



UNIDIR

**Increasing Transparency,
Oversight and Accountability
of Armed Unmanned Aerial Vehicles**

UNIDIR RESOURCES

Acknowledgements

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The United Nations Institute for Disarmament Research (UNIDIR)—an autonomous institute within the United Nations—conducts research on disarmament and security. UNIDIR is based in Geneva, Switzerland, the centre for bilateral and multilateral disarmament and non-proliferation negotiations, and home of the Conference on Disarmament. The Institute explores current issues pertaining to the variety of existing and future armaments, as well as global diplomacy and local tensions and conflicts. Working with researchers, diplomats, government officials, NGOs and other institutions since 1980, UNIDIR acts as a bridge between the research community and governments. UNIDIR's activities are funded by contributions from governments and donor foundations.

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Contents

Acronyms and abbreviations	ii
Executive summary	1
Foreword	2
Introduction	3
I. Mapping the issues	7
Transparency, accountability and oversight	7
Characterizing armed UAVs	8
Key concerns about use and proliferation of armed UAVs	9
Recent international responses	11
II. Standards applicable to the possession and trade of armed UAVs	13
Overview of existing mechanisms applying to armed UAV transfers and holdings	13
Weapons of mass destruction	13
Excessive accumulations of armaments	14
Misuse	15
Challenges and limitations of these mechanisms	16
III. Standards applicable to armed UAV use	19
How does international law apply to the use of armed UAVs?	19
Some challenges armed UAV use raises	21
Why is accountability for the use of armed UAVs a challenge?	22
IV. Ways forward to increase transparency, accountability, and oversight of armed UAVs	27
Elements related to holdings and transfers	28
Strengthening accountability for armed UAV use	29
Forums and procedures to elaborate armed UAV-specific measures	32
The First Committee of the United Nations General Assembly	32
Alternative multilateral frameworks	33
Diplomatic conferences outside the auspices of the United Nations	34
V. Concluding remarks	35
Appendix 1. Joint Declaration for the Export and Subsequent Use of Armed or Strike-Enabled UAVs	37
Appendix 2. Overview of mechanisms applicable to armed UAV transfers and holdings	38

Acronyms and abbreviations

ATT	Arms Trade Treaty
CCW	Convention on Certain Conventional Weapons
CD	Conference on Disarmament
EU	European Union
GGE	Group of Governmental Experts
HCoC	Hague Code of Conduct
ICRC	International Committee of the Red Cross
IED	Improvised Explosive Device
IHL	International Humanitarian Law
IHRL	International Human Rights Law
MTCR	Missile Technology Control Regime
OSCE	Organization for Security and Co-operation in Europe
UAV	Unmanned Aerial Vehicle
UNDC	United Nations Disarmament Commission
UNIDIR	United Nations Institute for Disarmament Research
UNODA	United Nations Office for Disarmament Affairs
UNROCA	United Nations Register of Conventional Arms
WMD	Weapons of Mass Destruction

Executive summary

- Armed UAVs are an increasingly ubiquitous feature of 21st century warfare, yet in view of their role in targeted strikes outside traditional battlefields, in circumstances that are often shrouded in secrecy, they have also become a source of controversy.
- Armed UAVs are not inherently unlawful. But there are growing concerns that they will bring about a dangerous expansion in the use of armed force. The same characteristics that make them attractive to militaries can make armed UAVs particularly susceptible to misuse.
- Moreover, armed UAVs are increasingly being used in situations characterized by a troubling lack of clarity as to how international norms apply, in part because existing users have not been uniformly transparent concerning their use of armed UAVs.
- Improving technology and the emergence of new producers and exporters suggest the world may be on the cusp of a spread of armed UAV capabilities. In the last few years there appears to have been a substantial boost in the proliferation and deployment of armed UAVs globally.
- The points above indicate that the international community urgently needs to develop common understandings and standards to improve transparency, oversight and accountability of armed UAVs in order to reduce potential for their misuse, and thus enhance civilian protection, ensure the rule of law, and help to maintain stability.
- A number of different international mechanisms already address aspects of armed UAVs—mostly by attempting to track or control their transfer and that of related technology. However, membership and adherence to these mechanisms varies, as do the provisions of the mechanisms themselves, and they do not necessarily share key terms and concepts. This has created a patchwork of measures that does not add up to an effective response to issues around the use of armed UAVs.
- There is a need for a transparent and inclusive multilateral process to develop international standards applicable to armed UAVs. Such a process should engage in depth with issues around the use of armed UAVs, and not only focus on controlling their acquisition, although this is important.
- A 2016 *Joint Declaration for the Export and Subsequent Use of Armed or Strike-enabled Unmanned Aerial Vehicles* by more than 50 countries has underlined the interest of States in tackling issues around armed UAVs.
- This study concludes that it would be preferable for multilateral discussions aimed at developing standards and principles for use of armed UAVs to take place under the auspices of the United Nations, with a view to involving all concerned States.
- Now is the time for States to move toward creating an open and inclusive process to this end. In this regard, a useful step would be for States to put forward a United Nations General Assembly resolution that highlights both use and proliferation concerns about armed UAV policies and practices, and establishes a mandate for the development of standards in order to improve the transparency, oversight and accountability of armed UAVs in all their aspects.

Foreword

Armed unmanned aerial vehicles (UAVs) are an increasingly ubiquitous feature of 21st century warfare. To their proponents, armed UAVs offer unparalleled advantages. Many observers, however, note that their use has also created a troubling pattern of harm, and risks that need to be addressed for the sake of civilian protection, the maintenance of international peace and security, and the rule of law. For example, Special Rapporteurs of the United Nations Human Rights Council have reported extensively on issues relating to the practice of targeted strikes using armed UAVs.

In September 2015, the United Nations Under-Secretary-General and Acting High Representative for Disarmament, Mr Kim Won-soo observed that armed UAVs “have unique characteristics that make them particularly susceptible to misuse in comparison to other technologies. These include their low costs, which can aid their rapid proliferation; their loitering persistence and precision, which can tempt covert armed forces and non-State actors to use them secretly and without appropriate transparency, oversight and accountability; and the minimal risk to their operators, which can lower political thresholds for the use of force.”

The United Nations and other multilateral disarmament bodies have been seized for some time of the concern that UAVs might be used as a means to deliver weapons of mass destruction. However, in recent years there has been growing interest within the international community in confronting issues posed by the increasing use of armed UAVs to conduct targeted strikes, in particular in areas outside of “active hostilities”. In 2015, the United Nations Office for Disarmament Affairs (UNODA), with assistance from UNIDIR and the Human Rights Institute at the Columbia University School of Law, prepared a study on armed UAVs pursuant to a recommendation of the Secretary-General’s Advisory Board on Disarmament Matters (A/69/208).^{*} Amongst its recommendations, the study proposed that UNIDIR carry out further research on the development of international measures or mechanisms to improve transparency, accountability and oversight of armed UAVs.

Correspondingly, UNIDIR commenced a project on this topic in September 2016. As part of its research, UNIDIR convened four symposiums with invited government representatives, international organizations, academic experts and members of civil society to consider aspects of armed UAV proliferation and use. The first of these symposiums (on “Mapping Developments, Capabilities and Responses”) was held at the Palais des Nations in Geneva from 15 to 16 November 2016, and the second (on “Strengthening the Standards Applicable to the Use of Armed UAVs”) was held from 2 to 3 March 2017. Two further symposiums were held consecutively from 28 to 30 June 2017 in New York at the United Nations Headquarters; one to consider military perspectives and the other to explore options and opportunities for future multilateral dialogue on transparency, accountability and oversight issues.

In addition to thanking the funders of this project, the Governments of Germany and The Netherlands, and the Open Society Foundations, UNIDIR wishes to acknowledge the helpful contributions of all those people participating in the symposiums. Their perspectives and insights materially benefited the project and prompted many new ideas. Thanks to John Borrie, Elena Finckh and Kerstin Vignard for research and writing of the study and to its peer reviewers, Elizabeth Minor, Alex Moorehead, Lisa Oldring, Michael Spies, Rachel Stohl, and Wim Zwijnenburg. Also due thanks are Yasmin Afina, Michael Storey, Tae Takahashi, and Wilfred Wan at UNIDIR. John Borrie and Kerstin Vignard oversaw the project.

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^{*} United Nations Office for Disarmament Affairs (UNODA) (2015), *Study on Armed Unmanned Aerial Vehicles Prepared on the Recommendation of the Advisory Board on Disarmament Matters*, New York. Available from <http://www.un.org/disarmament/publications/more/drones-study/drones-study.pdf>.

Introduction

In recent decades, unmanned aerial vehicles (UAVs)—often referred to as aerial drones, or just drones—have become commonplace in a widening range of roles in society, from agriculture and package delivery to environmental monitoring and aerial photography. Globally, the aerial drone market is large and growing: one estimate predicts it will more than quadruple in value between 2015 and 2022 to surpass USD 22 billion, with the value of military sales growing as part of it.¹ Far from being an emergent or short-lived development, UAVs are here to stay.

This study is primarily interested in a small subset of UAV functionality, namely their use in the context of military operations and the delivery of armed force. Even though lethal operations are currently a small portion of military missions involving UAVs, the specific ways in which these drones are used to apply armed force have implications that are important for a number of practical, ethical and legal reasons. Yet at present these practices, their justifications, and the degree and nature of accountability for violations of international law are not widely understood, not least because possessors and users have not been uniformly transparent about them.

Militaries first developed UAVs early in the 20th century. However, various technological obstacles constrained what these systems could usefully or reliably do, and thus initially prevented their widespread acceptance.² By the 1960s, the United States had developed sufficiently sophisticated UAV technology to carry out surveillance missions in the Viet Nam conflict, and Israel's military used drones in the 1982 Lebanon War to locate targets that its piloted aircraft later destroyed. In the 1990s, the United States deployed unarmed *Predator* UAVs for surveillance during the Balkan conflicts.³ Interest grew from around this time in arming UAVs. Pressure was mounting on certain militaries to balance “force protection against moral and legal demands by removing human combatants”,⁴ particularly in view of the demands of operations in Iraq and Afghanistan for Western forces. Meanwhile, intelligence agencies also started to use armed drones in covert operations in areas outside the military battlefield such as in Yemen, Pakistan and Somalia. These operations generated controversy and have put armed UAV use on the international agenda, as there are concerns about civilian casualties, the absence of a clear legal framework for use, and the perceived lack of transparency and accountability mechanisms.⁵

Today, approximately 90 countries deploy UAVs for military use. These militarized UAVs are of many shapes and sizes. The large majority of these systems are not armed. The smallest known military system currently in use is the *PD Black Hornet*,⁶ small enough to fit in the palm of a hand,⁷ whereas

¹ Christopher Diamond, “Global drone market expected to surpass \$22B by 2022”, *Defense News*, 3 May 2017. Available from <http://www.defensenews.com/air/2017/05/03/global-drone-market-expected-to-surpass-22b-by-2022>.

² Océane Zubeldia, *Histoire des drones*, Perrin, 2012, pp. 32-33.

³ Michael C. Horowitz, Sarah E. Kreps and Matthew Fuhrman, “Separating Fact from Fiction in the Debate Over Drone Proliferation”, *International Security*, 41(2), 2016, pp. 7-42, p. 10.

⁴ Marcus Schulzke, *The Morality of Drone Warfare and the Politics of Regulation*, Springer, 2016, p. 5.

⁵ See Chris Cole, “Rise of the Reapers: A Brief History of Drones,” *Drone Wars UK*, 6 October 2014. Available from <https://dronewars.net/2014/10/06/rise-of-the-reapers-a-brief-history-of-drones>. For an account of the first use of UAVs to conduct a targeted lethal strike in Afghanistan in 2001 see The Sunday Times, “US Kills Al Qaeda Leaders by Remote Control”, 18 November 2001. Available from <http://www.foxnews.com/story/2001/11/19/us-kills-al-qaeda-leaders-by-remote-control>. See also Chris Woods, “Ten years since first deadly drone strike, industry gathers in London”, *The Bureau of Investigative Journalism*, 21 November 2011. Available from <https://www.thebureauinvestigates.com/stories/2011-11-21/ten-years-since-first-deadly-drone-strike-industry-gathers-in-london>; and Richard Whittle, “How We Missed Mullah Omar”, *Politico*, 16 September 2014. Available from http://www.politico.com/magazine/story/2014/09/how-we-missed-mullah-omar-111026_full.html?print#.Wbt8MdMjGRs. Others suggest the first CIA drone strike took place in February 2002 when a tall man believed to be Osama Bin Laden was targeted. See John Sifton, “A Brief History of Drones”, *The Nation*, 27 February 2012. Available from <https://www.thenation.com/article/brief-history-drones>.

⁶ Hope H. Seck, “Marines Testing Out World’s Smallest Drone”, *Defensetech*, 27 September 2016. Available from <https://www.defensetech.org/2016/09/27/marines-are-testing-out-the-worlds-smallest-drone>.

⁷ FLIR Unmanned Aerial Systems, “PD-100 Black Hornet PRS” (accessed 20 April 2017). Available from <http://www.proxdynamics.com/products/pd-100-black-hornet-prs>.

the largest UAVs, such as the *RQ-4 Global Hawk*, are comparable in size to a small passenger aircraft.⁸ UAVs are used for a variety of purposes including reconnaissance, surveillance, establishing military data links and supply delivery,⁹ in addition to those deployed to deliver armed force through targeted strikes.¹⁰ Armed UAVs are even being developed for use in missile defence.¹¹

In the last decade there appears to have been a substantial boost in the deployment of armed UAVs in military and intelligence operations around the world. These armed systems tend to be among the largest, most sophisticated—and most expensive—UAVs, which has probably helped to constrain their spread to date. Estimates vary, but depending on how one defines an armed UAV as many as 28 governments are believed to already possess these systems,¹² and many others have programmes in place to acquire these capabilities.¹³ Technological advances and more diversified actors are likely to increase the number and types of UAV operations involving the use of armed force. Although armed UAVs are already being used in targeted strikes, so far aerial drones have not been used in combat against other armed UAVs. This may change, however, and in the future, armed UAV missions could also extend to force protection, air-to-air combat¹⁴ and even deep-strike bombing missions into hostile and contested environments.¹⁵

Unlike conventional aircraft, UAVs can be operated remotely from a safe distance and be set to loiter above a target (or potential target) to allow their commanders to wait for an opportune moment to strike. Equipped with high precision weaponry such as air-to-ground missiles, armed UAVs offer the alluring, additional prospect of producing maximum effect while, in principle, being able to avoid or at least reduce “collateral damage”; that is, the death and injury of civilians and civilian infrastructure.¹⁶ Moreover, having no humans on board means that UAVs offer other advantages over crewed vehicles in the conduct of lengthy or dangerous missions, including in places considered otherwise too hazardous to operate in.¹⁷ Pilots and other specialists can change shift in the relative comfort and safety of home base, and indeed large teams can be deployed to identify and assess potential targets based on the UAV’s data feed.

Taken together, these characteristics make UAVs highly attractive to militaries,¹⁸ especially in those States seeking to respond with force to transnational terrorist threats in remote or difficult to access

⁸ Northrop Grumman Systems Corporation, “RQ-4 Block 30 Global Hawk Brochure” (accessed 9 August 2017). Available from http://www.northropgrumman.com/Capabilities/GlobalHawk/Documents/GH_Brochure_B30.pdf.

⁹ See for instance Jeremy Hsu, “Disposable drones could deliver supplies under fire”, *Wired*, 5 August 2017. Available from <https://www.wired.com/2017/05/disposable-drones-deliver-supplies-enemy-fire>.

