humanitarian personnel attempting to rescue the injured.<sup>111</sup> It must be emphasized that the law is absolutely clear in this respect: persons *hors de combat* are no longer legitimate military targets, regardless of whether or not they can be captured.<sup>112</sup> Medical personnel and others trying to collect the dead and care for the wounded must be respected and protected.<sup>113</sup> Directing attacks against persons *hors de combat*,<sup>114</sup> or against non-combatants engaged in their rescue,<sup>115</sup> constitutes a war crime in any armed conflict. As a matter of law, ordering a targeted killing without permitting the option of suspending the attack when the targeted person falls *hors de combat* is unlawful and, under the ICC-Statute, amounts to a war crime in international armed conflict.<sup>116</sup> In sum, it is always prohibited to declare that the adversary is outside the law, and to treat him as such on the battlefield.<sup>117</sup>

<sup>109</sup> Art. 40 Protocol I. See also Art. 23(1)(d) Hague Regulations and, for non-international armed conflict, Art. 4(1) Protocol II. On the customary nature of this rule in both international and non-international armed conflict see: ICRC, *Customary Humanitarian Law*, Rules 46 and 47.

<sup>110</sup> Parks, *Memorandum EO 12333*, p. 5 and N 14.

<sup>111</sup> For the alleged US practice of double-strikes see: Stanford/NYU, “*Living under Drones*”, pp. 74-76, with references.

<sup>112</sup> Art. 23(1)(c) Hague Regulations. See also: Melzer, *Targeted Killing in International Law*, pp. 367-71, with references.

<sup>113</sup> For medical personnel, see: Art. 24 Geneva Convention I, Art. 36 Geneva Convention II; Arts 12(1) and 20 Protocol I; Arts 9(1) and 11 Protocol II. ICRC, *Customary Humanitarian Law*, Rules 25, 28-30.

<sup>114</sup> Arts 8(2)(a)(i) and 8(2)(c)(i) ICC Statute.

<sup>115</sup> In the case of medical personnel, see: Arts 8(2)(b)(xxiv) and 8(2)(e)(ii) ICC Statute. For others, the general protection of civilians applies.

<sup>116</sup> Art. 8(2)(b)(xii) ICC Statute.

<sup>117</sup> Sandoz et al. (eds.), *Commentary on the Additional Protocols*, § 1600.

### 3.1.5 Drone Technology and Weapons Law

It is a fundamental maxim of international humanitarian law that, “(i)n any armed conflict, the right of the Parties to the conflict to choose methods or means of warfare is not unlimited”.<sup>118</sup> In the study, development, acquisition or adoption of a new weapon, means or method of warfare, therefore, all States must determine whether its employment would, in some or all circumstances, be prohibited by international law.<sup>119</sup> Accordingly, any State planning to develop, acquire or use armed drones for military purposes must subject the system in question to a full legal compliance review.

Obviously, any weapon system can deliberately be used in a manner violating humanitarian law. It is therefore important to distinguish the legality of a weapon system as such (law of weaponry) from the legality of the way it is being used in a particular operation (law of targeting). The present question of the legality of a weapon system as such turns on whether, in the normal operational circumstances for which it has been designed, that system is *capable* of being used in compliance with humanitarian law. This determination has either already been made in the framework of existing treaties prohibiting or regulating specific weapon systems, or it must be made based on the fundamental principles governing the lawfulness of weapons under humanitarian law.

First, existing weapons treaties contain no general prohibition or restriction on the development or use of drone technology, whether remotely-controlled or autonomous. Treaty law does, however, outlaw a number of weapons which may conceivably be combined with drone technology.<sup>120</sup> Clearly, the general prohibitions and restrictions of weapons law fully apply also to all types of weapons which may be mounted on drones.<sup>121</sup>

Second, it must be considered whether armed drones would fall under the customary and treaty prohibition on indiscriminate attacks. As far as relevant for weapon systems as such, indiscriminate attacks are defined as those which employ a method or means of combat which either *cannot be directed at a specific military objective, or the effects of which cannot be limited as required by humanitarian law* and, consequently, are of a nature to strike military objectives and civilians or civilian objects without distinction.<sup>122</sup> The notion also includes attacks which may be expected to inflict excessive collateral harm on the civilian population.<sup>123</sup>

Without any doubt, from a technological point of view, attacks by human-controlled drones (“man in the loop”) can be directed at specific military objectives and, in principle, the effects of such attacks on the target and the civilian population can be limited as required by humanitarian law. Therefore, currently operational armed drones do not, as such, constitute an indiscriminate means of warfare prohibited under humanitarian law.<sup>124</sup> Where protected persons or objects are attacked by armed drones, or where such attacks result in excessive collateral harm among the civilian population, the reason for such violation of humanitarian law lies in the failure of the human planners and operators to comply with the principles of distinction, proportionality and precaution (law of targeting), and not in

<sup>118</sup> Art. 35(1) Protocol I.

<sup>119</sup> Art. 36 Protocol I.

<sup>120</sup> Such as, for example, poison, chemical and biological weapons, or cluster munitions.

<sup>121</sup> For example, the prohibition of poison or poisonous weapons in warfare would make it unlawful to equip micro-drones with poison as an anti-personnel device.

<sup>122</sup> Art. 51(4) Protocol I, ICRC, *Customary Humanitarian Law*, Rule 12.

<sup>123</sup> Art. 51(5) Protocol I, ICRC, *Customary Humanitarian Law*, Rule 19.

<sup>124</sup> Affirmative Alston, *The CIA and Targeted Killings Beyond Borders*, p. 324.



the any technological inability of armed drones to be used in compliance with those principles (law of weaponry).<sup>125</sup>

A different conclusion would have to be reached for the use of armed drones in a fully autonomous mode, in which armed drones would make targeting decisions without human intervention. As pointed out earlier, no currently operational armed drone even comes close to being capable of reliably distinguishing between civilian persons and legitimate military targets, of taking the necessary precautions to avoid erroneous targeting, or of assessing the proportionality of expected collateral civilian harm. While current target recognition systems may be capable of automatically detecting certain types of military objectives, such as hostile weapon systems and communications networks, attacking such targets would always require additional precautionary measures, including a proportionality assessment, which can only be carried out by a human operator. Even in exceptional circumstances, where the area of operations is such that no civilian harm must be expected (e.g. large military formations in a desert or a maritime environment), fully autonomous drones still lack the capability of identifying enemy personnel entitled to protection against attack, such as medical and religious personnel, and combatants *hors de combat*. In sum, if used in a fully autonomous mode, current drone technology would be incapable of complying with the law of targeting and, consequently, would constitute an indiscriminate weapon system prohibited under humanitarian law.<sup>126</sup> For the foreseeable future, therefore, any application of military force through armed drones must necessarily remain under the control of a human operator.

Finally, it must be determined whether armed drones, would fall under the prohibition of “weapons, projectiles and material and methods of warfare of a nature to cause superfluous injury or unnecessary suffering”.<sup>127</sup> According to the International Court of Justice, the prohibition “to cause unnecessary suffering to combatants” constitutes an intransgressible principle of international customary law, which outlaws the causation of “harm greater than that unavoidable to achieve legitimate military objectives”.<sup>128</sup> While this principle has motivated the prohibition of or restriction of numerous other weapon systems, such as chemical and biological weapons, blinding laser weapons, incendiary weapons, and expanding bullets, there seems to be no reason for currently operational drone technology to be outlawed under this prohibition. Where armed drone operations have inflicted excessive harm on targeted persons, the reason lay not in the “excessively injurious”<sup>129</sup> nature of the weapon used, but in the failure of the human planners and operators to comply with the prohibition of attacks against persons *hors de combat* and, thus, in a failure to respect the principle of distinction rather than the prohibition of unnecessary suffering.

### 3.1.6 “Right to Kill” vs. “Capture rather than Kill”

In regulating the use of force against legitimate military targets, humanitarian law neither provides an express “right to kill”, nor does it impose a general obligation to “capture rather than kill”. Instead, humanitarian law simply refrains from providing certain categories of persons with protection against attacks, that is to say, against “acts of violence against the adversary, whether in offence or in defence”.<sup>130</sup> The fact alone that a person is not protected against acts of violence, however, is not

<sup>125</sup> Boothby, *The Law of Targeting*, p. 281.