¹⁰ Kelley Saylor, *A World of Proliferated Drones—A Technology Primer*, Center for New American Studies, June 2015, p. 20. Available from https://s3.amazonaws.com/files.cnas.org/documents/CNAS-World-of-Drones_052115.pdf.

¹¹ David E. Sanger and William J. Broad, “Downing North Korean Missiles Is Hard. So the U.S. Is Experimenting”, *New York Times*, 16 November 2017. Available from <https://www.nytimes.com/2017/11/16/us/politics/north-korea-missile-defense-cyber-drones.html>.

¹² See New America Foundation, “Who has What: Countries with Armed Drones” (accessed 5 October 2017). Available from <https://www.newamerica.org/in-depth/world-of-drones/2-who-has-what-countries-drones-used-combat>. This source includes in its list several European States that belong to a programme to develop the *nEUROn* stealth unmanned combat aerial vehicle advanced demonstrator, which so far as is known is not an operational armed UAV system. According to this source, nine States have used armed UAVs in combat (U.S., Israel, UK, Pakistan, Nigeria, Iran, Azerbaijan, Iraq and Turkey).

¹³ Horowitz, Kreps and Fuhrman (2016), *op. cit.*, p. 11. Almost a dozen States, including the United States, United Kingdom, Israel, China, Iran and Saudi Arabia, now possess armed UAVs, and many others—including India—are racing to acquire them. In 2015, for example, Iraq, Nigeria and Pakistan respectively used Chinese-manufactured armed UAVs in combat for the first time against domestic insurgents.

¹⁴ Saylor (2015), *op. cit.*, and David Hambling, *Swarm Troopers: How Small Drones Will Conquer the World*, Archangel Ink, 2015.

¹⁵ Jerry Hendrix, “Retreat from Range: The Rise and Fall of Carrier Aviation”, Center for a New American Security, 2015. Available from <http://www.cnas.org/retreat-from-range#.ViXquARrKV4>.

¹⁶ Micah Zenko and Sarah Kreps, “Limiting Armed Drone Proliferation,” Council on Foreign Relations, June 2014, p. 4. Available from https://www.cfr.org/sites/default/files/pdf/2014/06/Limiting_Armed_Drone_Proliferation_CSR69.pdf.

¹⁷ See also US Department of Transportation, *Unmanned Aircraft System (UAS) Service Demand 2015-2035: Literature Review & Projections of Future Usage*, Volpe National Transportation Systems Center, 2013. Available from <https://fas.org/irp/program/collect/service.pdf>.

¹⁸ Zenko and Kreps (2014), *op. cit.*, p. 4.

areas. This kind of use has raised particular concerns, as will be discussed.¹⁹ A variety of actors have called for better controls, oversight and transparency about armed UAVs, as well as greater clarity about the precise norms and policies that States apply to their use.²⁰ Issues around United States policies on armed UAVs have received the most detailed attention—not least because its government pioneered the development of armed UAVs and for a time was the only user.²¹ But even as armed UAVs become a “key cog”²² in United States military and intelligence operations, it has struggled to devise and implement policies on transparency and accountability that maintain its desired level of operational security while answering concerns raised at the United Nations,²³ as well as in the United States legislature, the media, and among the general public about its conduct of the “drone war”.²⁴ This is in part because of the use of armed UAVs by covert armed forces, including paramilitary divisions of intelligence agencies, can frustrate ordinary efforts to ensure accountability for violations of international law.²⁵

If the trend of armed UAV use in targeted strikes continues and these systems spread to a wider group of States, the issues that the use of armed UAVs raises will become more acute. It suggests there is a pressing need to consider potential options and alternatives for transparency, accountability and oversight of armed UAV use at the international level in order to protect civilians, maintain and enhance the rule of law, and contribute to international stability.

In section I of this study, some basic understandings are elaborated, including what is meant by transparency, accountability and oversight, key characteristics of armed UAVs, major concerns about them, and international responses to date. In section II the study maps existing mechanisms applicable to holdings and transfers of armed UAVs in order to identify gaps as well as potential for future enhancement. Section III looks at how international law regulates the use of armed UAVs, and why it has been challenging for the international community to come to grips with their use in targeted strikes. In section IV, areas for international cooperation are identified with a view to improving transparency, accountability and oversight of armed UAVs, including potential elements and forums. In the final section, the study offers UNIDIR’s findings and suggests a way forward for States and others to consider.

¹⁹ Human Rights Watch et al., “Joint Letter to the UN Human Rights Council on Targeted Killings and the Use of Armed Drones,” 17 September 2014. Available from <https://www.hrw.org/news/2014/09/18/joint-letter-un-human-rights-council-targeted-killings-and-use-armed-drones>; Human Rights Watch et al., “Joint Letter to President Obama Regarding ‘Targeted Killings’ and Drone Strikes,” 13 May 2015. Available from <https://www.hrw.org/news/2015/05/13/joint-letter-president-obama-regarding-targeted-killings-and-drone-strikes>; Office of the United Nations High Commissioner for Human Rights (OHCHR), *Summary of the Human Rights Council interactive panel discussion of experts on the use of remotely piloted aircraft or armed drones in compliance with international law*, UN Document A/HRC/28/38, 15 December 2014.

²⁰ See for instance PAX Netherlands, *Global Ambitions for Armed Drones*, PAX Policy Brief, September 2017. Available from <https://www.paxvoorvrede.nl/media/files/global-ambitions-for-armed-drones-pax-policy-brief.pdf>; and European Forum on Armed Drones, “Call to Action on Armed Drones”, (accessed July 2016). Available from <http://www.efadrones.org/call-to-action>.

²¹ See Columbia Law School Human Rights Clinic and Sana’a Center for Strategic Studies, *Out of the Shadows: Recommendations to Advance Transparency in the Use of Lethal Force*, June 2017. Available from https://www.outoftheshadowsreport.com/s/106066_HRI-Out-of-the-Shadows-WEB-1-wfwg.pdf. For independent data collected on United States drone strikes, see “Drone Wars: The Full Data”, The Bureau of Investigative Journalism, <https://www.thebureauinvestigates.com/stories/2017-01-01/drone-wars-the-full-data>.

²² Josh Smith, “Drones emerge from shadows to become key cog in U.S. war machine”, *Reuters*, 7 June 2016, <https://www.reuters.com/article/us-afghanistan-drones-insight/drones-emerge-from-shadows-to-become-key-cog-in-u-s-war-machine-idUSKCN0YTOU0>.

²³ See Human Rights Committee, *Concluding observations on the fourth periodic report of the United States of America*, United Nations Document CCPR/C/USA/CO/4, 23 April 2014, paragraph 9.

²⁴ See for instance The Editorial Board, “The Secret Rules of the Drone War”, *New York Times*, 9 July 2016. Available from <https://www.nytimes.com/2016/07/10/opinion/sunday/the-secret-rules-of-the-drone-war.html>.

²⁵ See Larry Lewis and Diane Vavrichek, *Rethinking the Drone War: National Security, Legitimacy, and Civilian Casualties in U.S. Counterterrorism Operations*, Marine Corps University Press/CNA, 2016. Available from <https://fas.org/man/eprint/drone-war.pdf>.

I. Mapping the issues

Transparency, accountability and oversight

Before proceeding further, let us briefly consider what is meant by transparency, accountability and oversight for the purposes of this study.

Transparency is “a foundational principle “that runs through international law”,²⁶ as well as a necessary procedural element for the fulfilment of specific substantive obligations. In arms control, transparency is also traditionally considered an important confidence-building measure. A State’s willingness to be transparent about its capabilities, policies and operations, for example, can help to build or restore trust in its peaceful intentions. More broadly, transparency is often associated with public access to information and good governance.²⁷ For example, governments are considered more trustworthy when they are open about their capabilities and intentions, whereas governments that withhold information may be seen as threatening or even acting in an unethical or illegal manner.

Nevertheless, access to information alone will not in itself produce good governance, nor will it necessarily build or restore trust in government institutions. Understanding transparency narrowly in terms of access to information fails to capture the full breath of this concept.²⁸ That is because transparency is also “the degree to which information is available to outsiders that enable them to have informed voice in decision making and/or to assess the decisions made by insiders”; in other words, allowing “outsiders to hold decision makers accountable”.²⁹ Transparency thus links access to information with accountability and oversight—in short, the existence of checks and balances on power.

Accountability in turn implies consequences for wrongdoing and efforts to prevent it from reoccurring.³⁰ It relies not only on transparency, but also on effective oversight mechanisms that test compliance and identify wrongdoing, and on institutions that ensure justice, imposing penalties or punishment where necessary. Accountability implies a relationship of power.³¹ It includes a duty to investigate alleged violations, prosecute those responsible, and provide victims with remedy and reparation, as well as to prevent violations from recurring.³² There is thus the connotation of a positive obligation to self-evaluate and actively seek structural improvements to prevent re-occurrence.

Oversight, in this study, is considered in two distinct contexts, although these bear some relationship to one another. The first context, as mentioned above, is that of a domestic component within a State’s official processes of transparency and accountability for armed UAV possession, use, and its consequences. The second context in which oversight is considered is that of standards and monitoring mechanisms for armed UAV use at an international level. At present, no international

²⁶ See Columbia Law School Human Rights Clinic et al. (June 2017) *op. cit.*, p. 110.

²⁷ Ann Florini (ed.), “Introduction: The Battle Over Transparency,” in *The Right to Know: Transparency for an Open World*, Columbia University Press, 2007. For a comprehensive analysis of the term see Andrea Bianchi and Anne Peters (eds.), *Transparency in International Law*, Cambridge University Press, 2013, pp. 7-8. See also UNODA (2015) *op. cit.*, Chapter IV, which noted that transparency also extends to sharing information bilaterally between governments and with international organizations etc.

²⁸ See Bianchi and Peters (2013), *op. cit.*

²⁹ Florini (2007), *op. cit.*, p. 5.

³⁰ See also Christophe Paulussen, Jessica Dorsey and Bérénice Boutin, “Towards a European Position on the Use of Armed Drones? A Human Rights Approach”, The International Centre for Counter-Terrorism—The Hague, 2016, p. 12.

³¹ Robert O. Keohane, “The Concept of Accountability in World Politics and the Use of Force”, *Michigan Journal of International Law*, vol. 24, 2003, pp. 1125–6.

³² United Nations General Assembly, *Basic Principles and Guidelines on the Right to a Remedy and Reparation*, United Nations Document A/RES/60/147, 2005, paragraphs 1-3. Available from

<http://www.ohchr.org/EN/ProfessionalInterest/Pages/RemedyAndReparation.aspx>.

oversight mechanisms exist specifically for armed UAVs, although armed UAV use has repeatedly come up in United Nations human rights bodies. One question this study intends to prompt is whether there is a role for such international oversight, and realistically what that might be.

Characterizing armed UAVs

For the purposes of this study, an armed UAV is understood as a remotely piloted aircraft without a human on board that has been primarily designed or modified to deliver armed force.³³ This does not include autonomous UAVs, which might be developed and deployed in the future and could be considered as a subcategory of UAVs. However, this study is exclusively concerned with the specific challenges for international peace and security of armed UAVs that are **remotely operated**.

This study further considers an armed UAV as a platform designed to be **recoverable** after use, and which is distinct from its weapon payload. This is an important characteristic distinguishing armed UAVs from loitering munitions or missiles, which are single-use,³⁴ or “flying IEDs”—unarmed drones modified to carry explosives that are intended by the user to be destroyed on the target.³⁵ Depending on the type, an armed UAV may carry a lethal payload of several missiles or other munitions.

Armed UAVs also tend to be **persistent** in that they have the ability to loiter over a target for extended periods of time, providing operators with unprecedented flexibility to choose both when and where to strike. For example, modern military UAV platforms such as the *MQ-9B Reaper* or the *CH-4*³⁶ can loiter over a target for up to 40 hours—something that might, in principle, be further extended in the future through airborne refuelling and technological innovation. In contrast, the loitering time and range of munitions are typically far lower.³⁷

³³ Numerous UAV definitions exist. For example, the Wassenaar Arrangement defines a UAV as “Any ‘aircraft’ capable of initiating flight and sustaining controlled flight and navigation without any human presence on board.” See Wassenaar Arrangement Definitions, Cat 9 “UAV”, ML10, “List of Dual Use Goods and Technologies and Munitions List (16) 1 Corr.1,” 17 February 2017, p. 228. Available from <http://www.wassenaar.org/wp-content/uploads/2016/12/List-of-Dual-Use-Goods-and-Technologies-and-Munitions-List-Corr.pdf>. The United Kingdom subcategorises unmanned aircraft, unmanned aircraft systems, remotely piloted aircraft and remotely piloted aircraft systems. See United Kingdom Ministry of Defence, *Unmanned Aircraft Systems* (Joint Doctrine Publication 0-30.2), 2017, p. 12. Available from <https://www.gov.uk/government/publications/unmanned-aircraft-systems-jdp-0-302>.

³⁴ This distinction is important as today UAVs, both armed and unarmed, are used more like aircraft. This was different in the 1980s when they were used as one-way target UAVs. See Elisa Catalano Ewers, Lauren Fish, Michael C. Horowitz, Alexandra Sander and Paul Scharre, *Drone Proliferation: Policy Choices for the Trump Administration*, Center for a New American Security, June 2017. Available from <http://drones.cnas.org/wp-content/uploads/2017/06/CNASReport-DroneProliferation-Final.pdf>.

³⁵ This study acknowledges that it is possible to use UAVs in similar ways to missiles. UAVs might, for example, be used to deliver WMD. The Missile Technology Control Regime (MTCR) therefore applies to UAVs above a maximum range of 300km and a payload greater than 500kg. Non-State armed groups have reportedly mounted small quantities of explosives on small UAVs to try to destroy what they can hit, or constitute booby traps. See U.E. Franke (2016), “Flying IEDs: The Next Big Threat?”, 13 October, War on the Rocks. Available from <https://warontherocks.com/2016/10/flying-ieds-the-next-big-threat>. See also M. Jacobsen (2016), “Why the Flying IED Threat Has Barely Started,” War on the Rocks, 19 October. Available from <https://warontherocks.com/2016/10/why-the-flying-ied-threat-has-barely-started>.

³⁶ See General Atomics, “MQ-9B RPA”. Available from <http://www.ga-asi.com/mq-9b>; and Kelvin Wong, “China’s CH-4 armed reconnaissance UAV receives upgrades”, *IHS Jane’s International Defence Review*, 4 August 2017. Available from <http://www.janes.com/article/72877/china-s-ch-4-armed-reconnaissance-uav-receives-upgrades>.

³⁷ Dan Gettinger and Arthur Holland Michel, “Loitering Munitions in Focus”, Center for the Study of the Drone at Bard College, 2017. Available from <http://dronecenter.bard.edu/files/2017/02/CSD-Loitering-Munitions.pdf>. Loitering munitions, like UAVs, are designed to hover over a target for extended periods of time. However, unlike UAVs, existing loitering munitions are designed to be portable and not meant to be recovered. Moreover, loitering periods and range differ; most loitering munitions have a 5-400km range, endurance from 30 minutes to 7 hours, and often rely extensively on software for autonomous target identification. Conversely the types of UAVs used most frequently for lethal targeted operations are larger and currently have a range of up to 3000km, an endurance of up to 40 hours, and, most importantly, targets are identified and selected remotely by human operators. Currently, differences in technical capabilities mean that each type of system lends itself to different uses. For example, loitering munitions are predominantly used to provide units on the ground with precision munitions. Armed UAVs are remotely operated to facilitate greater control over target selection and engagement. See David Hambling, “Loitering Munition Availability Expanding

While armed UAVs (remotely piloted, recoverable and persistent) are the main focus of this study, it is recognized that other UAVs may also be used to deliver or enable force to be delivered to a target. UAVs are already used, for example, to find, observe, and loiter over specific areas or locations, and even mark targets with lasers for attack by other military assets such as manned aircraft or land-launched missiles, mortars or artillery. Concerns arising from the use of such unarmed systems may thus overlap, to some extent, with those of armed UAVs. The findings of this study may therefore be relevant to unarmed UAVs in some cases. For reasons of clarity, however, this study will only explicitly concern itself with armed UAVs unless otherwise stated.