<sup>126</sup> Affirmative: Sharkey, *Drones proliferation and protection of civilians*, pp. 112, 118. But see Boothby, *The Law of Targeting*, pp. 282-286, according to whom autonomous drone attacks may be lawful in “certain, narrowly defined circumstances”.

<sup>127</sup> Art. 35(2) Protocol I; ICRC, *Customary Humanitarian Law*, Rule 70.

<sup>128</sup> ICJ, Advisory Opinion on the Legality of the Threat or Use of Nuclear Weapons, 8 July 1996, § 78.

<sup>129</sup> See also the full title of the 1980 CCW: “Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May be Deemed to be Excessively Injurious or to Have Indiscriminate Effects”.

<sup>130</sup> Art. 41(1) Protocol I.



equivalent to a legal entitlement of the adversary to kill that person without any further considerations. Rather, even in attacks against legitimate military targets, elementary considerations of humanity require that no more death, injury or destruction be caused than is actually necessary to accomplish a legitimate purpose.<sup>131</sup>

In the conduct of hostilities, the strict requirement of "absolute necessity", which governs the use of lethal force against persons under the law enforcement paradigm, is replaced by the more widely conceived requirement of "military necessity", which no longer refers to the removal of an imminent threat or the prevention of a serious crime, but to the achievement of a legitimate military purpose. Today, the principle of military necessity is generally recognized to permit "only that degree and kind of force, not otherwise prohibited by the law of armed conflict, that is required in order to achieve the legitimate purpose of the conflict, namely the complete or partial submission of the enemy at the earliest possible moment with the minimum expenditure of life and resources".<sup>132</sup> Complementing the principle of military necessity is the principle of humanity, which "forbids the infliction of suffering, injury or destruction not actually necessary for the accomplishment of legitimate military purposes".<sup>133</sup> In conjunction, the principles of military necessity and of humanity could be said to reduce the sum total of permissible military action from that which humanitarian law does not expressly prohibit to that which is actually necessary for the accomplishment of a legitimate military purpose in the prevailing circumstances.<sup>134</sup>

In practice, the kind and degree of force to be used against legitimate military targets obviously cannot be pre-determined for all conceivable military operations, but must be determined by the operating forces based on the totality of the circumstances prevailing at the relevant time and place. As a general rule, circumstances which would allow an attempt at capture or the issuing of a warning prior to the use of lethal force are more likely to arise in territory over which the operating forces exercise effective control. In the contexts in which armed drone attacks are currently carried out, the restrictive aspect of military necessity is unlikely to play a major role, because any attempt at capturing the targeted person would almost certainly involve significant risks for the operating forces and, therefore, would not be required. On the other hand, the fact alone that a capture operation would be impossible or fraught with unacceptable risk does not turn an otherwise protected civilian into a legitimate military target subject to lawful attack.

### 3.2 Drone Attacks outside Military Hostilities

In current practice, most armed drone attacks are conducted outside the territorial control of the operating State and in situations where the applicability of the law of hostilities is uncertain, either

<sup>131</sup> This is also the official position taken by the International Committee of the Red Cross. See: ICRC, *Interpretive Guidance DPH*, Section IX, and by the Israeli High Court of Justice in its judgment on the Israeli policy of targeted killing (*The Public Committee against Torture et al. v. The Government of Israel et al.* (HCJ 769/02), Judgment of 13 December 2006, § 40). For a detailed discussion of this approach see: Melzer, *Targeted Killing or Less Harmful Means?*, pp. 87-113. For four critiques of the ICRC's position, and the organization's official response, see: NYU/JILP, Forum on "Direct Participation in Hostilities", pp. 637-916.

<sup>132</sup> UK Ministry of Defence, "The Manual of the Law of Armed Conflict", Section 2.2 (Military Necessity). The modern notion of military necessity has been strongly influenced by the definition provided in Art. 14 of the "Lieber Code".

<sup>133</sup> UK Ministry of Defence, "The Manual of the Law of Armed Conflict", Section 2.4 (Humanity).

<sup>134</sup> Affirmative also: ICRC, *Interpretive Guidance DPH*, Recommendation IX and Commentary. See Sandoz et al. (eds.), *Commentary on the Additional Protocols*, § 1395. See also the determination of the International Court of Justice that the prohibition on the use of means and methods of warfare of a nature to cause unnecessary suffering to combatants constitutes an intransgressible principle of international customary law and a cardinal principle of humanitarian law, which outlaws the causation of "harm greater than that unavoidable to achieve legitimate military objectives" (*emphasis added*). See: ICJ, *Nuclear Weapons Opinion*, § 78.

because it is not clear whether the targeted individual is a legitimate military target, or because it is doubtful whether the operation is linked to an armed conflict in the first place. Unless and until there is sufficiently reliable evidence that the targeted persons constitute legitimate military targets, however, any use of force against them, including by way of extraterritorial drone attacks, must comply with universally binding standards governing the use of force under the law enforcement paradigm.

### 3.2.1 Law Enforcement Paradigm – Concept and Applicability

The law enforcement paradigm consists of a uniform set of principles derived from all customary and treaty rules of human rights law and humanitarian law which regulate the use of force outside the conduct of hostilities and from the interpretation of these rules in international case law dealing with such situations.<sup>135</sup> This includes not only human rights treaties and case law, but also the humanitarian law protections against murder, wilful killing and extrajudicial executions and the jurisprudence of the war crimes tribunals and the International Court of Justice with regard to such cases.

In this generic sense, law enforcement is not necessarily synonymous with the standards governing domestic peacetime policing. Rather, the law enforcement paradigm applies whenever - and wherever - States exercise their authority and power in order to ensure law, order and public safety within their jurisdiction, irrespective of whether such action is described as “law enforcement”, “counter-terrorism”, “counter-piracy”, “counter-narcotics”, “border protection” or otherwise. The only situation for which international law provides a different, more specific set of standards is the conduct of hostilities in armed conflict. In principle and by default, therefore, all drone attacks except those directed against legitimate military targets in an armed conflict are subject to the law enforcement paradigm.

In view of the wide variety of situations in which the law enforcement paradigm applies, the resulting principles of necessity, proportionality and precaution must allow for considerable flexibility in interpretation in order to accommodate the specificities of each operational context. For example, when applied to specific extraterritorial drone operations, the law enforcement paradigm must be interpreted in good faith and in accordance with the prevailing circumstances, including the level of control that can actually be exercised over the targeted individual. Nevertheless, however limited the control of a State over a particular territory or individual may be, flexibility in interpretation must not be confused with flexibility in application. In other words, while the principles of necessity, proportionality and precaution may be open to restrictive or extensive interpretation, they can in no case be derogated from so as to allow the use of force which is not necessary, which is likely to cause disproportionate harm, or which reasonably could have been avoided by feasible precautionary measures. Similarly, the list of legitimate purposes for the use of lethal force may require interpretation, but is not open to modification or extension. Even in armed conflict, therefore, the lawfulness of a punitive killing is inconceivable “without previous judgment pronounced by a regularly constituted court affording all the judicial guarantees which are recognized as indispensable by civilized peoples”.<sup>136</sup> In the following, the law enforcement principles of necessity, proportionality, precaution and legality shall be outlined by reference to the relevant case law.

### 3.2.2 Strict Necessity of Lethal Force

<sup>135</sup> For a comprehensive discussion of the law enforcement paradigm in customary and treaty law see: Melzer, *Targeted Killing in International Law*, pp. 85-239.

<sup>136</sup> Art. 3(1) Geneva Convention I-IV.

Outside the conduct of hostilities, the use by States of lethal force is always subject to the requirement of strict necessity.<sup>137</sup> In quantitative terms, strict necessity implies that less harmful means remain ineffective or without any promise of achieving the desired purpose. In practice, this means that there must be no realistic prospect for successful capture, incapacitation or any other non-lethal response to the threat posed by the targeted person. Moreover, although treaty law is silent in this respect, strict necessity is generally interpreted to imply that the threat to be averted must be imminent. Similar to the controversy surrounding anticipatory or pre-emptive self-defence between States, this raises the contentious question of whether States may use lethal force only when the harm likely to be caused by a person is already on the verge of materializing, or whether preventative action may be taken already at an earlier stage.<sup>138</sup>

From an international policy perspective it is clear that, irrespective of the existence of an armed conflict, any interpretation of international law prohibiting States from using extraterritorial force which is strictly necessary to protect their population against terrorist attacks would squarely contradict the principles of self-preservation, good faith and humanity underlying and governing the international legal system as a whole. It is also clear that the same applies to any legal interpretation effectively permitting States to conduct preventative killings in the territory of third States without sufficient safeguards against error, arbitrariness and abuse.

The context of transnational terrorism, which is currently most relevant for the use of armed drones, is marked by surprise attacks on the part of loosely organized, clandestinely operating non-state actors with support bases and “sleepers” spread across the globe. While the prospect of further terrorist attacks is certain, the target and the time and place of the next attack remain unpredictable. In contrast to police operations responding to an on-going crime or aiming to arrest a fugitive, therefore, the primary purpose of transnational counter-terrorist operations is to prevent unspecified attacks before they enter the phase of operational execution. If such operations are to have any prospect of success, the permissibility of lethal force cannot depend exclusively on the temporal imminence of an attack but, alternatively, also on the temporal urgency of the use of lethal force for the prevention of further attacks. In other words, the question is not necessarily whether the next attack is about to take place, but whether the present moment is likely to be the last opportunity for preventing it.<sup>139</sup>

At the same time, it must be emphasized that the use of lethal force by States must always address an existing threat, and not merely a potential one that may materialize at some point in the future. Moreover, given that necessity is always determined by reference to a desired outcome, lethal force may only be used if it can realistically be expected to avert the threat in question.<sup>140</sup> For example, where the isolated killing of a particular individual known to be engaged in the preparation of terrorist attacks is unlikely to prevent or, at least, delay the execution of these attacks by other members of the same group, such use of lethal force would have to be regarded as unsuitable for the desired purpose and, therefore, as arbitrary.

<sup>137</sup> See Art. 2(2) ECHR; UN Code of Conduct for Law Enforcement Officials Art. 3 (and Commentary (a)); Basic Principles on the Use of Force and Firearms no 4, 9, 13-14. Confirmed, e.g., in: UNHRC, *de Guerrero case*, §§ 13.1. to 13.3.; ECtHR, *McCann case*, §§ 132, 149, 196 f., 212; IACiHR, *Terrorism and Human Rights*, §§ 87-88, 90-92; ACiHPR, *Ouédraogo case*, § 4. With regard to prisoners of war, see Art. 42 Geneva Convention III.

<sup>138</sup> Chesney, *Who May Be Killed?*, pp. 54-56.

<sup>139</sup> Chesney, *Who May Be Killed?*, p. 55.

<sup>140</sup> Accordingly, Art. 2(2) ECHR refers to “the use of force which is no more than absolutely necessary: (a) in defence of any person from unlawful violence; (b) in order to effect a lawful arrest or to prevent the escape of a person lawfully detained; (c) in action lawfully taken for the purpose of quelling a riot or insurrection”.

In sum, while the requirement of strict necessity does not categorically exclude the permissibility of armed done attacks outside the conduct of hostilities, it does establish exceptionally strict standards of necessity for such operations.

### 3.2.3 Proportionality of Harm and Benefit

The requirement of proportionality involves a value judgment independent from, and additional to, considerations of necessity. Even if the circumstances are such that a specific threat can only be removed through lethal force (*necessity*), its use is only permissible if the threat to be addressed is also sufficiently grave to justify endangering human life (*proportionality*).<sup>141</sup> It is important to note that, outside the conduct of hostilities, the requirement of proportionality not only refers to the incidental effects on uninvolved bystanders, but also to the harm caused to the targeted individuals themselves.

As a general rule, outside the conduct of hostilities, the use of force endangering human life (potentially lethal force) is always considered an extreme measure justified only in exceptional circumstances.<sup>142</sup> Even more extreme, the use of force which is designed to kill (“shoot-to-kill”) is regarded as proportionate only where strictly unavoidable for the protection of human life from unlawful attack.<sup>143</sup> In addition, the law enforcement paradigm is clearly less tolerant with regard to the infliction of incidental harm on peaceful bystanders. This does not mean that, outside the conduct of hostilities, the causation of incidental harm would never be permissible. In recent human rights case law it has even been held that the use of gas in the Moscow theatre hostage crisis resulting in the incidental killing of 125 hostages “was not in the circumstances a disproportionate measure, and, as such, did not breach (the right to life)”.<sup>144</sup> However, the relevant judgment also suggests that the use of lethal force may not be permissible in circumstances where it is certain to cause the incidental killing of bystanders, as opposed to operations leaving them “a high chance of survival”.<sup>145</sup> Although there is no express or implied basis in human rights law to draw such a distinction as a matter of principle, it is clear that security operations that are certain to cause the incidental death of innocent bystanders are always extremely problematic.<sup>146</sup> Nevertheless, in terms of juridical function, the principle of proportionality always involves a balance between benefit and harm and, if it is to provide equitable responses to any given constellation of circumstances, does not lend itself to absolute, predefined limits. It is therefore not inconceivable that, in circumstances of extreme threat such as the 9/11 scenario of a hi-jacked

<sup>141</sup> Confirmed in: ECtHR, *McCann case*, §§ 192 ff.; ECtHR, *Streletz case*, §§ 87, 96 and 102; ECtHR, *Nachova case*, § 95. UNHRC, *de Guerrero case*, §§ 13.1. to 13.3.; IACiHR, *Terrorism and Human Rights*, 137, §§ 87 and 92.

<sup>142</sup> See, for example, Art. 2(2) ECHR, which states that deprivations of life can be lawful only “when it results from the use of force which is no more than absolutely necessary: (a) in defence of any person from unlawful violence; (b) in order to effect a lawful arrest or to prevent the escape of a person lawfully detained; (c) in action lawfully taken for the purpose of quelling a riot or insurrection”.

<sup>143</sup> Basic Principles on the Use of Force and Firearms, no 9.

<sup>144</sup> ECtHR, *Finogenov case*, § 236.

<sup>145</sup> According to the European Court, “the gas used by the Russian security forces, while dangerous, was not supposed to kill, in contrast, for example, to bombs or air missiles. The general principle stated in the *Isayeva case*, condemning the indiscriminate use of heavy weapons in anti-terrorist operations, can be reaffirmed, but it was formulated in a different factual context, where the Russian authorities used airborne bombs to destroy a rebel group which was hiding in a village full of civilians. Although the gas in the present case was used against a group consisting of hostages and hostage-takers, and although the gas was dangerous and even potentially lethal, it was not used “indiscriminately” as it left the hostages a high chance of survival, which depended on the efficiency of the authorities’ rescue effort. The hostages in the present case were not in the same desperate situation as all the passengers of a hijacked airplane” (ECtHR, *Finogenov case*, § 232). The last statement referred to the 2006 Judgment of the German Constitutional Court described n.147 below.

<sup>146</sup> Arguably, even more so when conducted within a State’s territorial jurisdiction (where it has a positive duty to *protect* the right to life) than extraterritorially (where its duty is limited to *respecting* the right to life).

airplane being used as a weapon, human rights law may permit the shooting down of such aircraft in the knowledge that this would cause the incidental killing of all passengers on board.<sup>147</sup>

In any event, the requirement of proportionality sets the bar for the permissibility of drone attacks outside the conduct of hostilities very high. Not only will it be difficult to prove that the targeted person actually does pose a threat to human life requiring immediate action, but also that this threat is sufficiently serious to justify both the killing of the targeted person and the near certain infliction of incidental death, injury and destruction on innocent bystanders.