Key concerns about use and proliferation of armed UAVs

In spite of the advantages mentioned above, armed UAVs raise some risks for international peace and security. The same characteristics that make them attractive to militaries can make armed UAVs particularly susceptible to misuse. Moreover, armed UAVs are increasingly being used in ways in which the applicable legal paradigm and principles are disputed. As will be explored, the current situation is unsatisfactory for promoting civilian protection in conflict, upholding the rule of law (for instance, concerning “targeted killing”), and helping to ensure international stability.

In 2015, UNODA prepared a study on armed UAVs pursuant to a recommendation of the Secretary-General’s Advisory Board on Disarmament Matters, with assistance from UNIDIR and the Human Rights Institute at the Columbia University School of Law. The study,³⁸ itself drawing on sources such as a report by the United Nations Special Rapporteur on extrajudicial, summary or arbitrary executions in 2013,³⁹ identified five particular trends of concern about the use of armed UAVs:

1. **Altering incentives in the use of force:** The use of armed UAVs could render the use of force more acceptable both for policy makers and in public perception, particularly in user States, eroding the notion of the use of lethal force as a means of “last resort”⁴⁰ and “of social or political barriers to the use of force”.⁴¹ Possessor States might be inclined to engage more quickly or frequently in armed attacks in the belief that armed UAVs permit the use of force relatively precisely, and that risk to one’s own forces is drastically reduced.⁴²
2. **Tempting States to interpret legal frameworks to permit fuller exploitation of the expanded capabilities of armed UAVs:** A related but distinct concern to the first point above is that armed UAVs might enable, if not incentivize, behaviour that erodes important legal norms meant to restrain the way in which force is used. On the one hand, sophisticated armed UAV

Internationally”, *Aviation Week & Space Technology*, 14 April 2016. Available from <http://aviationweek.com/defense/loitering-munition-availability-expanding-internationally>.

³⁸ United Nations Office for Disarmament Affairs (UNODA), *Study on Armed Unmanned Aerial Vehicles Prepared on the Recommendation of the Advisory Board on Disarmament Matters*, United Nations, October 2015, pp. 26-32.

³⁹ Christof Heyns, *Report of the Special Rapporteur on extrajudicial, summary or arbitrary executions*, United Nations Document A/68/382, 13 September 2013. Available from <http://justsecurity.org/wp-content/uploads/2013/10/UN-Special-Rapporteur-Extrajudicial-Christof-Heyns-Report-Drones.pdf>.

⁴⁰ See Chris Cole, “What’s Wrong with Drones?”, *Drone Wars UK*, 20 March 2014. Available from <https://dronewars.net/2014/03/20/whats-wrong-with-drones>.

⁴¹ UNODA (2015), *op. cit.*, p. 41.

⁴² See for instance Anna Di Lellio and Emanuele Castano, “The danger of ‘new norms’ and the continuing relevance of IHL in the post-9/11 era,” *International Review of the Red Cross*, 97 (900) 1277-1293, p. 1285: “For example, conducting a safer, remote war in which the vaunted “surgical precision” is partly illusory might make assassinations more frequent and less concerned with the principles of distinction and proportionality. The key questions that absorb legal and ethical debates on targeted killing are how accurate the killing really is and who is targeted.” In addition, some claim that UAV operators are more “trigger happy” due to the fact that the target of an attack and the consequences of the attack are physically far removed and psychologically distant—although recently this psychological distance has been contested as some UAV operators have developed post-traumatic stress-related disorders. See also Chris Cole, Mary Dobbing and Amy Hailwood, “Convenient Killing—Armed Drones and the ‘Playstation’ Mentality,” September 2010. Available from <https://dronewarsuk.files.wordpress.com/2010/10/conv-killing-final.pdf>.

technology has enabled users of these systems to claim they can apply force with unprecedented precision, thus better permitting them to comply with proportionality and distinction requirements under international law, while achieving their strategic objectives, for instance in counter-terrorism. On the other hand, armed UAVs have been most frequently used in situations that are characterized by a lack of shared understanding of *how* international norms and obligations apply, which has a bearing on *who* is considered a legitimate target in a given circumstance. In light of these ambiguities some have resorted to more expansive interpretations, and in some cases proposed new justifications for the use of force that are not supported by current international law.

3. **Use of armed UAVs by covert armed forces in ways that do not permit sufficient transparency or accountability:** While most modern militaries have solid accountability structures and some level of public transparency, covert or paramilitary forces have historically been less transparent.⁴³ This concerns both individual strikes and the policies applicable to armed UAVs, which renders them less amenable to public scrutiny and makes investigations of alleged violations more difficult. The structural lack of transparency is further exacerbated by the fact that armed UAVs have been used by States predominantly in remote areas, thus not only with “minimal footprint”, but also in situations that make investigations of alleged violations of international law inherently more difficult.
4. **Increasing use by non-state armed groups or even individuals:** Compared to conventional combat aircraft, smaller relative size and lower cost of many UAVs makes these systems attractive to non-state actors who seek to develop lethal airborne capabilities.⁴⁴ Larger military UAVs are likely to remain inaccessible to non-state actors, given the extensive logistical support their operation requires. But smaller commercial UAVs and mid-size UAVs have already been modified and misused by non-state actors in Iraq and Syria to deliver lethal force in the form of improvised explosive devices,⁴⁵ something that has attracted international condemnation.⁴⁶ Meanwhile, the international community is conscious of the risk that UAVs might be used to deliver weapons of mass destruction (WMD).⁴⁷
5. **Automation and compressing the “time to strike” process:** Armed UAV technology is developing quickly and future models are likely to offer increased range, speed, and accuracy.⁴⁸ More sophistication,⁴⁹ including automation, is likely to further increase the military strategic advantage of this technology by reducing the time between target identification and possible target engagement.⁵⁰ This has raised concerns about the ethical, legal, and security consequences of reducing or even removing the human from the decision

⁴³ UNODA (2015), *op. cit.*, p. 44. See also Ben Emmerson (2013), *op. cit.*, paragraphs 47-48.

⁴⁴ Larry Friese et al., *Emerging Unmanned Threats: The Use of Commercially-Available UAVs by Armed Non-State Actors* Armament Research Services and PAX, 2016. Available from <https://www.paxforpeace.nl/stay-informed/news/significant-growth-in-non-state-armed-groups-use-of-commercial-uavs>.

⁴⁵ See Franke (2016), “Flying IEDs”; Saylor (2015), *A World of Proliferated Drones*; Jacobsen (2016), “Why the Flying IED Threat Has Barely Started.”

⁴⁶ Security Council, United Nations Document S/RES/2370, 2 August 2017.

⁴⁷ Although UAVs have not yet been used to deliver WMD, States have undertaken numerous efforts to address this issue within existing mechanisms, such as the MTCR and the Committee established pursuant to United Nations Security Council resolution 1540 (2004). There are also increasing concerns that mid-sized UAVs could open the possibility to any actors to deliver dangerous chemical or biological weapons. See Saylor (2015), *op. cit.*, p. 15.

⁴⁸ The greatest innovation is occurring and likely to continue to occur in the very small UAVs referred to as nano and micro drones. See Saylor (2015), *op. cit.*, p. 19.

⁴⁹ Rapid developments are most likely in the area of airframe, propulsion, communications, command and control, sensors and information processing. See US Department of Transportation (2013), *op. cit.*

⁵⁰ UNODA (2015), *op. cit.*, p. 47.

to use and deploy lethal force.⁵¹ However, another perspective is that the capacity of UAVs to loiter and collect data about the target and its environment help commanders use armed force in conformity with international legal rules.

As mentioned earlier, to date the number of users of armed UAVs has been small, and mostly in asymmetric situations in which one side possesses these systems and the other does not. However, as armed UAV systems spread—either through endogenous development in a greater number of States or because, as is more likely, armed UAVs are sold or transferred—these trends in use may be expected to have increasingly acute effects for international peace and security. In combination, the trends above might prove to be destabilizing regionally and even globally.

Recent international responses

States are increasingly aware of these potential challenges of armed UAVs for international peace and security. Some have undertaken efforts to clarify and strengthen the application of existing mechanisms to address issues related to transfers and holdings of armed UAVs, among these the United Nations Register of Conventional Arms and the Wassenaar Arrangement. However, pressing concerns related to the *use* of armed UAVs have remained mostly unaddressed at the international level.⁵²

States have undertaken some measures on their own initiative. The United States Government announced efforts in mid-2016 to increase transparency about the impact of its drone strikes,⁵³ although this was criticized as insufficient by some experts and advocacy groups.⁵⁴ In October 2016, the new policy was followed by the emergence of a United States-led *Joint Declaration for the Export and Subsequent Use of Armed or Strike-Enabled Unmanned Aerial Vehicles* (hereafter referred to as the “Joint Declaration”: see Appendix 1).⁵⁵ Significantly, the countries supporting this political declaration agreed to “take appropriate transparency measures to ensure the responsible export

⁵¹ See for instance Christof Heyns (2013), *op. cit.*

⁵² United Nations Meeting Coverage and Press Release, “Delegates Consider Deadly Use of Drone Technology as Third Committee Hears More Presentations by Experts on Human Rights Obligations”, 68th General Assembly Third Committee, GA/SHC/4078, 25 October 2013. Available from <https://www.un.org/press/en/2013/gashc4078.doc.htm>; Human Rights Committee (2014), CCPR/C/USA/CO/4, *op. cit.*, paragraph 9; Office of the United Nations High Commissioner for Human Rights, *Summary of the Human Rights Council interactive panel discussion of experts on the use of remotely piloted aircraft or armed drones in compliance with international law*, United Nations Document A/HRC/28/38, 15 December 2014; See also Ben Emmerson (2013), *op. cit.* and United Nations Document A/HRC/25/59, 11 March 2014; Christof Heyns (2013), *op. cit.*

⁵³ The White House, “Executive Order—United States Policy on Pre- and Post-Strike Measures to Address Civilian Casualties in U.S. Operations Involving the Use of Force”, Office of Press Secretary, 1 July 2016. Available from <https://obamawhitehouse.archives.gov/the-press-office/2016/07/01/executive-order-united-states-policy-pre-and-post-strike-measures>. This followed an Executive Order three years before containing stricter guidelines for the US drone campaign run by the Central Intelligence Agency and the Pentagon, but which was criticised for lacking transparency mechanisms to ensure it was being implemented. See The White House, “Factsheet: U.S. Policy Standards and Procedures for the Use of Force in Counterterrorism Operations Outside the United States and Areas of Active Hostilities”, 23 May 2013. Available from https://obamawhitehouse.archives.gov/sites/default/files/uploads/2013.05.23_fact_sheet_on_ppg.pdf. See also New York Times Editorial Board (July 2016), *op. cit.*

⁵⁴ See Mandy Simon, “Amnesty International USA Responds to Drone Casualty Disclosure,” *Amnesty International USA*, 1 July, 2016. Available from <http://www.amnestyusa.org/news/press-releases/amnesty-international-usa-responds-to-drone-casualty-disclosure>; Rachel Stohl, “Analysis: Obama Administration’s Release of Drone Casualty Data, Executive Order”, Stimson Center, 1 July 2016. Available from <https://www.stimson.org/content/analysis-obama-administration-release-drone-casualty-data-executive-order>; Jack Serle, “Obama Drone Casualty Numbers a Fraction of Those Recorded by the Bureau”, *The Bureau of Investigative Journalism*, 1 July 2017. Available from <https://www.thebureauinvestigates.com/stories/2016-07-01/obama-drone-casualty-numbers-a-fraction-of-those-recorded-by-the-bureau>.

⁵⁵ U.S. Department of State, *Joint Declaration for the Export and Subsequent Use of Armed or Strike-Enabled Unmanned Aerial Vehicles (UAVs)*, 28 October 2016. Available from <https://2009-2017.state.gov/r/pa/prs/ps/2016/10/262811.htm>.

and subsequent use of these systems”. At the time of writing, 53 States had supported the Joint Declaration.⁵⁶

The Joint Declaration initiative has been the subject of some criticism, in part because of its brevity, vagueness, and the voluntary nature of transparency measures it calls for (but does not specify), as well as for alleged lack of openness in its participation.⁵⁷ For example, while the importance of international law is highlighted, the Joint Declaration does not itself elaborate *how* this should apply. This is an acute issue as users of armed UAVs engaged in “targeted killing” against specified individuals or groups appearing to match a particular profile (so-called signature strikes) have sometimes expanded their legal justifications or even resorted to new ones.⁵⁸ It has already posed profound challenges for international human rights law (IHRL) and international humanitarian law (IHL), and in certain cases has led to violations of sovereignty that some experts have argued challenge basic tenets of international peace and security. Overall, participants in the four project symposiums convened by UNIDIR appeared to view the Joint Declaration as marking the beginning of a discussion, rather than constituting a sufficient response. Some felt it did not offer a clear roadmap or blueprint for the international community on matters of transparency, accountability or oversight of armed UAV use or possession.

Significantly, the 2016 Joint Declaration underlines that managing the issues raised by armed UAVs is not simply one of curbing their proliferation. This is important because the use of armed UAVs is not *mala in se* (an evil in itself): Armed UAVs have many lawful uses and an outright prohibition on this technology is not in prospect. These uses are drivers for States to acquire or develop armed UAV capabilities. Moreover, the kind of challenges for international law, peace and security that armed UAV use already raises strongly suggests the solution cannot be resolved by “responsible” use as determined nationally. If widespread proliferation of armed UAVs occurs without common understandings about accountability and oversight based on some measure of transparency with a view to mutual confidence building, then the results may be chaotic and undermine the rule of law.

A key finding of this study is that it is unlikely the challenges associated with armed UAVs can be addressed in an effective way without addressing standards pertaining to their use *in parallel with* measures to control their spread. Next, in section II and III, this study will look at existing mechanisms and standards pertaining to armed UAVs, and will consider ways forward on how to enhance transparency, accountability and oversight in section IV.

⁵⁶ See Appendix 1 for a list.

⁵⁷ Alex Moorehead and Sarah Knuckey, “Global Group of Civil Society Organizations Raise Concerns about U.S.-led Drone Export Initiative”, *Just Security*, 14 September 2017. Available from <https://www.justsecurity.org/44995/global-group-civil-society-organizations-raise-concerns-u-s-led-drone-export-initiative>.

⁵⁸ Proposing restrictive interpretations, see Amnesty International, *Key Principles on the Use and Transfer of Armed Drones*, September 2017, p. 1; Jessica Dorsey and Jessica Bonaquisti, *Towards an EU Common Position on the Use of Armed Drones*, June 2017. Available from [http://www.europarl.europa.eu/thinktank/fr/document.html?reference=EXPO_STU\(2017\)578032](http://www.europarl.europa.eu/thinktank/fr/document.html?reference=EXPO_STU(2017)578032); International Bar Association’s Human Rights Institute, *The Legality of Armed Drones under International Law: Background Paper*, 2017. Available from <http://bit.ly/drones-bp>; Elizabeth Wilmschurst CMG, *Principles of International Law on the Use of Force by States In Self-Defence*, Chatham House, 2005. Available from <https://www.chathamhouse.org/node/5469>; Nico Schrijver and Larissa van den Herik, “Leiden Policy Recommendations on Counter-Terrorism and International Law,” *Netherlands International Law Review* 53:3 (2010): 531–50; International Bar Association’s Human Rights Institute, “IBAHRI adopts Resolution on armed drone strikes amid major concerns of rapid increase of use”, Adopted on 25 May 2017,”. Available from <http://guernica37.org/2017/07/press-release-ibahri-adopts-resolution-on-armed-drone-strikes-amid-major-concerns-of-rapid-increase-of-use/>; and Daniel Bethlehem, “Notes and Comments—Principles Relevant to the Scope of a State’s Right of Self-Defense Against an Imminent or Actual Armed Attack by Nonstate Actors,” *The American Journal of International Law* 106 (2012): 769–77.

II. Standards applicable to the possession and trade of armed UAVs

A number of international agreements and treaties apply to armed UAV possession and trade. This section will describe how these different mechanisms apply to armed UAVs and, to this end, compare and contrast them. Rather than assessing each mechanism's effectiveness with regard to their respective goal, the aim is to assess here to what extent they *collectively* address armed UAV-specific issues introduced in section I, and to identify potential gaps.

Overview of existing mechanisms applying to armed UAV transfers and holdings

No mechanism exists to comprehensively address the issues raised by armed UAVs. Nonetheless, a number of mechanisms apply, or have been adapted to apply, in order to try to prevent the availability of armed UAVs for (a) use as delivery platforms for weapons of mass destruction (WMD); (b) their contribution to excessive accumulations of armaments, or (c) other misuse, in particular violations of international law. An overview of the mechanisms applicable to armed UAV transfers and holdings is provided in Appendix 2.

Weapons of mass destruction

For some time, States have been concerned that UAVs might be used to deliver nuclear, chemical or biological weapons—concerns reflected in steps they have taken in the context of United Nations Security Council resolution 1540 (2004), and the Missile Technology Control Regime (MTCR).

Security Council resolution 1540 (2004) prohibits States from assisting non-state actors to develop, acquire, or use nuclear, chemical or biological weapons and their means of delivery. To prevent proliferation of the prohibited material and their means of delivery, the resolution requires all States to adopt legislation and to establish domestic controls, including measures for physical protection, and for effective control of exports, transshipments, borders and end-use. Resolution 1540 does not itself list any particular technology, but rather covers any technology and related materials that might be used as means of WMD delivery. The primary reporting tool developed to facilitate States' mandatory reporting on implementing their obligations under Security Council resolution 1540 was adapted in 2013 to include unmanned delivery systems.⁵⁹

The **Missile Technology Control Regime (MTCR)**, established in 1987, is an informal export control regime that aims to ensure that its 35 "Partner" States exercise restraint in the transfer of technologies that "could make a contribution to delivery systems for" WMD.⁶⁰ To this end the MTCR comprises voluntary policy guidelines that help States to coordinate their national export licensing efforts for technology transfers. The MTCR applies to both armed and unarmed UAVs above a certain technical threshold, distinguishing between UAVs of the greatest sensitivity (Category I), and risky items (Category II), as well as related equipment, components, and production facilities specifically designed for these systems.⁶¹

⁵⁹ Security Council, United Nations Document S/RES/1540 (2004).

⁶⁰ MTCR Guidelines for Sensitive Missile-Relevant Transfers, paragraph 1: "Restraint will be exercised in the consideration of all transfers of items contained within the Annex." For list of MTCR partners see <http://mtcr.info/partners>.

⁶¹ See MTCR Equipment and Technology Annex (18 May 2017), Category I—Item 1.A and Category II—Items 19.A and 10. Category I restrictions apply to complete UAV systems (including cruise missiles, target drones and reconnaissance drones) capable of delivering at least a 500 kg "payload" to a "range" of at least 300 km. Category II Item 19.A applies to complete UAVs (including cruise missiles, target drones and reconnaissance drones), capable of a "range" equal to or greater than 300 km and UAVs possessing meeting a set of stated criteria namely autonomous flight control and navigation capability, controlled flight capability out of the direct vision range of a human operator and an aerosol dispensing system. See also Ewers et al. (2017), *op. cit.*, p. 9.

Although it does not apply to armed UAVs, the **Hague Code of Conduct (HCoC)** is also noteworthy. The HCoC was created in 2002 and contains provisions to restrain the development, testing and deployment of ballistic missiles capable of delivering WMD, and has use-related transparency measures. Essentially, the HCoC was developed to complement the MTCR.⁶² As such, it represents an example of adaptability in addressing particular challenges that do not necessarily sit easily within existing mechanisms, and so is of relevance in considering an international response to the issues around availability and use of armed UAVs.

Excessive accumulations of armaments

Several international mechanisms are concerned with detecting or preventing destabilizing accumulations of conventional arms, and as such armed UAV transfers and holdings fall within their scope.⁶³

The United Nations General Assembly established the **United Nations Register of Conventional Arms (UNROCA)** in 1991.⁶⁴ This register is intended to promote transparency in transfers and holdings of conventional arms as a means to provide early warning for conflict, to enhance confidence, and promote stability.⁶⁵ To this end, all States are encouraged to provide, on a voluntary basis, information about the number of arms they import and export in six categories, including combat aircraft (Category IV) and attack helicopters (Category V).⁶⁶ Although armed UAVs were thus implicitly covered, in 2016 United Nations Member States decided to explicitly include armed UAVs, in Category V and to change the title accordingly.⁶⁷

The **Wassenaar Arrangement** on Export Controls for Conventional Arms and Dual-Use Goods and Technologies is an informal export control regime established in 1996 to promote transparency and greater responsibility in transfers of conventional arms. Its transparency provisions for conventional arms transfers, including those of armed UAVs,⁶⁸ are based on those of the UNROCA.⁶⁹ Unlike the UNROCA, the Wassenaar Arrangement contains two lists: (i) a List of Dual-use Goods and Technologies and (ii) a Munitions List. Together these lists capture armed UAVs and their components,⁷⁰ making these subject to national transfer controls by members and (depending on their sensitivity) specific transparency requirements.⁷¹

⁶² Mark Smith, "The Hague Code of Conduct—Current Challenges and Future Possibilities", Fondation pour la Recherche Stratégique (accessed 26 April 2017). Available from <https://www.nonproliferation.eu/hcoc/wp-hcoc/uploads/2017/02/THE-HCOC-CURRENT-CHALLENGES-AND-FUTURE-POSSIBILITIES.pdf>.

⁶³ See for instance PAX, *Unmanned and Uncontrolled. Proliferation of unmanned systems and the need for improved arms export controls*, 2015. Available from <https://www.paxforpeace.nl/publications/all-publications/unmanned-uncontrolled>.

⁶⁴ General Assembly, *Transparency in Armaments*, United Nations Document A/RES/46/36, 6 December 1991. Available from <http://www.un.org/depts/ddar/Register/4636.html>.

⁶⁵ Notably, the UNROCA promotes transparency in conventional armaments to detect and "prevent excessive and destabilizing accumulation", A/RES/46/36 (1991), *op. cit.*, paragraph 2. See also paragraph 1.

⁶⁶ In addition, States are encouraged to provide background information on military holdings, procurement through national production and relevant policies. See A/RES/46/36 (1991), *op. cit.*, paragraph 10.

⁶⁷ General Assembly, *Transparency in armaments*, United Nations Document A/RES/71/44, 9 December 2016, operative paragraph 3. See also *Report on the continuing operation of the United Nations Register of Conventional Arms and its further development*, United Nations Document A/71/259, 29 July 2016.

⁶⁸ "Unmanned aerial vehicles, specially designed, modified, or equipped for military use including electronic warfare, suppression of air defence systems, or reconnaissance missions, as well as systems for the control and receiving of information from the unmanned aerial vehicles" as defined in the Wassenaar Arrangement Guidelines (2016), Appendix 3, Category 4.2.

⁶⁹ Section VI, Wassenaar Arrangement Guidelines & Procedures, including the Initial Elements, as of December 2016.

⁷⁰ Wassenaar Arrangement List of Dual-Use Goods and Technologies Category (2017), 9.A.12.a.

⁷¹ Section IV-VI, Wassenaar Arrangement Guidelines (2016). It should be noted that EU Community regime for the control of exports, transfer, brokering and transit on dual-use items (EC No 428/2009) provides further important, binding guidance for EU Member States to facilitate compliance with the Wassenaar Arrangement and other international mechanisms in order to strengthen national controls for the export of risky technologies.

The 2011 **Vienna Document of the Organization for Security and Co-Operation in Europe (OSCE)** contains important transparency and confidence building measures in addition to information exchange on major weapon and equipment systems such as military forces and defence planning.⁷² While the Vienna Document does not refer to any specific weapon systems, it is relevant to armed UAVs and complements the efforts mentioned above, particularly in view of its broad membership.⁷³

Misuse

Although international rules and mechanisms applicable to the use of armed UAVs are discussed in section III of this study, some mechanisms intended to curb use are mentioned below as they also relate to transfers and holdings.

States have an obligation codified in **Article 36 of 1977 Protocol I Additional to the 1949 Geneva Conventions** stipulating that:

In the study, development, acquisition or adoption of a new weapon, means or method of warfare, a High Contracting Party is under an obligation to determine whether its employment would, in some or all circumstances, be prohibited by this Protocol or by any other rule of international law applicable to the High Contracting Party.⁷⁴

This is also generally viewed as a customary international law norm, meaning that the obligation to review applies to all States. Relatedly, a United Nations Special Rapporteur, specifically referring to “remotely controlled and increasingly autonomous systems” recently noted the importance of legal reviews to determine whether their employment would “in some or all circumstances, violate the absolute prohibition of torture and other cruel, inhuman or degrading treatment or punishment.”⁷⁵ These national legal reviews are relevant to holdings and transfers of armed UAVs because if it is assessed nationally that employment of a given weapon, means or method or warfare would violate international law rules, then it follows that these activities should also not be permitted.

The **Arms Trade Treaty (ATT)** is an international legally binding instrument. Its goals include establishing the highest common international standards for regulating the trade in conventional arms and eradicating illicit trade and diversion in order to contribute to international peace and security, reduce human suffering, and promote cooperation.⁷⁶ The ATT holistically covers international transfers of conventional arms and it requires its member States to take the consequences of transfers into account when assessing exports; for example, denying those transfers if these would undermine or contribute to abuses of IHL or human rights law.⁷⁷ The ATT covers armed UAVs, which, at the time the ATT was negotiated, were considered to fall under category IV (combat aircraft) and category V (attack helicopters).

⁷² OSCE, “Vienna Document on Confidence- and Security-Building Measures,” 2011, paragraph 11: “The participating States will exchange data relating to their major weapon and equipment systems as specified in the provisions on Information on Military Forces within the zone of application for CSBMs”. Available from <http://www.osce.org/fsc/86597>.

⁷³ The OSCE has currently 57 Partner States including the US and Russian Federation in addition to most European and Central Asian states. See <http://www.osce.org/fsc/86597>.

⁷⁴ *Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol I)*, 8 June 1977, Article 36. Available from <https://ihl-databases.icrc.org/ihl/WebART/470-750045?OpenDocument>.

⁷⁵ United Nations General Assembly, *Report of the Special Rapporteur on torture and other cruel, inhuman or degrading treatment or punishment*, United Nations Document A/72/178, 20 July 2017, paragraph 59. He added that this duty is particularly significant in light of the “constant emergence and deployment of new technologies for use in law enforcement operations”.

⁷⁶ Arms Trade Treaty, New York, 2 April 2013, Article 1.

⁷⁷ Arms Trade Treaty, Article 7.

The 2016 ATT Conference of State Parties recommended that States report separately on their transfers of UAVs, taking advantage of the recently introduced UNROCA definition.⁷⁸

The **European Common Position on Arms Export** was established in 2008, replacing the 1998 European Union (EU) Code of Conduct on Arms Exports. The Common Position is legally binding and obliges all 28 EU Member States to regulate the export of military goods, including armed UAVs, based on the EU Common Military List and the EU Dual-Use List, which is regularly updated taking into account similar international lists, such as the Wassenaar Arrangement.⁷⁹ Like the ATT, the Common Position sets out criteria that should guide national licensing policies, including respect for international law. Importantly, it imposes stricter criteria than the ATT and also requires States to take into account behaviour of the importing state, for example its relation to terrorism, and the risk for diversion.

As discussed in section I, the United States-led **Joint Declaration for the Export and Subsequent Use of Armed or Strike-Enabled UAVs** is an effort to prepare the ground for common understandings and standards applicable specifically to these systems. However, the Joint Declaration is not legally binding on its subscribers, and as yet its aims have not been fleshed out into specific measures to be undertaken by all, nor has a monitoring mechanism been established.

Challenges and limitations of these mechanisms

The mechanisms described in the previous section, which all pertain to the availability of armed UAVs, face some common limitations.

The first challenge is that of **ensuring uniform transparency**. Many of these mechanisms contain important transfer restrictions or prohibitions of varying degrees of scope or specificity. Both the ATT (which is not yet universal in membership) and Security Council resolution 1540 impose binding obligations on States to limit certain kinds of transfers and establish appropriate export controls. While these contribute to providing a useful frame for the design of such national controls, there is scope for ambiguity that could lead to variation in national implementation. Of course, States participating in such mechanisms may exchange information about how they interpret their obligations within these regimes. With a mosaic of different mechanisms, there is a need to do this not only within mechanisms but also across them.

Even if this can be achieved, it does not overcome the problem of **how to resolve and harmonize differing interpretations and resulting practices**. This extends to export control regimes like the Wassenaar Arrangement and the MTCR. In contrast to the ATT and Security Council resolution 1540, these mechanisms provide detailed guidance for the implementation of export controls, for example by providing guidelines, control lists and definitions. However, these are not legally binding, and are only accepted by a proportion of the world's States—a proportion unlikely to increase significantly soon.

⁷⁸ Arms Trade Treaty, *Final Report of the Second Conference of State Parties*, United Nations Document ATT/CSP2/2016/5, 26 August 2016. Moreover, States Parties can fulfil their reporting obligations under the ATT by submitting their reports to the UNROCA, thus taking full advantage of the clarifications the UNROCA provided in 2016. According to Article 13(3) of the ATT, States can provide reports to the Secretariat “containing the same information” submitted to other United Nations frameworks such as the UNROCA.

⁷⁹ The Council of the European Union, Council Common Position 2008/944/CFSP of 8 December 2008, paragraph 16, Article 6 and Article 12. See also EU Common Military List, last updated 9 February 2015, ML10.

The challenge in achieving uniformity may be further illustrated by looking at **how armed UAVs are defined across differing regimes**. Security Council resolution 1540 refers to WMD means of delivery to capture “missiles, rockets and other unmanned systems capable of delivering nuclear, chemical, or biological weapons, that are *specially designed for such use*” (italics added).⁸⁰ The UNROCA and ATT apply to “unmanned fixed-wing or variable-geometry wing aircraft, designed, equipped or modified to engage targets by employing guided missiles, unguided rockets, bombs, guns, cannons or other weapons of destruction.”⁸¹ This definition appears to be both more specific and inclusive at first sight. Nevertheless, it is clear that—problematically—the characterization in resolution 1540 excludes unarmed systems that can easily be modified or equipped with weapons, a key characteristic of certain prominent armed UAVs.⁸²

In another approach, the MTCR does not distinguish between armed and unarmed systems, but instead subjects UAVs above certain technical thresholds to specific transfer restrictions. However, such a technical threshold has been subject to criticism, since producers can sidestep it relatively easily by designing systems just below those thresholds.⁸³ Moreover, innovation in UAV technology means incrementally smaller platforms might be used to deliver WMDs and fulfil other tasks that can currently only be performed by larger military specific UAVs, which is likely to put pressure on the technical thresholds.⁸⁴ The only mechanism that would appear to avoid these problems is the Wassenaar Arrangement, which broadly applies to UAVs that can fly beyond visual line-of-sight of the operator.