### 3.2.4 Precautions, Error and Arbitrariness

Outside the conduct of hostilities, the principle of precaution requires that all security operations must be planned, organized and controlled so as to minimize, to the greatest extent possible, the use of lethal force. The aim is to minimize not only incidental effects on innocent bystanders, but also the recourse to lethal force against the targeted individuals themselves.<sup>148</sup> At first sight, this requirement seems to be diametrically opposed to the very purpose of most armed drone operations, namely the targeted killing of selected individuals. Accurately understood, however, the requirement of precaution does not categorically exclude the lawfulness of targeted killing. Rather, it clarifies that, in the planning and conduct of specific operations, the determination of whether the deliberate use of lethal force is justified must be made with greatest care. This is particularly important in the context of counter-terrorist operations, which often have to be conducted on the basis of incomplete intelligence and hypotheses, thus entailing a significant risk of error or arbitrariness.<sup>149</sup> Indeed, in operational practice, erroneous or arbitrary killings occurring outside the conduct of hostilities are almost always the result of insufficient precautions.<sup>150</sup>

Of course, the required standard of precaution cannot impose an unrealistic burden on the operating personnel but must always relate to what is reasonably achievable in the circumstances.<sup>151</sup> For example, while it clearly is not permissible to use lethal force based on the mere suspicion that the targeted individual may be involved in the planning and conduct of terrorist attacks or other particularly serious crimes, a targeted killing is not necessarily unlawful if it is carried out based on a honest but mistaken belief that it is absolutely necessary to prevent an unlawful attack on human life. Just as in the conduct of hostilities, the distinctive criterion between "mere suspicion" and "honest but mistaken belief" is not only the degree of subjective conviction or doubt actually held by the operating personnel, but also the objective reasonableness of that subjective conviction in view of the circumstances prevailing at the time.<sup>152</sup>

Once an armed drone attack has been launched, the duty of precaution still works in favour both of the targeted individual and of innocent bystanders. Thus, drone operators must constantly re-evaluate the necessity and proportionality of the planned attack in light of the evolving circumstances and make the adjustments necessary to avoid or minimize the expected infliction of death, injury and destruction.

<sup>147</sup> Note, however, that in 2006 the German Constitutional Court considered a German law, which authorized the shooting down of hijacked aircraft believed to be intended for a terrorist attack, to be incompatible with the right to life and human dignity as protected by the German constitution. See: German Federal Constitutional Court, „Luftsicherheitsgesetz“-case.

<sup>148</sup> Commentary (c) to Art. 3 UN Code of Conduct for Law Enforcement Officials. See also: ECtHR, *McCann case*, §§ 150, 194 and 205; ECtHR, *Andronicou and Constantinou case*, § 171; ECtHR, *Nachova case*, § 93.

<sup>149</sup> ECtHR, *McCann case*, §§ 193 and 211.

<sup>150</sup> The European Court's *McCann case* is the classic case where insufficient precautions led to the deliberate killing of three terrorist suspects. For a detailed discussion see: Melzer, *Targeted Killing in International Law*, pp. 236-239.

<sup>151</sup> ECtHR, *McCann case*, § 200; ECtHR, *Andronicou and Constantinou case*, §§ 183, 192.

<sup>152</sup> UNHRC, *de Guerrero case*, §§ 13.1. to 13.3; ECtHR, *McCann case*, § 200. Confirmed, *inter alia*, in ECtHR, *Andronicou and Constantinou case*, § 192.

Also, once an attack has been carried out, the duty of precaution requires, as a minimum, that those searching for the dead and providing medical assistance to the injured not be threatened or hindered in their activities.<sup>153</sup>

Overall, outside the conduct of hostilities, the requirement of precaution places a heavy burden on the attacker to make sure that the expected infliction of death, injury and destruction on the targeted person and on innocent bystanders is both strictly necessary and proportionate in view of the threat posed by the targeted individual.

### 3.2.5 Requirement of Domestic Regulation

States must regulate the use of force by their agents in their national law so as to comply with the applicable international law.<sup>154</sup> National laws and doctrines, rules of engagement and other legislative or executive instruments authorizing the use of force in police, military, counter-terrorism or intelligence operations must strictly align with internationally recognized law enforcement standards except where such operations are directed against legitimate military targets in an armed conflict. In practice, failure to regulate and control the use of force in accordance with internationally binding standards is likely to provoke arbitrary killings and may amount to a violation of the positive duty of States to protect the right to life even before the actual use of lethal force.<sup>155</sup> It is therefore important that States resorting to armed drone attacks subject such operations to national regulation that is in line with international legal standards.

## 3.3 Assessment and Challenges of Current Practice

### 3.3.1 Drone Attacks as a Means of Warfare

In order to be permissible as a means of warfare, armed drone attacks must fulfil the following cumulative conditions: (a) they must be directed against a legitimate military target; (b) they must be planned and conducted so as to avoid erroneous targeting as well as incidental harm to protected persons and objects; (c) they must be suspended when the targeted person falls *hors de combat*, or when the attack must be expected to cause excessive incidental harm; (d) they must not involve the use of prohibited weapons; and (e) they must not employ force in excess of what is actually necessary to achieve a legitimate military purpose in the prevailing circumstances.

From the perspective of weapons law, current drone technology does not, *as such*, raise any particular concern, provided that attacks are conducted under the real-time control of a human operator and do not otherwise involve the use of unlawful weapons. This assessment would almost certainly be reversed if armed drones were to be used in a fully autonomous mode. Without a veritable quantum leap in technological development, armed drones will remain incapable of autonomously making the distinctions, assessments and judgements required by the law of targeting. As a consequence, if used in a fully autonomous mode, armed drones would constitute an inherently indiscriminate weapon system prohibited under humanitarian law. For the foreseeable future, therefore, any use of force through armed drones must necessarily remain under the real-time control of a human operator.

More immediate reasons for concern can be seen in some of the approaches reportedly adopted in current drone policies with respect to the law of targeting:

1. **“Signature strikes”**: First, the reported practice of “signature strikes”, which seems to authorize drone attacks against individuals merely suspected of being “terrorists”, “militants”, or “jihadists”,

<sup>153</sup> Principle 5 UN Force and Firearms Principles.

<sup>154</sup> The right to life “shall be protected by law” (Arts 2(1) ECHR; 6(1) ICCPR; 4(1) ACHR).

<sup>155</sup> See, e.g., ECtHR, *Streletz case*; UNHRC, *de Guerrero case*.



would appear to disregard the precautions and presumptions required in the conduct of hostilities and to seriously undermine the distinction between civilians and combatants. To the extent that this practice leads to the deliberate targeting of civilians, it constitutes a serious violation of humanitarian law and may amount to a war crime.<sup>156</sup>

2. Proportionality assessment: Second, the reported practice of excluding all “males of fighting age” present in the vicinity of a target from the proportionality assessment based on the unverified presumption that they are combatants would appear to violate the presumption of civilian status and protection, to disregard the precautions required in the conduct of hostilities and to seriously undermine the distinction between civilians and combatants. To the extent that this approach leads to excessive collateral harm it constitutes a serious violation of humanitarian law and may amount to a war crime.<sup>157</sup>
3. “Follow-up strikes”: Third, the reported practice of conducting “follow-up strikes” on wounded survivors of first attacks would appear to violate the principle of distinction and the prohibition of denial of quarter. To the extent that this practice leads to the deliberate targeting of persons *hors de combat*, it constitutes a serious violation of humanitarian law and may amount to a war crime.<sup>158</sup>

These alarming approaches stand in stark contrast to US Government officials’ repeated assertions that the criteria and procedures applied in the targeting process for US drone attacks are in full compliance with national and international law.<sup>159</sup> The first comparatively detailed account of US targeting standards was provided in 2012 by John Brennan, counter-terrorism advisor of the US President.<sup>160</sup> According to Brennan, given that the United States are in an armed conflict with al-Qaeda and associated forces, all US drone attacks must meet the following standards (summary):

1. Distinction: The targeted individual must be a legitimate military target (member of al-Qaeda or associated forces).
2. Threat-based necessity: The targeted individual must also represent a significant (not merely hypothetical) threat to US interests (e.g. as an “operative” or “operational leader” of al-Qaeda or associated forces, or because of “unique operational skills”).
3. Military necessity / humanity: The target must have definite military value, and capture must be either impossible or involve unacceptable risks to US forces or civilians. Moreover, the weapons used must not inflict unnecessary suffering.
4. Precaution and proportionality: There must be a “high degree of confidence” both that the target has been accurately identified, and that innocent civilians will not be harmed “except in the rarest of circumstances”.
5. Sovereignty: International legal restraints on unilateral action in foreign sovereign territory must be respected.
6. Domestic law: The targeting of US citizens requires and additional domestic law review.