There is also the challenge of **reconciling issues around armed UAVs with the differing purposes of the mechanisms discussed** above. While these mechanisms have been adapted in the past to better address issues raised by armed UAVs—and may continue to do so in the future—the scope for improvement to better address issues associated with armed UAVs is necessarily limited to how much it overlaps with the specific goals and objectives of those regimes. These mechanisms are not ideally equipped to respond comprehensively to the *distinct* challenges raised by armed UAVs writ large, particularly those related to their use, alongside transfer issues. Moreover, attempting to improve the relevance of these mechanisms to UAVs could even weaken them with regard to their intended purposes.⁸⁵ The Joint Declaration, as discussed above, is a notable exception, although one that lacks specificity as of yet, particularly regarding “responsible” end-use. It is to standards applicable to the *use* of armed UAVs that this study now turns.

⁸⁰ Security Council resolution 1540 (2004), *op. cit.* Operative paragraph 3 also includes “related materials”, which are those that can be used for the design, development, production or use of such weapons.

⁸¹ United Nations General Assembly, *Transparency in armaments*, United Nations Document A/RES/71/44, 9 December 2016, operative paragraph 3. See also *Report on the continuing operation of the United Nations Register of Conventional Arms and its further development*, United Nations Document A/71/259, 29 July 2016, paragraph 81.

⁸² Experts at UNIDIR’s symposiums noted that some current military reconnaissance UAVs in use are specifically designed to be easily transformed into armed versions (e.g. the US *Reaper* and *Predator* drones). See also Andrea Shalal, “U.S. government approves Italy’s request to arm its drones”, *Reuters*, 5 November 2015. Available from <http://www.reuters.com/article/us-italy-usa-drones/u-s-government-approves-italys-request-to-arm-its-drones-idUSKCN0ST1VI20151104>.

⁸³ Zenko and Kreps (2014), “Limiting Armed Drone Proliferation,” *op. cit.*, pp. 17–18; and Michael C. Horowitz, “Drones aren't missiles, so don't regulate them like they are”, *Bulletin of the Atomic Scientists*, 26 June 2017. Available from <http://thebulletin.org/drones-arent-missiles-so-dont-regulate-them-they-are10859>.

⁸⁴ Horowitz (2017), *Ibid*; Dennis M. Gromley and Richard Speier, “Controlling Unmanned Aerial Vehicles: New Challenges”, *The Nonproliferation Review*, 2003, p. 9. Dennis M. Gromley and Richard Speier noted that this also concerns the Wassenaar Arrangement’s dual use-controls applying to armed UAVs since they rely on a technical threshold as well. See Wassenaar Arrangement List of Dual-Use Goods and Technologies Category 9.A.12.a.

⁸⁵ MTCR Participating States have the possibility to adapt its technical thresholds, for example to cover lighter UAVs under Category I. Conversely, an attempt to remove UAVs from Category I was made in 2012, albeit unsuccessfully.

III. Standards applicable to armed UAV use

The majority of concerns raised in regard to armed UAVs relate to their use, something that the analysis in section II indicates cannot be addressed solely by improving controls over holdings and transfers of armed UAV technology. A central challenge—one observed by participants at all of UNIDIR’s symposiums—is that while all States have affirmed the importance of compliance with international law applicable to the use of armed UAVs, there is not agreement among governments as to how specific international legal standards apply to such use. This, in addition to the considerable secrecy associated with some armed UAV use to date, raises significant challenges for accountability.

In this section, a very brief description is offered of how international law regulates the *use* of armed UAVs.⁸⁶ Second, some of the main challenges that this use creates are listed. It connects to a discussion in the third section about *why* armed UAV use seems to pose challenges for creating greater understanding and increasing accountability.

How does international law apply to the use of armed UAVs?

Three branches of international law are relevant to how the use of armed UAVs is governed: (i) the law relating to the inter-state use of force (*jus ad bellum*), (ii) international human rights law (IHRL), and (iii) international humanitarian law (*jus in bello*). The context in which an armed UAV is used is key to determining how and which of these branches of law apply.

Jus ad bellum contains rules that determine whether the use of force against another State—or on its territory—constitutes a breach of sovereignty and a violation of international law. It contains notable exceptions to the general prohibition on the use of force as codified by Article 2(4) of the United Nations Charter. These exceptions are self-defence against an armed attack (Article 51 of the Charter), or if the State using force has explicit Security Council authorization. A third relevant scenario is if the State using force has the express consent of the State on whose territory it is used.

Irrespective of whether an armed UAV strike is considered legal under *jus ad bellum* it must meet international legal rules and standards for the intentional use of armed force. IHRL applies in all contexts and, outside an armed conflict, is the primary body of law that would apply to the use of force, as well as such use in law enforcement operations taking place within the context of an armed conflict. In situations of armed conflict, IHRL and IHL apply coextensively and simultaneously unless there is a conflict between them—and then the context determines which of these takes precedence.⁸⁷ The issue of precedence is very important because IHRL and IHL have different standards when it comes to standards related to the use of lethal force.

In the context of armed conflict, whether international or non-international, the IHL rules relevant to the use of force are those on the conduct of hostilities, particularly the principles of distinction, proportionality and precaution in attack.⁸⁸ Subject to the requirements of IHL, during active hostilities lethal force may be directed against combatants, military objectives, members of an

⁸⁶ For a concise overview see *Report of the Special Rapporteur on extrajudicial, summary or arbitrary executions, Philip Alston, Addendum: Study on Targeted Killings*, United Nations Document A/HRC/14/24/Add.6, 28 May 2010, paragraphs 28-36. For a detailed analysis see Jelena Pejic, “Extraterritorial Targeting by Means of Armed Drones: Some Legal Implications”, International Committee of the Red Cross, 2015. Available from <https://www.icrc.org/en/international-review/article/extraterritorial-targeting-means-armed-drones-some-legal-implications>. See also Christof Heyns et al., “The International Law Framework Regulating the Use of Armed Drones”, *International and Comparative Law Quarterly*, 65(4) (October 2016), pp. 791-827, p. 795; and UNODA (2015) *op. cit.*, pp. 17–38.

⁸⁷ See A/HRC/14/24/Add.6 (2010), *op. cit.*, footnote 53.

⁸⁸ 1977 Additional Protocol I to the 1949 Geneva Conventions, Articles 48 and 51; Additional Protocol II, Article 13.

armed group belonging to a party to the conflict, and individuals directly participating in hostilities.⁸⁹ IHL permits States to take or risk human life if it is *necessary* to attain a legitimate military objective, but strictly restrains the use of armed force with a view to protecting civilians and limiting the humanitarian consequences of armed conflict.⁹⁰ For example, any incidental risk to civilians posed by an armed attack must be *proportionate* to the anticipated concrete and direct military advantage. Moreover, IHL requires States to take all feasible *precautionary* measures to prevent mistakes and minimize risks to civilians. The United Nations Special Rapporteur on extrajudicial, summary or arbitrary executions noted: “These standards apply regardless of whether the armed conflict is between States (an international armed conflict) or between a State and a non-state armed group (non-international armed conflict), including alleged terrorists.”⁹¹

Outside the context of active hostilities in armed conflict the legal framework for use of force, including with armed UAVs, is different. This is governed by IHRL standards, in particular the right of everyone to be protected against the arbitrary deprivation of their life.⁹² In narrow circumstances, a State may use force, for example in a law enforcement operation. However, “the absolute prohibition on the arbitrary deprivation of life means that the intentional use of lethal force would only be lawful in the context of a law enforcement operation, where an individual poses an imminent threat to another’s life and where the use of such lethal force is strictly unavoidable to protect life. In addition, such use would only be lawful where other less-than-lethal measures, including restraint, capture and the graduated use of force, are not possible.”⁹³

For the most part, armed UAVs have become controversial because these systems offer new capabilities for “targeted killing” of individuals and groups, which makes this use of force potentially more attractive to users. In an armed conflict, such use of lethal force is only lawful when the target is a “combatant” or “fighter” or, in the case of a civilian, only for such time as the person “directly participates in hostilities”.⁹⁴ And the rules of IHL like those mentioned above still apply. The human rights law standards are even stricter outside of such active hostilities. In fact, United Nations mandate holders have argued that “under human rights law, a targeted killing in the sense of an intentional, premeditated and deliberate killing by law enforcement officials cannot be legal because, unlike in armed conflict, it is never permissible for killing to be the *sole objective* of an operation. Thus, for example, a “shoot-to-kill” policy violates human rights law”.⁹⁵ In addition, the broad human rights impact of armed UAV strikes on individuals, families, and communities, including their psychological effects, have also been recognized as potentially amounting to cruel, inhuman or degrading treatment, in violation of human rights law.⁹⁶

⁸⁹ Nils Melzer, *Interpretive Guidance on the Notion of Direct Participation in Hostilities under International Humanitarian Law*, International Committee of the Red Cross, May 2009. Available from <https://www.icrc.org/eng/assets/files/other/icrc-002-0990.pdf>.

⁹⁰ The right to use force, while permitted, is not unlimited and remains strictly regulated by IHL, which applies during an armed conflict with the goal of minimizing the humanitarian impact of warfare. Proportionality is linked to military necessity, which in turn has to be balanced with vital humanitarian concerns. IHL provides detailed guidance on the methods and means of warfare that are prohibited. See also Article 51(5)(b) of 1977 Additional Protocol I to the 1949 Geneva Conventions, and Article 57 on precaution in attack. Additionally, the use of force has to be consistent with the principle of humanity and States are required to take precautionary measures.

⁹¹ A/HRC/14/24/Add.6 (2010) *op. cit.*, p. 10.

⁹² See United Nations General Assembly, *International Covenant on Civil and Political Rights*, adopted 19 December 1966, Article 6 (1). While this right applies equally in situations of armed conflict, in those situations the term ‘arbitrary’ is interpreted in light of IHL norms and standards.

⁹³ Wilton Park, *Drone Strikes Under International Law*, Conference Report, April 2013 (WP 1249), p 2. Available from <https://www.wiltonpark.org.uk/wp-content/uploads/WP1249-Report.pdf>. See also United Nations General Assembly, *Basic Principles on the Use of Force and Firearms by Law Enforcement Officials*, adopted by the 8th UN Congress on the Prevention of Crime and the Treatment of Offenders and affirmed by the General Assembly, United Nations Document A/RES/45/166, 1990.

⁹⁴ A/HRC/14/24/Add.6 (2010) *op. cit.*, p. 10.

⁹⁵ A/HRC/14/24/Add.6 (2010) *op. cit.*, p 11.

⁹⁶ See, for example, International Bar Association’s Human Rights Institute (2017), *op. cit.*

Some challenges armed UAV use raises

The brief overview above underlines the importance of transparency in order to establish the facts of the context and to know which legal regimes apply, and thus to assess the legality of the use of force. However, because armed UAV use has tended to be so secretive, establishing the necessary facts is often impossible. Without such transparency, a number of thorny legal and practical challenges arise, which in turn have implications for oversight and accountability. Some examples of these challenges are listed below.⁹⁷

Challenges concerning *jus ad bellum*:

- When a State has consented to armed UAV strikes by another State on its territory, it is obliged to ensure that these are carried out in compliance with international law. A State cannot consent to the unlawful killing of an individual within its jurisdiction. Moreover, the territorial State has an obligation to investigate any allegedly unlawful killing. Yet *it is frequently difficult to ascertain whether consent was provided explicitly and freely—let alone whether proper investigations were carried out.*
- *Some States have sought to justify the extraterritorial use of force using armed UAVs as self-defence against acts of terrorism using an “imminence” justification in a way that is not consistent with historical precedent and practice.*⁹⁸
- The notion that a State can invoke Article 51 of the United Nations Charter to use force—armed UAV strikes—in self-defence against threats emanating from non-state actors⁹⁹ goes *beyond anticipatory self-defence by a State toward “preventive killing” as a kind of man-hunting*, in the view of some legal experts. They have argued it creates a judicial asymmetry in which a person’s right to life is highly attenuated versus that of the targeting State: “To the extent that one’s pattern of conduct and continued presumed intention to plan terrorist acts renders one’s life by its nature an imminent threat, one’s right to life is highly conditional.”¹⁰⁰

Nor is this the only kind of challenge that armed UAV use creates for preserving and protecting the right to life:

- In law enforcement situations, use of lethal force is only lawful where other less-than-lethal measures such as restraint, capture and the graduated use of force are not possible. As mentioned in the preceding section, *it is not self-evident that practices of armed UAV use could ever meet the IHRL threshold for lawful lethal force.*
- States are obliged to investigate serious violations of IHRL and IHL, and to prosecute those allegedly responsible for such violations where there is sufficient evidence to do so. Accountability is important to providing victims with remedy and reparation, as well as to ensure such violations are not repeated. Yet *lack of transparency about the legal rules that govern specific uses of armed UAVs to deliver lethal force acts as an obstacle to the initiation of such processes* (something discussed in more detail in the next section).

⁹⁷ These illustrations draw in particular from Wilton Park (2013), *op. cit.*

⁹⁸ The United Nations Secretary-General’s High-level Panel on Threats, Challenges and Change concluded, for example: “Article 51 needs neither extension nor restriction of its long-understood scope, and Chapter VII fully empowers the Security Council to deal with every kind of threat that States may confront.” See United Nations General Assembly, United Nations Document A/59/565, 2 December 2004, p. 53.

⁹⁹ See for instance letter from United Kingdom Ambassador Matthew Rycroft to the President of the Security Council, 7 September 2015. Available from

https://www.justsecurity.org/wp-content/uploads/2015/09/UK_UNSC_Letter_on_Drone_Strike_7Sept2015.pdf.

¹⁰⁰ Nehal Buhta, “On Preventive Killing”, *EJIL Talk! Blog of the European Journal of International Law*, 17 September 2015. Available from <https://www.ejiltalk.org/on-preventive-killing>. See also Emily Crawford, “Terrorism and Targeted Killings in International Law,” *Social Science Research Network Scholarly Paper*, 30 July 2014.

A number of issues pose challenges for both IHRL and IHL because of ambiguity concerning which body of legal rules apply and how they apply in a given context:

- One point that is sometimes unclear when armed UAVs are used is whether those situations meet the “intensity” threshold, as well as the requisite degree of organization of the non-state group, which are required to determine the existence of a non-international armed conflict,¹⁰¹ and therefore trigger application of IHL and its rules on the use of force.¹⁰²
- This has an impact on which individuals may be lawfully targeted,¹⁰³ and indeed questions about what the geographic and temporal restrictions are of a conflict. The International Committee of the Red Cross (ICRC), for instance, has rejected the notion of a “global battlefield” in which IHL is applied without limit or regard for context.¹⁰⁴
- Ambiguous terminology such as “transnational warfare”, “counterterrorism” and “areas outside active hostilities” that characteristically accompany armed UAV operations can also complicate matters. Likewise, the use of terms like “terrorist” and “terrorist network” have taken on connotations associated or even synonymous with State interpretations that differ from the legal definitions of “combatant” or “armed group”. Using these terms interchangeably or even to replace proper legal terms, as sometimes appears to be the case in operational and political contexts, has exacerbated the legal ambiguity of these situations.
- Relatedly, some often-used key terms do not yet have consensus definitions such as “scope of the battlefield” and “direct participation in hostilities”.

Why is accountability for the use of armed UAVs a challenge?

As noted in section I of this study, in principle accountability entails subjecting behaviour to objective standards, for example based on shared norms, and making individuals, institutions and even States answerable to them. Accountability is essential to the effective rule of law and ensuring access to justice for victims, while a lack of accountability can fuel a cycle of impunity and contribute to a climate of lawlessness. In this regard, one United Nations Special Rapporteur has highlighted, with respect to armed UAVs, that “a lack of accountability [for violations of the right to life] is in itself a violation” of that right.¹⁰⁵ States have the duty to investigate violations of IHL and IHRL. To hold those responsible for violations accountable is therefore an important element of the rules themselves.¹⁰⁶

¹⁰¹ Threshold of intensity: Article 1(2) of Additional Protocol II of 1977.

¹⁰² In today’s world of asymmetric conflicts, which are fought with increasingly targeted weapons that may not trigger the intensity threshold necessary for IHL to apply, the question arises of whether there can be self-defence in situations short of armed conflict. This question did not present itself previously, as a scenario of self-defence would necessarily arise within, or at least trigger, an armed conflict, hence, application of IHL. See Kenneth Anderson, “Targeted Killing and Drone Warfare: How We Came to Debate Whether There is a ‘Legal Geography of War’”, in Peter Berkowitz (ed.), *Future Challenges in National Security and Law*, Hoover Institution, Stanford University, 2011, p.3. Available from http://media.hoover.org/sites/default/files/documents/FutureChallenges_Anderson.pdf. Some authors have articulated the view that *jus ad bellum* and *jus in bello* exist independently from each other. According to this view, *jus ad bellum* rights could then exist independently of *jus in bello* obligations—a concept known as ‘naked self-defence’. See Pejic (2015), *op. cit.*, p. 75 for a critical view.

¹⁰³ This includes the notion of whether the person(s) targeted can be said to be directly participating in hostilities. The ICRC provides guidance on establishing “direct participation” based on a three-stage (cumulative) test. See Nils Melzer (2009), *op. cit.*

¹⁰⁴ The ICRC has rejected the possibility of aggregating the entirety of the violence between the State and non-State groups across the globe as a “global war on terror” for instance, and takes a case-by-case approach to the legal qualification of situations of violence. See ICRC, *International Humanitarian Law and the Challenges of Contemporary Armed Conflicts* (30th International Conference of the Red Cross and Red Crescent), 26-30 November 2007, p. 7; Pejic (2015), *op. cit.*, pp. 102–3.

¹⁰⁵ Christof Heyns, *Report of the Special Rapporteur on extrajudicial, summary or arbitrary executions*, United Nations Document A/71/372, 2 September 2016, paragraph 111. Available from http://www.un.org/en/ga/search/view_doc.asp?symbol=A/71/372. Heyns’ statement also reflected the position of the Human Rights Committee on *The Nature of the General Legal Obligation Imposed on States Parties to the Covenant on Civil and Political Rights*, United Nations Document CCPR/C/21/Rev.1/Add. 13, 26 May 2004.

¹⁰⁶ See also United Nations General Assembly, *Basic Principles and Guidelines on the Right to a Remedy and Reparation*, United

Legal accountability requires a sufficiently shared understanding of common norms, and thus a clear standard of judgement, and it further requires appropriate institutional structures to maintain oversight and allow for effective, prompt, thorough and impartial investigations of violations and to action taken against those allegedly responsible.¹⁰⁷ So why does the use of armed UAVs seem to be such a challenge for accountability in this regard?

As illustrated in the previous section, **lack of transparency by States deploying armed UAVs** seems to be a central obstacle to ensuring accountability regarding their use. It is widely known that armed UAVs are equipped with the technology necessary to gather a great deal of data, often over prolonged periods of time, which has generally improved the situational awareness of commanders using them. And as discussed above, the practice to date among several users of armed UAVs has been that decisions to deliver force with armed UAVs are informed by several kinds of advisors including intelligence analysts and military lawyers. Reliance on the identification and targeting process on electronic communication and high-resolution imagery would appear to increase possibilities for transparency and oversight in comparison to conventional bombings with manned aircraft a few decades ago. This has arguably created greater public expectation than previously about transparency, as well as precision in targeting when using armed UAVs.¹⁰⁸

However, the reality is that for operational or other reasons this information is often classified and restricted to those inside government processes. So too is the legal basis for individual armed UAV strikes (e.g. the criteria for distinguishing between a legitimate and an illegitimate target). This can make independent oversight, for instance by open courts or national legislative bodies, challenging even when they have access to such secret information later, as occurred in the United Kingdom.¹⁰⁹ It means such bodies cannot necessarily be as transparent as they may feel is necessary in order to provide reassurance to the public that the rule of law is being adhered to. In several countries—including Pakistan, the United Kingdom and the United States—these issues have gone to the courts, and in a number of cases it has been ruled that governments using armed UAVs should release more information about policies, practices and specific instances of use.¹¹⁰ A related issue is that independent investigation of lethal armed UAV strikes can be difficult due to the danger and remoteness of the places where targets are located. (This is, of course, is one reason why remotely piloted systems like armed UAVs may have been chosen for use in the first place).

When there are doubts about adherence to the law due to a lack of transparency, it can impact on the perceived legitimacy of armed UAVs—and even that of a user State's policies and actions more broadly.¹¹¹ Lack of transparency may fuel fears that accountability for the use of armed force is also lacking,¹¹² which can have other strategic costs including deepening suspicion about the legitimacy

Nations Document A/RES/60/147, 2005. Available from

<http://www.ohchr.org/EN/ProfessionalInterest/Pages/RemedyAndReparation.aspx>.

These were adopted to further specify States' obligations to prevent and mitigate gross violations of IHL and IHRL, including through taking appropriate legislative and administrative measures, and through effective, prompt, thorough and impartial investigations of violations and to take action against those allegedly responsible.

¹⁰⁷ See A/RES/60/147, II Scope of Obligations. Several participants at UNIDIR's symposiums on armed UAVs stressed that the State's duty to investigate human rights violations also exists during armed conflict.

¹⁰⁸ Eliav Liebllich, "Show Us the Films: Transparency, National Security and Disclosure of Information Collected by Advanced Weapon Systems under International Law," *Israel Law Review* 45, no. 3 (November 2012), pp. 459–91; Frans P. B. Osinga and Mark P. Roorda, "From Douhet to Drones, Air Warfare, and the Evolution of Targeting," in Paul A. L. Ducheine, Michael N. Schmitt and Frans P. B. Osinga (ed.), *Targeting: The Challenges of Modern Warfare*, T.M.C. Asser Press, 2016, pp. 27–76.

¹⁰⁹ For example, see Intelligence and Security Committee of the UK Parliament, *UK Lethal Drone Strikes in Syria*, 26 April 2017, especially paragraphs 14 and 72. This Committee was tasked to investigate the intelligence basis of a British drone strike that killed Reyaad Khan in Raqqah, Syria on 21 August 2015.

¹¹⁰ See Columbia Law School Human Rights Clinic et al. (June 2017) *op. cit.*, pp. 29–36.

¹¹¹ See Abigail Watson, *Targeted killing: a new departure for British defence and security policy?* Remote Control Briefing, Oxford Research Project, 2017. Available from <http://remotecontrolproject.org/wp-content/uploads/2017/03/Targeted-Killing-PDF-1.pdf>.

¹¹² See Spencer Ackerman and Patrick Wintour, "Obama will not restrict drone strike 'playbook' before Trump takes office", *The Guardian*, 9 November 2016. Available from <https://www.theguardian.com/world/2016/nov/15/obama-administration-drone>

of armed UAV technology itself. Noting increasing public disquiet in this regard, one former senior United States Department of State legal advisor commented in 2013: “Small wonder that the public has lost track of the real issue, which is not drone technology *per se*, but the need for transparent, agreed-upon domestic and international legal process and standards.”¹¹³ This was apparently something United States President Obama recognized later in his administration as he took limited steps to attempt to improve government transparency around drone strikes, apparently in the conviction that this would underline the legality of the way in which armed UAVs were being used.¹¹⁴

A second challenge for accountability is that **existing legal norms are being put under pressure**, as the examples in the previous section also illustrated. The capabilities that armed UAVs offer users lead to legal situations not previously specifically envisaged on issues as diverse as human rights and State sovereignty.¹¹⁵ It has been argued that armed UAVs create a temptation to expand use to new situations previously considered to be legally controversial—because lethal force was either not feasible, or was rare for important practical reasons. In this vein, certain legal experts and State legal counsel have suggested that States should adapt the law to be able to use armed UAVs for targeted operations in “self-defence” to eliminate an individual “terrorist” (or group) representing a potential future threat¹¹⁶—even if these persons are asleep in their beds in a house full of other people in a country far away.

In other words, this would expand the notion of who or what qualifies as a threat triggering a State’s right to self-defence in ways that impinge on other States’ sovereignty, and may appear completely arbitrary to the world outside the “kill chain”. Some of those concerned about armed UAVs in targeted strikes appear to suspect that users of armed UAVs are already acting as if the law has evolved to match such expanded interpretations without open debate—something that lack of transparency about “targeted killing” masks.

Few States have yet expressed their views officially on the kinds of challenges of armed UAV use like those outlined above.¹¹⁷ And the reality is that the concerns expressed to date have not created sufficient pressure on those States at the forefront of the development and deployment of armed UAV capabilities to address them in view of the countervailing military advantages. But the near-monopoly of these States on “targeted killing” capabilities by means of armed UAV is diminishing.

[strikes-donald-trump](#). See also Charlie Savage, “US Releases Rules for Airstrike Killings of Terror Suspects”, *New York Times*, 6 August 2016. Available from <https://www.nytimes.com/2016/08/07/us/politics/us-releases-rules-for-airstrike-killings-of-terror-suspects.html>.

¹¹³ Harold Koh, “How to End the Forever War”, *Yale Global Online*, 14 May 2013. Available from <http://yaleglobal.yale.edu/content/how-end-forever-war>.

¹¹⁴ Reuters, “The U.S. has released a redacted version of the Administration’s drone strike policy”, *Newsweek*, 6 August 2016. Available from <http://europa.newsweek.com/us-drone-strike-policy-released-488047>. National Security Council spokesman Ned Price said that “Our counter-terrorism actions are effective and legal, and their legitimacy is best demonstrated by making public more information about these actions as well as setting clear standards for other nations to follow”.

¹¹⁵ Eyal Benvenisti, “The Legal Battle to Define the Law on Transnational Asymmetric Warfare”, *Duke Journal of Comparative & International Law*, 20 (2010), pp. 339-359, p. 342, <http://scholarship.law.duke.edu/djcil/vol20/iss3/2>.

¹¹⁶ These arguments are often framed around an expanded notion of the imminence requirement under *jus ad bellum*. See Michael N. Schmitt, “State-Sponsored Assassination in International and Domestic Law” 17, no. 2 (1992), 609–50, pp. 647-8; Amos N. Guiora, “Targeted Killing as Active Self-Defense”, *Case Western Reserve Journal of International Law*, 36:2, 2004, 319-334, p. 324; and Daniel Bethlehem, “Notes and Comments—Principles Relevant to the Scope of a State’s Right of Self-Defense Against an Imminent or Actual Armed Attack by Nonstate Actors”, *The American Journal of International Law* 106 (2012), 769–77, p. 774.

¹¹⁷ Ben Emmerson, Special Rapporteur of the Human Rights Council, called upon States to clarify their views on eight disputed international legal issues concerning the use of remotely piloted aircraft in extraterritorial lethal counter-terrorism operations in his report to the General Assembly in 2013 (A/68/389), *op. cit.* As of February 2017, no formal answers have been received. See Ben Emmerson, *Report of the Special Rapporteur on the Promotion and Protection of Human Rights and Fundamental Freedoms While Countering Terrorism (Advance Edited Version)*, United Nations Document A/HRC/34/61, 21 February 2017. Available from <http://www.ohchr.org/Documents/Issues/Terrorism/A-HRC-34-61.pdf>. See also Paulussen, Dorsey and Boutin (2016), *op. cit.*, pp. 7-8. These independent researchers said they had limited success in obtaining information about the position of EU Member States on the use of armed drones, as well as on their positions concerning pertinent international law questions. Only five governments were willing or able to respond to the questionnaire developed by the researchers.

In the absence of common understandings and standards, a world in which more actors follow their example will be more dangerous, more arbitrary, and less accountable—with more crises and violations of the law as a likely result.

These are powerful reasons to suggest that the international community as a whole should develop common standards, or at least understandings, about transparency, accountability, and oversight for armed UAV use and transfer before too much damage is done. Extra-territorial use of armed UAVs to kill individuals or groups in the territories of other States is a priority concern. This should not obscure the need to also address domestic use of armed UAVs in counter-terrorism operations, in situations where no armed conflict exists. Some options in this regard are discussed in section IV.

IV. Ways forward to increase transparency, accountability, and oversight of armed UAVs

Increasing transparency and accountability in relation to armed UAVs could enhance international security in crucial ways:

- Greater **transparency and accountability on the transfer and holdings** of armed UAVs and their components could facilitate implementation of export controls and other international arrangements. This would help to increase confidence in adherence to international law and help to curb illicit proliferation.
- Increased **transparency and accountability about the use** of armed UAVs and the policies applicable to them could help to demonstrate States' compliance with international law, and contribute toward the development of common understandings and rules about what is acceptable use. Transparency and accountability are also crucial for civilian protection and investigation of possible human rights violations.¹¹⁸ Improving these is likely to require common standards.

Recently, the Joint Declaration emerged as a notable indication of intention of many governments to adapt certain of their policies and behaviour concerning armed UAVs.¹¹⁹ However, as of writing the process for developing the Joint Declaration into a binding document and the specifics of those standards were still unclear, including key terms mentioned in it, such as “responsible use” of armed UAVs. Recognizing this, in September 2017 nineteen non-governmental organizations called for States to develop international standards on the use of armed UAVs “in accordance with well-established rules of international law, and that technological standards do not vary those standards”, motivated by concern that the Joint Declaration might risk “setting standards that are too low” and not address issues around use.¹²⁰ Meanwhile, in UNIDIR’s symposiums, most participants seemed to acknowledge the desirability of finding a means to make headway on these issues at a multilateral level in a way that engages the widest possible range of relevant actors in order to make it effective, even if there was not consensus around specifics.

Below is outlined a non-exhaustive set of *elements* that States could consider, either within the context of an existing mechanism or mechanisms, or by establishing something new that is specific to armed UAVs. In all, there are numerous options for States to strengthen, elaborate or specify the norms applicable to armed UAV transfers, holdings and use. Following an overview of these potential elements, the different *processes* available for States to address armed UAV-related issues within a multilateral setting are set out. In the conclusions in section V, some suggestions are offered, based on UNIDIR’s research and discussion over the last year or more with Governments and other experts, on how the international community could move forward.

¹¹⁸ UNODA (2015), *op. cit.*, pp. 50–52.

¹¹⁹ See Appendix 2.

¹²⁰ Article 36 et al., “The development of international standards on the export and subsequent use of ‘armed or strike-enabled UAVs’”, 12 September 2017. Available from <http://www.article36.org/updates/joint-statement-standards-sep-17>.

Elements related to holdings and transfers

First, States could **adapt existing mechanisms pertaining to the availability of armed UAVs**. Indeed, each of the legal frameworks and mechanisms described in section II of this study provides for frequent review by its members or participating States in order to allow for continuous update and improvement, although their procedures vary. Even Security Council resolution 1540 has a review process allowing States to review and renew its mandate.¹²¹ In some cases, standing structures, for example in the form of a secretariat, are specifically tasked to assist States in implementation. Moreover, most of the mechanisms allow for establishing specific subcommittees or working groups. The Wassenaar Arrangement, for example, has sometimes set up issue-specific working groups, for instance to assess specific new risks or to review its technology list annexes.¹²² Such processes have already contributed to better understanding and addressing within each mechanism that have led to armed UAVs and related dual use technology being captured.