<sup>156</sup> Arts 8(2)(b)(ii) and 8(2)(e)(iii) ICC Statute.

<sup>157</sup> Art. 8(2)(b)(iv) ICC Statute.

<sup>158</sup> Arts 8(2)(b)(vi); 8(2)(b)(xii); 8(2)(c)(i) ICC Statute.

<sup>159</sup> See: US Department of State, Speech Koh (2010); US White House, Speech Brennan (2012); US Department of Justice, Speech Holder (2012); US Department of Defense, Speech Johnson (2012); CIA, Speech Preston (2012).

<sup>160</sup> US White House, Speech Brennan (2012).



Brennan explained that considerations of national security did not permit disclosing the precise intelligence-driven methods and processes by which individual targets are being identified. But he asserted that the process was extremely rigorous and included discussions across several departments and hierarchy levels not only of the counter-terrorist rationale, but also of the broader international policy implications of each operation. Once targeting decisions have been taken, they continue to be revisited with a view to re-considering whether lethal force is still warranted and, after every strike, the impact is being assessed both in terms of mission success and possible collateral damage. Brennan also stressed that the implementation of the US drone policy remains subject to effective oversight by the Congressional committees.

To the extent that Brennan's account accurately and genuinely reflects the targeting process being conducted in the context of the US drone policy, it can only be described as exemplary. In fact, the threats-based necessity assessment even goes beyond what would be required under the law of hostilities. However, this positive evaluation would change dramatically if, in practice, the targeting principles outlined in Brennan's speech were to be misconstrued so as to allow "signature strikes", "follow-up strikes", and the exclusion of all "males of fighting age"- from the proportionality assessment.

### 3.3.2 Drone Attacks outside Military Hostilities

Outside the conduct of military hostilities, any use of armed drones against individuals is governed by law enforcement standards derived from human rights law and, in armed conflict, international humanitarian law. As a consequence, armed drone attacks directed against persons other than legitimate military targets can be permissible only in very exceptional circumstances, namely where they fulfil the following cumulative conditions: (a) they must aim at preventing an unlawful threat to human life; (b) they must be strictly necessary for achieving this purpose; (c) they must be planned, prepared and conducted so as to minimize, to the greatest extent possible, the use of lethal force. Moreover, national law must regulate such operations in line with international law.

This sets the bar for the permissibility of drone attacks extremely high. Not only will it be difficult to prove that the targeted person actually does pose a threat to human life requiring immediate action, but also that this threat is sufficiently serious to justify both the killing of the targeted person and the near certain infliction of incidental death, injury and destruction on innocent bystanders. As a result, the use of armed drones and other robotic weapons outside military hostilities may not be categorically prohibited, but their international lawfulness is certainly confined to very exceptional circumstances.

Judged by these standards, the above discussed approaches reportedly adopted in current drone policies would give raise to grave concern:

1. First, the reported practice of "signature strikes" seems to authorize targeted killings based on generalized presumptions as to the threat posed by certain categories of persons (e.g. suspected "terrorists", "militants", or "jihadists"). In doing so, this practice disregards the requirement of strict necessity governing the use of lethal force outside the conduct of hostilities and, therefore, violates the right to life.
2. Second, the reported practice of automatically excluding all males of fighting age present in the area of a planned attack from the proportionality assessment needlessly exposes scores of potentially innocent bystanders to incidental death and injury and, thus, violates their right to life.
3. Third, the reported practice of conducting follow-up strikes on wounded survivors of first attacks disregards the requirements of strict necessity, proportionality and precaution and, therefore, violates the right to life both of the intended targets and of first responders attempting to rescue the injured.

Overall, these reported practices imply an excessively permissive approach to the use of lethal force implying substantial risk of erroneous targeting and excessive collateral harm. This cannot by any standards be compatible with the degree of precaution prerequisite to any operation involving use of lethal force by States.

As far as the US targeting standards as outlined by Brennan are concerned, the evaluation is more difficult. While clearly focusing on law of hostilities concepts, these standards also include a threats-based necessity requirement according to which a person may only be targeted if he or she represents a significant (not merely hypothetical) threat to US interests (e.g. as an “operative” or “operational leader” of al-Qaeda or associated forces, or because of “unique operational skills”). Outside the conduct of hostilities, simply “being” an operative, an operational leader, or a uniquely skilled person certainly does not, without more, justify the use of lethal force. At the very minimum, there must be some form of ongoing or imminent threat to human life which cannot be averted but for the use of lethal force. Although the United States has not disclosed the threshold of imminence which, in its view, would justify a targeted killing, the current practice could hardly be justified in view of the strict necessity requirement governing the use of force outside the conduct of hostilities.

#### **4. ACCOUNTABILITY AND THE RULE OF LAW**

The fundamental principle that governmental power and authority must be exercised in accordance with clear, legitimate and enforceable rules lies not only at the heart of liberal democracies – it encapsulates the very essence of the rule of law. Beyond the existence of internationally recognized legal standards governing the exercise of State authority, the rule of law also requires mechanisms aiming to ensure actual compliance with the law, including a sufficient degree of transparency and public scrutiny.<sup>161</sup>

Transparency and accountability must be taken particularly seriously when States resort to lethal force as a matter of foreign policy. The current US policy of targeted killing, for instance, has been severely criticized for perceived lack of transparency and accountability both on the domestic and the international level.<sup>162</sup> This has prompted several senior US Government officials to make public statements explaining not only the rationale and legal bases underlying that policy, but also outlining the actual standards and procedures applied to individual targeting decisions and recalling the oversight exercised by Congressional Committees.<sup>163</sup>

For the present purposes this example highlights how important it is that States remain legally and politically accountable for their use of armed drones and other robotic weapons systems. At the most basic level, legal accountability requires the recognition that States remain legally responsible for the consequences of their use of robotic weapons irrespective of the operational autonomy achieved by such systems. Legal accountability also involves a governmental duty of investigation, and of reparation for potential violations. Ultimately, government action must also be subject to independent judicial oversight both on the domestic and on the international level.

<sup>161</sup> Report of the Special Rapporteur (Alston), Targeted Killings, pp. 26-27. Wilmshurst, *Principles on the Use of Force in Self-Defence*, p. 9.

<sup>162</sup> See, most notably: Alston, *The CIA and Targeted Killings Beyond Borders*, p. 283; Report of the Special Rapporteur (Heyns), §§ 76-84; Report of the Special Rapporteur (Alston), Targeted Killings, §§ 87-92. See also, e.g., Stanford/NYU, “*Living under Drones*”, pp.122-124; Columbia Law School, “*The Civilian Impact of Drones*”, pp. 51-67; Zenko, *Reforming U.S. Drone Strike Policies*.

<sup>163</sup> See: US Department of State, Speech Koh (2010); US White House, Speech Brennan (2012); US Department of Justice, Speech Holder (2012); US Department of Defense, Speech Johnson (2012); CIA, Speech Preston (2012).

## 4.1 International Responsibility

### 4.1.1 State Agency

In international law, States are responsible for the conduct of persons or entities acting on their behalf or with their authorization or endorsement ("state agents").<sup>164</sup> This includes not only government personnel, such as members of the armed and police forces or intelligence agencies (*de jure* State agents),<sup>165</sup> but also persons acting on the instructions or under the direction or control of a State, such as certain private military or security contractors (*de facto* State agents).<sup>166</sup> The fact that State agents exceed their authority or contravene instructions does not exclude State responsibility as long as they act in their capacity as State organs or as persons otherwise empowered by the State.<sup>167</sup> In international armed conflict, the responsibility of States even extends to "all acts committed by persons forming part of its armed forces", including acts committed outside their official capacity as members of the armed forces.<sup>168</sup> In principle, therefore, all military operations carried out on behalf of a State are directly attributable to that State, regardless of where they take place or where their effects materialize.

### 4.1.2 Contribution to Unlawful Conduct of other States

International legal responsibility can also arise where a State aids or assists the unlawful conduct of another State, provided that: (1) the assisting State is aware of the circumstances making the conduct of the assisted State unlawful, and (2) its assistance is intended to – and actually does – facilitate that particular conduct.<sup>169</sup> For international responsibility to arise, such assistance should contribute significantly, but does not need to be indispensable or otherwise essential to the unlawful conduct of the assisted State.<sup>170</sup> Also, the assisting State does not necessarily have to be conscious of the *unlawfulness* of the assisted conduct but, rather, must be aware of the *factual circumstances* which make it unlawful. For instance, when a State is known to carry out armed drone attacks which are widely regarded to contravene its obligations under human rights law and humanitarian law, other States knowingly assisting such operations through the provision of personnel, logistic support or targeting intelligence will become internationally responsible for doing so. In case of serious violations of humanitarian law, such military assistance may entail not only a State duty to provide reparation for the resulting damage, but also individual criminal responsibility on the level of the assisting soldiers.<sup>171</sup>

<sup>164</sup> ILC, ARSIWA, Chapter II, Commentary § 2, p. 80.

<sup>165</sup> ILC, ARSIWA, Arts 4 and 5.

<sup>166</sup> ILC, ARSIWA, Art. 8, and Commentary §§ 1 & 2, pp. 103-104.

<sup>167</sup> ILC, ARSIWA, Art. 7.

<sup>168</sup> Art. 3 Hague Regulations and Art. 91 Protocol I.

<sup>169</sup> ILC, ARSIWA, Art. 16: "A State which aids or assists another State in the commission of an internationally wrongful act by the latter is internationally responsible for doing so if: (a) that State does so with knowledge of the circumstances of the internationally wrongful act; and (b) the act would be internationally wrongful if committed by that State".

<sup>170</sup> ILC, ARSIWA, Art. 16, Commentary § 5.

<sup>171</sup> Art. 25(3) ICC Statute.

### 4.1.3 Robotic Autonomy and force majeure

With the increasing autonomy of robotic weapons, the risk of such systems' software algorithms spinning out of control and causing major malfunction becomes a serious concern.<sup>172</sup> Conceivably, States may be tempted to plead *force majeure* in order to evade international responsibility for an armed robot's unforeseen "decision", for example, to attack civilians.<sup>173</sup> On the one hand, it is generally recognized that *force majeure* cannot excuse accidental, unintended or undesired injury if it was brought about by neglect or fault of the operating State,<sup>174</sup> or if that State consciously accepted the risk of such injury occurring.<sup>175</sup> Thus, any malfunction of a robotic weapon system which, although not *expected*, was reasonably *foreseeable* in view of the capabilities and limitations inherent in that system's design certainly cannot give rise to a situation of *force majeure*.<sup>176</sup> On the other hand, *force majeure* may conceivably be invoked in situations in which a State has "unwittingly contributed" to the malfunction of a robotic weapon system "by something which, in hindsight, might have been done differently but which was done in good faith and did not itself make the event any less unforeseen".<sup>177</sup> This would seem to include genuinely unforeseen shortcomings in the design and programming of robotic systems. The key question is really whether the malfunction of a robotic system ever could be regarded as a cause which is "external" to the State operating the system as would normally be required for a situation of *force majeure* to arise.<sup>178</sup>

Armed robots are not, of course, persons or entities capable of acting for or against a State in a human sense, but they are machines being used by humans as weapons. The fact that some of these weapons are programmed to operate with unprecedented speed and autonomy may challenge the capacity of humans to adequately control them, but cannot turn machines into independent external entities for which States no longer bear responsibility. While it is conceivable that the use of fully autonomous robots may result in unintended violations of international law, and while it may not always be possible in such cases to assign individual criminal responsibility for the resulting damage,<sup>179</sup> this observation is not robot-specific but applies to any other malfunctioning weapon or machine.<sup>180</sup> In such cases, the lack of *criminal culpability* on the level of individual State agents has no bearing on the continued *legal responsibility* of States both for the use of these weapons and for any internationally wrongful damage they may cause. The question to be clarified is whether *force majeure* can only arise if robotic malfunction is caused by external factors (e.g. malicious cyber-interference)<sup>181</sup> or also in case of a genuinely unforeseen shortcomings in the system's operating software.

<sup>172</sup> Sharkey, *Drones proliferation and protection of civilians*, p. 111.

<sup>173</sup> ILC, ARSIWA, Art. 23 (*Force majeure*): "1. The wrongfulness of an act of a State not in conformity with an international obligation of that State is precluded if the act is due to force majeure, that is the occurrence of an irresistible force or of an unforeseen event, beyond the control of the State, making it materially impossible in the circumstances to perform the obligation. 2. Paragraph 1 does not apply if: (a) the situation of force majeure is due, either alone or in combination with other factors, to the conduct of the State invoking it; or (b) the State has assumed the risk of that situation occurring".

<sup>174</sup> ILC, ARSIWA, Art. 23, Commentary § 3.

<sup>175</sup> ILC, ARSIWA, Art. 23, Commentary § 10.

<sup>176</sup> ILC, ARSIWA, Art. 23, Commentary § 2.

<sup>177</sup> ILC, ARSIWA, Art. 23, Commentary § 9.

<sup>178</sup> Szurek, *Force Majeure*, pp. 477.

<sup>179</sup> HRW/IHRC, "Losing Humanity", pp. 43-45; Tucker-Lowe, Nicholas, *RPAS and the Ethical Landscape of Contemporary Conflict*, p. 6.

<sup>180</sup> ILC, ARSIWA, Art. 23, Commentary § 5 referring to cases where a "State aircraft was forced, due to damage or loss of control of the aircraft owing to weather, into the airspace of another State without the latter's authorization".

<sup>181</sup> According to a US Air Force press release of 12 October 2011, cyber-malware was detected on certain systems on Creech Air Force Base, Nevada, from where US drones are being operated, but had "not affected Remotely Piloted Aircraft operations" ([http://www.afspc.af.mil/news1/story\\_print.asp?id=123275647](http://www.afspc.af.mil/news1/story_print.asp?id=123275647)).

Whatever international consensus will eventually emerge in this respect, *force majeure* can never be invoked to excuse the violation of peremptory norms of international law,<sup>182</sup> a category which arguably includes the human right to life<sup>183</sup> and, in armed conflict, the principle of distinction between civilian and combatants and the prohibition of inflicting unnecessary suffering on combatants.<sup>184</sup> Finally, even in situations genuinely covered by *force majeure* its invocation would remain “without prejudice to the question of compensation for any material loss caused by the act in question”.<sup>185</sup>

## 4.2 Duty to Investigate and Compensate

### 4.2.1 Investigation

All major human rights bodies have held that the obligations flowing from the right to life necessarily entail a duty of States to investigate the use of lethal force by their agents, and that failure to comply with this duty may, as such, amount to a violation of the right to life.<sup>186</sup> Of course, apart from determining whether the killing of the targeted person was lawful, this also includes an investigation into the resulting incidental death, injury and destruction.

In order to be effective, such investigations must be immediate, exhaustive and impartial, as well as independent in hierarchical, institutional and practical terms.<sup>187</sup> Moreover, the ensuing investigations and their results must be subject to sufficient public scrutiny.<sup>188</sup> Human rights case law further confirms that the duty to investigate applies not only in situations of peacetime policing, but also in counterterrorist operations,<sup>189</sup> and in the conduct of hostilities.<sup>190</sup> Thus, while a situation of armed conflict may require that the right to life be interpreted in line with the *lex specialis* of international humanitarian law, it suspends neither the right as such, nor the corresponding duty to investigate.