It is noteworthy that, as section II described, a number of mechanisms have already been quite responsive in capturing those aspects of armed UAVs seen as relevant to their central purpose within their reporting or controls. However, the result is a patchwork of measures as membership and adherence to these mechanisms varies, as do the provisions of the mechanisms themselves, and they do not necessarily share key terms and concepts.

Improving implementation of existing mechanisms is a second avenue. This includes harmonizing different mechanisms, although for practical and political reasons there are probably real limits to this due to differing objectives, memberships (and thus political dynamics), and historical path dependencies that have led to different fundamental approaches, as discussed earlier. There is also the issue of political will, which would need to be generated and sustained for some time in order for such efforts to succeed.

Nevertheless, a clear way of improving transparency would be to **improve national reporting**, which often falls short in practice. For instance, in addition to information on specific transfers and holdings, as in the case of the ATT and UNROCA, resolution 1540 and the ATT oblige States to report annually on the status of national implementation (the ATT's 92 member States in its case; all States under Security Council resolution 1540).¹²³ Alongside this, the UNGA has encouraged States to provide information to the UNROCA on relevant national policies relating to production, import and export of armaments.¹²⁴ These reporting mechanisms are not only important for maintaining oversight over actual implementation, they can incentivize States to review and improve their national policies in order to facilitate compliance. However, in many cases, the provisions for reporting are completely voluntary, and therefore many mechanisms suffer from poor reporting.

¹²¹ The mandate of the 1540 Mechanism was renewed several times: Resolution 1673 (2006), Resolution 1810 (2008). Resolution 1977 (2011) renewed it for a period of ten years until 2021.

¹²² Wassenaar Arrangement Guidelines (December 2015), *op. cit.*, VII (3). See also Wassenaar Arrangement Guidelines (2016), *op. cit.* in which States agreed to develop a common understanding of the risk associated with the transfer of weapons dual-use goods II (2) and to bring to each other's attention on "emerging trends in weapons programmes and the accumulation of particular weapons systems" VI (1).

¹²³ Security Council resolution 1540 (2004), *op. cit.* Operative paragraph 4 and follow-up Resolutions call on States to submit a first report on steps taken to implement the Resolution and submit a report to the Committee and additional information, such as action plans. ATT Article 13: Contracting Parties are to submit an initial report on implementation progress, including national laws, national control lists, other regulations, and administrative measures, as well as additional reports for any new measures undertaken (1), report on best practices (2), and lastly, report annually on an authorized imports and exports (3).

¹²⁴ United Nations General Assembly, *Transparency in Armaments*, United Nations Document A/RES/46/36 L, operative paragraph 10.

This is a significant hindrance to the UNROCA, for example, as many States submit their annual information late (if at all), and their reports are often incomplete.¹²⁵

Improvements in implementing existing mechanisms pertaining to armed UAV availability would clearly be welcome. But it should be observed that these are also more general issues tied to the broad application of these mechanisms rather than armed UAVs *per se*. However, the **information sharing** related to UAV development, acquisition, stockpiling and transfer between the ATT and the UNROCA is worth noting. Under the UNROCA, States are requested to provide data on holdings, imports and exports of conventional arms from their territory, including armed UAVs. Article 13 (3) of the ATT *requires* its parties to submit annual reports on imports and exports. Of course, even if progress was made in reporting rates of the ATT and UNROCA on armed UAVs due to the separate inclusion of unmanned combat aircraft in reporting from 2016,¹²⁶ there is much still to learn about national practices around *use* that are not captured within these processes of implementation. Nevertheless, these mechanisms could be built on to increase transparency and accountability on *transfers and holdings* of armed UAVs.

In principle, this information sharing between mechanisms pertaining to armed UAV availability is an important third area for improvement. While the ATT and UNROCA are a good fit for one another, informal strategic export control regimes such as the Wassenaar Arrangement and MTCR have more restrictive memberships than United Nations mechanisms, which can be a complicating factor for reasons explained earlier in this section.

What if there was something new specifically on armed UAVs? As the 2015 UNODA study noted, an armed UAV-specific process could permit States to **exchange information on best practice**, building on existing mechanisms in areas such as:

- *Non-diversion*: In accordance with ATT obligations (Article 11), a mechanism on armed UAVs could establish procedures to enable States to cooperate and exchange information in order to prevent, investigate or mitigate any diversion of armed UAVs.
- *End-use monitoring*: In accordance with national export controls and ATT obligations, a mechanism on armed UAVs could establish common requirements for end-user certificates applicable to exports of armed UAVs, including the provision of assurances specific to its use.
- *Legal Review*: A mechanism on armed UAVs could stipulate greater standardization and transparency regarding, for example, processes of Article 36 review, which requires States to determine whether the employment of weapon, means and methods of warfare they intend to use would, in some or all circumstances, be prohibited under international law,¹²⁷ as well as reviews concerning use in counter-terrorism situations.
- *Confidence-building measures* might be explored such as exchange of information, for instance about basing, personnel, or military exercises involving armed UAVs.

Strengthening accountability for armed UAV use

An additional important matter on which States could exchange information is on their *use* of armed UAVs. This is something NGOs, academic experts, and United Nations mandate holders have called for.¹²⁸ It goes to the crux of the issues around armed UAVs and transparency, accountability and

¹²⁵ Pieter D. Wezeman and Siemon T. Wezeman, "The 2015 UN Register on Conventional Arms: Still time to improve", *SIPRI Commentary*, 18 September 2015. Available from <https://www.sipri.org/commentary/expert-comment/2015/2015-un-register-conventional-arms-still-time-improve>.

¹²⁶ ATT, Final Report of the Second Conference of State Parties, ATT/CSP2/2016/5, 26 August 2016.

¹²⁷ ICRC, "A Guide to the Legal Review of New Weapons, Means and Methods of Warfare: Measures to Implement Article 36 of Additional Protocol I of 1977", *International Review of the Red Cross*, 88(864) 2006, 931-956.

¹²⁸ See for instance Article 36 et al. (12 September 2017), *op. cit.*

oversight. That such information exchange about armed UAV use is not currently happening systematically in fact makes it difficult for the international community to determine how “responsible” the use of armed UAVs really is, assessed against established rules of international law such as IHL and IHRL, and to be sure that there is sufficient accountability. Moreover, without greater transparency about use, the value of improvements in transparency about holdings and transfers of armed UAVs will probably also be hampered.

As part of considering the development of standards around use, States should **engage in a focused discussion about relevant norms**. States have stressed on numerous occasions the importance of respecting international law when using armed UAVs,¹²⁹ and many of those possessing armed UAVs have stressed their intent to abide by it. This is encouraging in that it reflects a general agreement that existing international norms provide an appropriate standard to judge the lawfulness of armed UAV use. However, it also serves to obscure the current lack of common understanding of how and which rules applicable to the use armed UAVs in delivering armed force should be interpreted, and therefore whether they are actually sufficient. This is significant because, as the United Nations Secretary-General noted, “The maintenance of world international peace and security depends importantly on there being a common global understanding, and acceptance, of when the application of force is both legal and legitimate.”¹³⁰

States should also **create an inclusive and open frame for work**. Many think tanks and academics have called for the need to clarify legal norms around armed UAV use and have provided useful analysis and concrete proposals.¹³¹ Some (including UNIDIR) have convened governmental and non-governmental experts to explore questions around improving armed UAV transparency, accountability and oversight. Moreover, there are multiple precedents for initiatives to clarify the law in light of new technological advances. Well-known examples include the San Remo Manual on International Law Applicable to Armed Conflicts at Sea of 1994, the Tallinn Manual on the International Law Applicable to Cyber Warfare of 2013, and the Manual on International Law Applicable to Air and Missile Warfare of 2013.¹³² While these manuals have certainly contributed to clarifying the meaning of existing rules in new contexts, they have been drafted at the initiative of lawyers, and were thus processes that lacked the “buy-in” of multilateral processes necessary to transform and adapt international law. Conversely, overly restrictive inter-governmental processes in which non-governmental experts (such as academics, and representatives of civil society and industry) are excluded lose the benefit of their perspectives and knowledge. These perspectives extend to the voices of individuals, families and communities affected by armed UAV use in “targeted killings”.

States should **create standards for use of armed UAVs that are consistent with existing international law and do not weaken or undermine it**. The purpose of developing armed UAV-specific standards should be to remove ambiguity or contestation in legal regimes such as IHL and IHRL that their use has created, and relieve rather than create more pressure on the current

¹²⁹ See for instance “Protection of Human Rights and Fundamental Freedoms While Countering Terrorism”, Human Rights Council resolution A/HRC/RES/33/21, 7 October, 2016, p. 21. Operative paragraph 27 “[u]rges States to ensure that any measure taken or means employed to counter terrorism and violent extremism conducive to terrorism, including the use of remotely piloted aircraft, complies with their obligations under international law, including international human rights law and international humanitarian law”. See also A/HRC/RES/31/30 (2016), A/HRC/RES/29/9 (2015), A/68/456/Add.2 (2014).

¹³⁰ *Note by the Secretary General on Collective Security*, United Nations Document A/59/565 (2004), paragraph 184. See also Ben Emmerson, *Report of the Special Rapporteur on the Promotion and Protection of Human Rights and Fundamental Freedoms While Countering Terrorism*, A/HRC/25/59, 11 March, 2014. Available from <http://www.ohchr.org/EN/HRBodies/HRC/RegularSessions/Session25/Pages/ListReports.aspx>.

¹³¹ See footnote 57.

¹³² *San Remo Manual on International Law Applicable to Armed Conflicts at Sea*, 12 June 1994; Michael N. Schmitt (ed.), *Tallinn Manual on the International Law Applicable to Cyber Warfare*, Cambridge University Press, 2013; *Manual on International Law Applicable to Air and Missile Warfare*, Program on Humanitarian Policy and Conflict Research—Harvard University, 2013.

international law regime. States have managed to do this previously on numerous occasions in response to specific challenges raised by particular means or methods of warfare. The 1980 United Nations Convention on Certain Conventional Weapons (CCW) regulates or prohibits certain kinds and uses of arms, for example. States have also developed differentiated restrictions depending on the context in which weapons are used: for instance, the use of riot control agents is banned for warfare under the 1993 Chemical Weapons Convention, whereas their use is permissible in law enforcement contexts.¹³³

In addition, States could explore standards for **greater information sharing** on armed UAVs in the interests of improving transparency and accountability in the following areas:

- *National policy applicable to the use of armed UAVs*: States could provide information regarding the legal framework, national laws, and policies that are applied to specific situations in which armed UAVs are used.¹³⁴
- *Strike-specific information*: Without prejudice to national security, States could provide information on:
 - The location of a strike and the identity and affiliation of the intended target;
 - Specific criteria used to select targets and a description of evidence used as a basis for authorizing the use of force;
 - The legal basis for each use of force, including a determination as to whether a strike conformed with applicable international law, national laws and policies;
 - Disaggregated information on the number of casualties, including civilians; and
 - The weapon system used in the attack.
- *Oversight and accountability mechanisms*: States could provide information on how oversight is maintained over the use of their armed UAVs, for instance about their rules of engagement (including how these are developed and adapted),¹³⁵ other procedures or “checklists” for determining legitimate targets,¹³⁶ and on their processes to ensure investigation of alleged violations of international norms. States could also make the results of such investigations available to the extent possible.

As discussed earlier, the prime responsibility for ensuring accountability in violations of international law lies with States, something that entails providing and continuously improving relevant institutions and other structures. To strengthen accountability, it is also important to note its broader political dimension, which, in essence, connects to a wider notion of responsibility. In addition to identifying and, if appropriate, punishing wrongdoers (i.e. holding individuals or governments accountable), it implies acknowledging wrong and taking measures to prevent reoccurrence. This may include, for example, providing compensation for injuries, and challenging and transforming institutional structures that allowed for or failed to prevent wrongdoing.

This more active and inward-directed notion of accountability is also reflected in language such as “taking” responsibility. Most importantly it entails efforts to *learn*, and to try to prevent such wrongs

¹³³ See Elizabeth Minor, *Approaches to Technology and Policy: International Standards and Addressing Armed Drones*, Article 36 (forthcoming), 2017: <http://www.article36.org>.

¹³⁴ For specific proposals in the US case, see for instance Columbia Law School Human Rights Clinic et al. (June 2017) *op. cit.*

¹³⁵ See the International Institute of Humanitarian Law, *San Remo Handbook on Rules of Engagement*, November 2009. Available from <http://www.iihl.org/sanremo-handbook-on-roe>. See also Attila F. Varga, “Rules of engagement vis-à-vis International Humanitarian Law”, *Academic and Applied Research in Military and Public Management Science*, 11:1, 2012, pp. 1-11.

¹³⁶ See Amos N. Guiora, “Targeting Killing—A Proposal for Criteria Based Decision Making” in C. Finkelstein et al. (eds.) *Targeted Killing: Law and Morality in an Asymmetrical World*, Oxford University Press, 2012. Guiora has drawn on his extensive experience as a former legal adviser to the Israel Defence Forces.

from recurring in the future.¹³⁷ Examples include strengthening institutional oversight and accountability structures, and providing appropriate training and education for decision-makers. International transparency and oversight mechanisms are also important. Also, they constitute confidence-building measures that can contribute to international stability, and the cooperation and mutual assistance may enhance adherence to the law.

Some users of armed UAVs insist that they do have comprehensive internal systems of accountability, but operational requirements for secrecy mean this cannot be discussed publicly (for instance, targeted drone strikes by intelligence agencies and paramilitaries on individuals or groups outside traditional battlefields). They are resistant to calls for blanket information sharing. This is a challenge for developing global standards. But the value of a multilateral discussion would be that it could prompt users to at least shed greater light on the principles and standards they apply in such contexts. In turn, this could create broader understanding and perhaps convergence toward common understandings that the international community could be more confident do comply with international law rules. And it might encourage users to review their internal policies.

Forums and procedures to elaborate armed UAV-specific measures¹³⁸

Developing improved transparency, accountability and oversight standards for armed UAVs within a multilateral framework is likely to generate more widespread acceptance for these systems. A key criticism of informal strategic export control regimes and the Joint Declaration is that participation in these processes is relatively restrictive or outcomes are pre-determined. This could inhibit buy-in from other States, which may feel these are standards imposed without their concerns being taken into account. In addition, processes within which civil society can meaningfully engage would also assist policy makers frame the issues they are dealing with, devise meaningful solutions to the challenges they must overcome, and help champion universal adherence to what is adopted.

In these respects, without detracting from likeminded initiatives on armed UAVs to date, there are a number of standing bodies and entities within the United Nations system that could facilitate this work going forward.¹³⁹ As noted throughout this report, deep concern about armed UAV use has arisen in United Nations human rights- and broader international law-related bodies, and these continue to be important avenues for the development of understandings on transparency, oversight and accountability. However, in view of the finding of this study that issues around armed UAVs should be tackled in all of their aspects (i.e. including transfer and holdings), some international security-related options are the focus below.

The First Committee of the United Nations General Assembly

The rules and practices of First Committee provide a spectrum of options for carrying forward discussions on disarmament and international security-related issues. In the past, Member States have mandated various subsidiary bodies to discuss specific topics, sometimes in a successive manner. While the General Assembly's rules of procedure do not prescribe a particular composition or structure, three formats have been frequently used in the past. Typically, these are triggered through resolutions agreed by consensus or voted on by Member States:

¹³⁷ See Paulussen et al. (2016), *op. cit.*, p. 12. Accountability "should be seen as wider than responsibility in courts [...] [for example,] providing answers to prevent the re-occurrence of mistakes or misconduct, allowing remedies for the victims and their families and providing punishment of those responsible for criminal behavior."

¹³⁸ The authors would like to thank Michael Spies for his input into this section.