Admittedly, the law of hostilities presumes that direct attacks against members of armed forces or organized armed groups are lawful and, therefore, do not violate the right to life. Consequently, it would not be appropriate to require a full-scale investigation into each drone attack against undisputed legitimate military targets, unless there are other reasons to question the lawfulness of a particular operation, such as the gravity of the resulting incidental civilian harm. Conversely, the lawfulness of attacks directed against persons merely suspected of being “terrorists”, “militants” or “jihadists” is almost inherently doubtful. In view of the general presumption of civilian status and protection in situations of doubt, an investigation would be required in each such case.<sup>191</sup> This conclusion

<sup>182</sup> ILC, ARSIWA, Art. 26.

<sup>183</sup> On the peremptory nature of the right to life see, Melzer, *Targeted Killing in International Law*, pp. 212-201.

<sup>184</sup> Both were described as an “intransgressible” principles of international customary law in: ICJ, Nucler Weapons AO, § 78. Affirmative also ILC, ARSIWA, Art. 40, Commentary § 5.

<sup>185</sup> ILC, ARSIWA, Art. 27.

<sup>186</sup> UNHRC, General Comment No. 31 (2004), § 15; UNHRC, General Comment No. 6 (1982), § 4; ECtHR, *McCann case*, § 169; ECtHR, *Kaya case*, § 86; ECtHR, *Ergi case*, §§ 82, 86; ECtHR, *Isayeva et al. case* §§ 208, 225; ECtHR, *Isayeva case*, §§ 209, 224; IACiHR, *Abella (La Tablada) case*, § 244; IACiHR, *Alejandro case*, § 47; ACiHPR, *Civil Liberties case*, § 22.

<sup>187</sup> See, for example, IACiHR, *Abella (La Tablada) case*, § 412; ECtHR, *Özkan case*, § 184; ECtHR, *Orhan case*, § 335; ECtHR, *Isayeva et al. case*, § 210; ECtHR, *Isayeva case*, § 211.

<sup>188</sup> While the required degree of public scrutiny may vary from case to case, it must in all cases involve the next-of-kin of the victim. See, for example, ECtHR, *Jordan case*, § 109; ECtHR, *Özkan case*, § 187; ECtHR, *Isayeva et al. case* § 213; ECtHR, *Isayeva case*, § 214.

<sup>189</sup> See, for example, ECtHR, *McCann case*, §§ 161 ff.; ECtHR, *Gül case*, §§ 88 ff.; ECiHR, *Ayetkin case*, §§ 101 ff.

<sup>190</sup> See, for example, IACiHR, *Abella (La Tablada) case*, § 181; ECtHR, *Kaya case*, §§ 86, 91; ECtHR, *Ergi case*, §§ 82, 85 f.; ECtHR, *Özkan case*, § 193; ECtHR, *Isayeva et al. case* §§ 208, 225; ECtHR, *Isayeva case*, §§ 209, 224.

<sup>191</sup> According to the Israeli Supreme Court, “after an attack on a civilian suspected of taking an active part, at such time, in hostilities, a thorough investigation regarding the precision of the identification of the target and the circumstances of the attack upon him is to be performed (retroactively). That investigation must be independent (...)” (Israel HCJ, *PCATI v. Israel*, § 40, further elaborated *ibid.* § 54).

corresponds to the duty of States to investigate alleged war crimes, including the wilful killing of protected persons, and to prosecute or extradite suspects.<sup>192</sup> As for situations of non-international armed conflict, the duty of States to investigate alleged war crimes, such as murder within the meaning of Article 3 Geneva Conventions I-IV, is recognized to have become part of customary international law.<sup>193</sup>

In sum, States are obliged to conduct an independent and effective investigation into the lawfulness of each case of targeted killing except those that are directed against undisputed legitimate military targets and do not otherwise give rise to legal concern, for example regarding the proportionality of incidental civilian harm.<sup>194</sup>

#### 4.2.2 Recording of Casualties

While humanitarian law requires parties to an armed conflict to take certain measures with regard to the search for and identification of dead or missing persons,<sup>195</sup> existing treaty law does not contain a comprehensive obligation to systematically record all casualties resulting from the use of lethal force. It has persuasively been argued, however, that the existing obligations under humanitarian law and human rights law with respect to the dead and missing, in conjunction with the interpretation given to these provisions in human rights case law, result in a "binding international legal obligation upon every party to an armed conflict to record every civilian casualty of armed conflict whether in an international or Non-International Armed Conflict".<sup>196</sup> Indeed, it is hard to imagine how States in practice could live up to their undisputable obligation to investigate potentially unlawful killings without first establishing a complete record of the civilian and combatant casualties resulting from a particular operation.

#### 4.2.3 Reparation

In case of drone attacks found to be in violation of international law, the responsible State has a customary duty of reparation which is independent from specific treaty obligations.<sup>197</sup> Indeed, the duty to make reparation for violations of the law is an integral part of customary and treaty law applicable in

<sup>192</sup> Art. 49(2) Geneva Convention I; Art. 50(2) Geneva Convention II; Art. 129(2) Geneva Convention III; Art. 146(2) Geneva Convention IV. See also the duty to "suppress" grave breaches in Art. 86(1) Protocol I and the general duty of states to "respect and to ensure respect" for the Geneva Conventions "in all circumstances" (Art. 1 Geneva Convention I-IV). ICRC, *Customary Humanitarian Law*, Rule 158.

<sup>193</sup> ICRC, *Customary Humanitarian Law*, Rules 157 and 158.

<sup>194</sup> According to Art. 9 of the UN Principles on the Effective Prevention and Investigation of Extra-Legal, Arbitrary and Summary Executions: "There shall be a thorough, prompt and impartial investigation of all suspected cases of extra-legal, arbitrary and summary executions, including cases where complaints by relatives or other reliable reports suggest unnatural death in the above circumstances (...)."

<sup>195</sup> E.g. Arts 16(2); 26; 129(2); 130(1)-(3); 136; 139; 140 Geneva Convention IV; Arts 32; 33; 33; 34 Protocol I; Arts 4 and 8 Protocol II. See also ICRC, *Customary Humanitarian Law*, Rules 112 and 116.

<sup>196</sup> Breau / Joyce, *The Legal Obligation to Record Civilian Casualties*, p. 2. The discussion paper provides a comprehensive analysis based on treaty and customary humanitarian law, human rights law and case law.

<sup>197</sup> As the Permanent Court famously stated, "it is a principle of international law, and even a general conception of law, that any breach of an engagement involves an obligation to make reparation. (...) Reparation is the indispensable complement of a failure to apply a convention, and there is no necessity for this to be stated in the convention itself" (PCIJ, *Factory at Chorzow case*, p. 29). According to Art. 31 ARSIWA: "the responsible State is under an obligation to make full reparation for the injury caused by the internationally wrongful act". See also: Stern, *The Obligation to Make Reparation*, pp. 563-565



all armed conflicts,<sup>198</sup> of universal and regional human rights treaties<sup>199</sup> and, for individuals, of international criminal law.<sup>200</sup>

Thus, victims of gross human rights violations of and of serious violations of international humanitarian law should be provided with reparation which, depending on the gravity of the violation and the circumstances of each case, can include restitution, compensation, rehabilitation, satisfaction and guarantees of non-repetition.<sup>201</sup> Financial compensation, in particular, should be provided for economically assessable damage, such as physical, mental material or moral harm, and loss of earnings or of earning potential.<sup>202</sup>

### 4.3 The Role of International Judicial Bodies

In principle, judicial oversight of government activities should be ensured through national institutions and procedures, whereas international mechanisms generally have a subsidiary and complementary role and are activated only when national accountability mechanisms are not working effectively.<sup>203</sup> On the international level, there are several judicial bodies which could adjudicate cases involving the use of armed drones or other robotic weapons in warfare, each from a different perspective.

#### 4.3.1 International Criminal Court (ICC)

The International Criminal Court could address questions of individual criminal responsibility in relation to the use of unmanned robots in warfare. Thus, within the limits of its jurisdiction, the Court could examine allegations of war crimes, crimes against humanity and, in the future, the crime of aggression committed in connection with robotic weapons. The Court can exercise its jurisdiction in three cases, namely if the accused is a national of a State party to the ICC-Statute, if the alleged crime took place on the territory of a State party (including registered vessels or aircraft), or if a situation is referred to the Court by the UN Security Council.<sup>204</sup> Also, its jurisdiction is subsidiary to that of national courts and can only be exercised when national courts are unwilling or unable to assume their primary responsibility to investigate or prosecute.<sup>205</sup>

#### 4.3.2 International Court of Justice (ICJ)

The International Court of Justice could take on cases involving the use of armed robots that are contentious between States, if they agree to submit to the jurisdiction of the court, whether *ad hoc* for a specific case, or through an optional declaration accepting the Court's jurisdiction for future cases.<sup>206</sup> Further, upon request of the UN General Assembly, the Security Council and other authorized UN organs and agencies, the Court could issue an advisory opinion on controversial legal issues arising in relation to the use of armed drones and other robotic weapons in warfare.<sup>207</sup> As is well known, in 1996,

<sup>198</sup> Art. 3 Hague Regulations states: "A belligerent party which violates the provisions of the said Regulations shall, if the case demands, be liable to pay compensation. It shall be responsible for all acts committed by persons forming part of its armed forces". See also Art. 91 Protocol I; ICRC, *Customary Humanitarian Law*, Rule 150.

<sup>199</sup> Art. 2 ICCPR; Art. 7 ACHPR; Art. 25 ACHR; Art. 13 ECHR.

<sup>200</sup> Art. 75 ICC Statute.

<sup>201</sup> ILC, ARSIWA, Arts 30, 31, and 34-39.

<sup>202</sup> See, on the whole: UN Basic Principles and Guidelines on the Right to a Remedy and Reparation for Victims of Gross Violations of International Human Rights Law and Serious Violations of International Humanitarian Law, in particular §§ 15-23.

<sup>203</sup> Alston, *The CIA and Targeted Killings Beyond Borders*, p. 309.

<sup>204</sup> Arts 12 and 13 ICC Statute.

<sup>205</sup> Arts 17 and 20 ICC Statute.

<sup>206</sup> Art. 36(2) ICJ Statute.

<sup>207</sup> Art. 96 UN Charter.

the Court issued such an advisory opinion on a different category of weapons, namely on the legality of the threat or use of nuclear weapons.<sup>208</sup>

#### 4.3.3 International Human Rights Bodies / Interrelation with International Criminal Law

Victims of armed drones attacks and other robotic weapons in warfare could try to bring individual complaints before the universal and regional human rights bodies. From an enforcement perspective it is important to recall that the precedence of international humanitarian law during the conduct of hostilities does not suspend the applicability of human rights law, but merely determines its interpretation. Consequently, combat deaths caused in violation of international humanitarian law will also violate the human right to life<sup>209</sup> and, therefore, can be pursued not only as potential war crimes, but also through the regular individual complaints procedures provided under the relevant human rights treaties. Thus, the European Court has adjudicated several human rights cases which concerned the use of lethal force in combat operations, including attacks by military aircraft in situations of non-international armed conflict.<sup>210</sup> In many cases, however, the difficulty is likely to be the question of jurisdiction, particularly when they involve extraterritorial drone attacks.<sup>211</sup> Also, outside the conduct of hostilities, the humanitarian law prohibitions on “murder”, “wilful killing” and extrajudicial executions are not suspended but, in the absence of precise standards on the lawful use of force in humanitarian law, may have to be interpreted in line with applicable human rights law. In principle, therefore, any violations of the right to life committed for reasons related to an armed conflict will also constitute violations of humanitarian law and, depending on the circumstances, may qualify as war crimes. The various judicial institutions are therefore complementary rather than competitive in nature.

## 5. POLICY RECOMMENDATIONS

As has been shown, existing human rights law and humanitarian law provide a uniform set of legal principles which govern the use of force by States both in warfare and outside the conduct of hostilities. When such use of force interferes with the territorial sovereignty of other States, its lawfulness additionally depends on the UN Charter and customary law. Although the legal principles resulting from these normative frameworks are universally recognized, their precise application and interpretation with regard to the use of armed drones and other robotic weapons gives rise to a number of controversies. Some of these controversies relate to the lawfulness of robotic weapons technology as such, whereas others relate to the circumstances and manner in which such technology is being used in current State practice. This includes, most notably, the following contentious questions:

- State and individual responsibility: How does increasing robotic autonomy affect the legal responsibility of States and individuals for potential harm which may result from their use?
- Self-defence: Does international law permit the use of force in self-defence against non-state actors within the territory of third States and, if so, on what conditions?
- Armed conflict: What are the threshold requirements for an armed conflict, and what is the territorial scope of application of humanitarian law, particularly in case of transnational confrontations between States and non-state actors?

<sup>208</sup> ICJ, *Nuclear Weapons Opinion*.

<sup>209</sup> Under the ACHR and the ICCPR such deaths would be regarded as “arbitrary”, whereas under the ECHR they would exceed the limits of permissible derogation for lawful acts of war.

<sup>210</sup> See, e.g.: ECtHR: *Isayeva case*; ECtHR *Isayeva et al. case*; ECtHR *Issa case*; ECtHR *Ergi case*.

<sup>211</sup> See section 2.1. above.

- Indiscriminate weapons: What levels of autonomy will be permissible for robotic weapons in view of the prohibition of indiscriminate weapons in warfare and, consequently, which weapons or technologies should be restricted or outlawed?
- Legitimate military targets: Based on what criteria do persons become legitimate military targets, particularly in transnational and asymmetric warfare?
- Imminence of a threat: Does the requirement of imminence, which governs the lawful use of lethal force outside the conduct of hostilities, necessarily relate to the temporal imminence of an unlawful attack on human life, or can it also relate to the temporal urgency to use lethal force for the prevention of future attacks?
- Non-combat collateral harm: Does international law tolerate the incidental killing of innocent bystanders outside the conduct of hostilities and, if so, on what conditions?

These and other legal controversies have resulted in a general sense of uncertainty as to the applicable legal standards. In conjunction with the rapid development and proliferation of drone technology and the perceived lack of transparency and accountability of current policies, this legal uncertainty has the potential of polarizing the international community, undermining the rule of law and, ultimately, of destabilizing the international security environment as a whole. This trend opens avenues for potential EU foreign policy initiatives aiming to promote transparency, accountability and the rule of law in relation to the use of armed drones and other robotic weapons in armed conflicts and other situations of violence:

1. EU Policy: The most pressing policy challenge lies in addressing the perceived lack of transparency and accountability of current drone policies. In responding to this challenge the EU should, in a first step, make the promotion of transparency, accountability and the rule of law in relation to the development, proliferation and use of new weapons technologies a declared priority of European foreign policy. Accordingly, the EU should make the use of unmanned weapon systems by the EU and its member States subject to a policy of transparency and accountability, which should also cover support of, or cooperation with other States related to such systems. Transparency may be subject to the legitimate security interests of States, but must also allow for effective and independent oversight (i.e. accountability) as required by the principles of democracy and the rule of law. As a minimum, this means that the abstract legal standards governing the development, proliferation and use of unmanned weapon systems are clear and open to public scrutiny, and that allegations of unlawful conduct are subject to effective domestic legal review independent from the executive branch. While considerations of national security may require restricting the information made available to the larger public, they cannot justify the absence of democratic control and judicial oversight. In support of this policy, the EU should develop a set of recommendations as to how States, within their national governance systems, could ensure effective and independent oversight over relevant national policies and practices without compromising national security.
2. Intergovernmental Consensus Building Process: In parallel, the EU should launch a broader intergovernmental policy dialogue, supported by a series of legal and technical expert meetings or committees, aiming to achieve broader international consensus: (a) on the international legal standards governing the use of currently operational unmanned weapon systems, and (b) on the legal constraints and/or ethical reservations which may apply with regard to the future development, proliferation and use of increasingly autonomous weapon systems. In order for this consensus-building process to be perceived as legitimate, it should be conducted in a transparent and inclusive manner, involving not only States but also drawing on

the valuable experience and expertise of concerned industries, relevant multinational institutions, civil society organizations and academia.

3. International Regulatory Instrument: Based on the outcome of the preceding consensus building process, the EU should work towards the adoption of a binding international agreement, or a non-binding code of conduct, aiming to restrict the development, proliferation and/or use of certain unmanned weapon systems in line with the legal consensus achieved.

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