¹³⁹ See Jozef Goldblat, *Arms Control: The New Guide to Negotiations and Agreements*, (2nd ed) SAGE, 2002, p. 47: "The United Nations is the only forum in which universal consensus on key security issues can be worked out. It therefore bears primary responsibility in the field of arms control."

- i. **Governmental Groups of Experts (GGEs)** are typically given a 1–2-year mandate to formulate recommendations to the General Assembly, conduct a study, or recommend how to update existing instruments. GGEs do not conduct formal negotiations, even though in practice government officials representing national positions have increasingly dominated their composition. GGEs are traditionally held in closed sessions and have a limited membership (typically between 15 and 25 experts—one per invited State, typically with the five Permanent Security Council members each represented). The small size of these groups may render discussions more effective, particularly given the consensus rule that is commonly applied. However, there is a risk that the legitimacy or acceptability of GGE outcomes suffer due to limited representation in the drafting process. Sometimes GGEs have attempted to compensate for their perceived lack of representation by seeking input from or having formal or informal consultations with non-members—including States, regional organizations, relevant private sector actors, academic experts and civil society groups—on specific issues.
- ii. **Working groups** have emerged in recent years as an increasingly sought intermediate path for carrying forward multilateral discussions in an open, transparent, and cost-effective manner. Participation in recent working groups has been open-ended, allowing for inclusive participation. The majoritarian principle of the General Assembly has been commonly applied, which has arguably helped delegations to avoid lowest-common denominator outcomes. Taking into account the status and ripeness of a given issue, the General Assembly has flexibility in specifying the mandate, participation, duration and rules of procedures of working groups. In the past, this has allowed for greater access for civil society organizations than GGEs, although not to the same degree as relatively open treaty forums such as the CCW (see below).
- iii. **Ad hoc committees and negotiating conferences** can be convened by the General Assembly as negotiating conferences for the purpose of concluding either a political or legal instrument. In the field of disarmament, rounds of feasibility studies or deliberations by expert groups and intergovernmental working groups have usually preceded ad hoc committees and negotiation conferences.

Alternative multilateral frameworks

There are several alternative multilateral frameworks already in place that could potentially be suited to taking up issues around armed UAVs:

- i. **The United Nations Convention on Certain Conventional Weapons (CCW)** lends itself to engagement on new issues, particularly given that it is a framework treaty with issue-specific protocols, which permits discussions to be relatively open and flexible in structure. While new technologies, such as lethal autonomous weapons systems, are of interest to the High Contracting Parties to the CCW, its primary purpose is to prohibit or restrict the use of weapons that may be deemed to be excessively injurious or to have indiscriminate effects. Given its strong IHL focus, the CCW might not be the most suitable forum to discuss armed UAVs as some of the concerns raised relate to their use outside armed conflict in which for instance, IHRL dimensions are central.
- ii. **The Conference on Disarmament (CD)**, based in Geneva, was established in 1979 as the standing multilateral forum for negotiating disarmament agreements. It currently has 65 member States. While in theory the CD is well suited to address new issues, due to its strict application of the consensus rule the CD has been unable to negotiate any new agreements since the 1990s. In addition, adding armed UAVs as a topic would mean revisiting and agreeing

to change the balance of core issues currently on the CD's draft agenda, a prospect that seems remote. The Conference is also closed to civil society participation, although the public may observe its plenary sessions from a gallery.

- iii. **The United Nations Disarmament Commission (UNDC)** is a deliberative (i.e. not a negotiating) body that meets each year in the United Nations in New York for three weeks. Only the UNDC's plenary sessions are open to civil society participation, effectively curtailing possibilities for meaningful engagement. However, the recent disposal of the long-standing conventional weapons item has created space for other issues in the UNDC's forthcoming meeting cycle. The inclusion of a new item on outer space transparency and confidence-building measures during an informal meeting in April 2017 shows that it would be possible (at least in principle) to suggest UAVs as a potential third item, with the possibility of starting discussions on this topic with an informal meeting as a trial run.

Diplomatic conferences outside the auspices of the United Nations

Governments have sometimes resorted to convening diplomatic conferences outside the auspices of the United Nations when established processes were stalled or failed to meet widespread expectations in terms of their response. This was the case with the so-called "Ottawa process" leading to the 1997 Anti-Personnel Mine Ban Convention and the "Oslo process" resulting in the Convention on Cluster Munitions in 2008.¹⁴⁰

In the context of armed UAVs, it does not seem likely at present that the main possessors and users would initiate such a freestanding diplomatic negotiating conference. However, the 2016 Joint Declaration initiative could be seen as containing the potential for a process to develop, for instance in the form of an HCoC-style understanding on aspects of armed UAVs between selected States that would in effect bypass the working mechanism of the United Nations. This remains to be seen.

Freestanding 'like-minded' diplomatic processes offer certain advantages as they may be tailored for a specific purpose in terms of their working methods and decision-making. Historically, certain States have chosen not to participate. This self-exclusion can have knock-on effects on efforts to universalize such agreements in the long run.

¹⁴⁰ See John Borrie, *Unacceptable Harm: A History of How the Treaty to Ban Cluster Munitions Was Won*, UNIDIR, 2009.

V. Concluding remarks

This study has explored the main contours of the international discourse on the use of armed UAVs in what some have described as the age of the “drone war”.¹⁴¹ While armed UAVs have not yet—as far as is publically known—encountered each other in drone-on-drone combat, the use of these systems in targeted strikes has become a distinctive and frequent means of applying armed force in conflict and counter-terrorism. Since the dawn of this century it has created or exacerbated a number of challenges, particularly for the application of international law that, so far, States have not properly come to grips with collectively.

Why should States—including users of armed UAVs—engage now? First, the capabilities armed UAVs offer may lead to expansion in the use of force that will be dangerous if it lacks clear limits. Historically, this issue is not unique to armed UAV technology, of course. Jurists and military commanders have wrestled with issues of how to define and respond to “imminent” threats much longer than armed drones have been around, for instance. Nor are armed UAVs the only means by which they have used armed force outside “traditional” battlefields. But the capabilities this technology provides *combined with* the practices that have arisen in its use mean that it urgently deserves dedicated and comprehensive scrutiny. Otherwise armed UAVs could serve to undermine the ability of legal regimes to protect civilians and the right to life, and help to maintain peace, international stability, and order. The erosion of international law rules will have deleterious consequences for all.

The second reason to develop common standards to improve transparency, accountability and oversight of armed UAV holdings, transfer and use is that armed UAV technology continues to become more sophisticated at the same time as it seems to be approaching mass adoption. New producers and exporters are entering the global market. For armed UAV exporters also it could be bad for business for common standards to be lacking.¹⁴²

The 2016 Joint Declaration initiative represented a significant statement of intent in this regard, led by the United States, to date their most prolific user. It is important to recognize that the challenges the United States has faced in reconciling operational security in its use of armed UAVs with ensuring transparency, accountability and oversight are unlikely to be exceptional. And these kinds of problem may worsen with the added complication of more rival actors using armed UAVs, including in contested environments.

The Joint Declaration had not been issued when UNIDIR’s project on transparency, accountability and oversight of armed UAVs was conceived. However, time and again, the Joint Declaration came up in our subsequent symposiums with experts, with United States officials themselves helpfully providing briefing about it. As of writing, further steps to operationalize the Joint Declaration remain somewhat vague. Some States feel that it focuses unduly on export controls and non-proliferation, while ignoring other critical issues.¹⁴³ A major concern of some, for instance, is the use of armed UAVs by States against third parties in other countries, in situations that may or may not be recognized as armed conflicts. Moreover, one of the most pressing questions is what constitutes “responsible use”, expressed in a way that is meaningful and uniform in application? This question is especially topical in view of a Government decision in the United States in September 2017 to

¹⁴¹ See for instance Peter Bergen and Katherine Tiedemann, “The drone wars: Killing by remote control in Pakistan”, *The Atlantic*, December 2010. Available from <https://www.theatlantic.com/magazine/archive/2010/12/the-drone-wars/308304>. See also <https://dronewars.net>.

¹⁴² Ewers et al. (2017), *op. cit.*

¹⁴³ Arun M. Sukumar, “As US Leads International Control Regimes on Armed Drones, India Decides to Opt Out,” *The Wire*, 17 October 2016. Available from <https://thewire.in/73032/india-stays-away-as-the-united-states-assembles-a-coalition-to-check-exports-of-armed-drones>.

expand the use of armed UAVs geographically and in a legal sense, while at the same time reducing high-level vetting of drone attacks.¹⁴⁴

Certain States have perceived the Joint Declaration as a pre-negotiated like-minded initiative not intended to be broadly inclusive. As such, it currently seems unlikely to secure the engagement of some States interested in armed UAVs such as Brazil, China, India, Israel, Pakistan, and Russia. As seen in other initiatives, such as the European Union Code of Conduct on Outer Space or the Convention on Cybercrime, it can be very difficult to universalize an agreement that was first negotiated by a handful of parties. Realistically, these and other States not involved in the Joint Declaration exercise would need to be involved in discussions about common understandings and standard setting for these to have widespread effect in the future. Indications offered to UNIDIR by a variety of State representatives in the course of research for this study were that such engagement and adherence would ideally occur in a multilateral forum, preferably the United Nations due to its universality and established legitimacy.

It is important that whatever the approach States choose, it should be:

- **Inclusive** in that, for reasons explained above, it is open to involvement to all holders, exporters and users of armed UAVs, as well as affected States and others with the knowledge and insights necessary to achieving results, including experts, civil society and industry. It will require calling on expertise from across domains such as IHL, IHRL and export controls, for instance.
- **Comprehensive** in that such a collective process develops useful understandings and standards related to the *use* of armed UAVs and not only their *holdings* and *transfers*. Controlling *transfer and holding* responsibly is important and necessary, yet such measures will not be sufficient to address concerns about use, including greater clarity about how relevant international norms are to be applied. Policies of “targeted killing” using armed UAVs are the elephant in the room, but one that some States are reluctant to acknowledge exists, and this needs to change.
- **Ambitious** in the sense that the development of common understandings or standards should not only “do no harm” to the international legal regime, it should aid its application. It should set higher benchmarks for transparency and accountability for armed UAVs in order to ensure civilian protection and the right to life are respected, consistent with the general intent of international law.

Section IV of this study set out a number of specific elements to be tackled, as well as a range of potential multilateral avenues for States to develop common standards for improved transparency, accountability and oversight of armed UAVs. One pathway could be for a State or group of likeminded States to draft and build support for a General Assembly resolution as early as 2018—for instance, in the First Committee dealing with matters of arms control and international security—**establishing a mandate for work on improving transparency, accountability and oversight of armed UAVs in all their aspects**. Such a draft could even incorporate aspects of the Joint Declaration into it. The mechanism might be a Group of Governmental Experts or an open-ended working group (the latter being less restrictive in participation), or a hybrid of some kind. There are many paths, but the one chosen should lead to higher ground, rather than further down into an opaque fog of armed drone use in which dangerous collisions are bound to happen.

¹⁴⁴ Charlie Savage and Eric Schmitt, “Trump poised to drop some limits on drone strikes and commando raids”, *New York Times*, 21 September 2017. Available from <https://www.nytimes.com/2017/09/21/us/politics/trump-drone-strikes-commando-raids-rules.html>.

Appendix 1. Joint Declaration for the Export and Subsequent Use of Armed or Strike-Enabled UAVs¹⁴⁵

An increasing number of States are acquiring and employing Unmanned Aerial Vehicles (UAVs) to support a range of missions, including military missions that promote peace and security. Individual States may already have laws and policies in place to ensure the responsible export and use of UAVs that are armed, or that include equipment related uniquely to the deployment or delivery of weapons. However, recognizing that misuse of armed or strike-enabled UAVs could fuel conflict and instability, and facilitate terrorism and organized crime, the international community must take appropriate transparency measures to ensure the responsible export and subsequent use of these systems. In this context, we continue to recognize the following principles, none of which should be construed to undermine the legitimate interest of any State to indigenously produce, export, or acquire such systems for legitimate purposes:

- A. The applicability of international law, including both the law of armed conflict and international human rights law, as applicable, to the use of armed or strike-enabled UAVs, as with other weapon systems;
- B. The importance of engaging in the responsible export of armed or strike-enabled UAVs in line with existing relevant international arms control and disarmament norms that help build confidence as to the peaceful intention of States;
- C. That the export of armed or strike-enabled UAVs should be done consistent with the principles of existing multilateral export control and non-proliferation regimes, taking into account the potential recipient country's history regarding adherence to its relevant international obligations and commitments;
- D. The importance of appropriate voluntary transparency measures on the export of armed or strike-enabled UAVs including reporting of military exports through existing mechanisms, where appropriate, and with due regard to national security considerations; and
- E. That in light of the rapid development of UAV technology and the benefit of setting international standards for the export and subsequent use of such systems, we are resolved to continue discussions on how these capabilities are transferred and used responsibly by all States.

We call upon other governments to support this declaration.

As of 4 August 2017 signatories were Albania, Argentina, Australia, Austria, Belgium, Bulgaria, Canada, Chile, Colombia, Czech Republic, Denmark, Estonia, Finland, Georgia, Germany, Greece, Hungary, Iraq, Ireland, Italy, Japan, Jordan, Kosovo, Latvia, Lithuania, Luxembourg, Malawi, Malta, Mexico, Montenegro, Netherlands, New Zealand, Nigeria, Norway, Paraguay, Philippines, Poland, Portugal, Republic of Korea, Romania, Serbia, Seychelles, Singapore, Slovakia, Slovenia, South Africa, Spain, Sri Lanka, Sweden, Ukraine, United Kingdom, United States of America, and Uruguay.

¹⁴⁵ Joint Declaration for the Export and Subsequent Use of Armed or Strike-Enabled Unmanned Aerial Vehicles (UAVs), 28 October 2016. Available from <https://2009-2017.state.gov/r/pa/prs/ps/2016/10/262811.htm>.

Appendix 2. Overview of mechanisms applicable to armed UAV transfers and holdings

Mechanism	Purpose	Membership/ Adherents	Relevance	Measures: (binding and non-binding)		Pros	Cons
				Preventive measures	Transparency and reporting		
UN Security Council resolution 1540 (2004)	Prevent proliferation of WMDs and their means of delivery, particularly to non-state actors	Universal	Any technology that might be used as means of delivery for WMD	Physical protection; effective export, border and end-user controls	Initial reporting on implementation	Good reporting record; possibility to review mandate; mutual assistance; cooperation; best-practice sharing	Narrow scope
				Develop control lists	National action plans; point of contacts; best practice		
Missile Technology Control Regime (MTCR), 1987	Limit risk of WMD proliferation	35 Partner States	Armed and unarmed UAVs; related equipment/components, and software	States exercise transfer restraints; establish certain end-user controls	None	Proven flexibility; detailed guidance and definitions for export controls	Technical thresholds increasingly under pressure; exclusive membership
Hague Code of Conduct (HCoc), 2002	Prevent and curb proliferation of WMD capable ballistic missile systems	138 Subscribing States	Ballistic missiles capable of delivering WMDs	Maximum restraint in the development, testing; reduce national holdings	Annual declaration on policies; holdings and (test-) launch sites; system launches; pre-launch notifications	Universal norms for responsible use; transparency and confidence building measures	Limited direct relevance for armed UAVs; legitimacy concerns; lacking compliance
UN Register of Conventional Arms (UNROCA), 1991	Promote transparency for weapon transfers and holdings	Universal	Armed UAVs	None	Imports, holdings and exports; national legislation	Possibility for updates and improvements	Very poor reporting record
Wassenaar Arrangement, 1996	Promote greater transparency and responsibility in the conventional arms and dual-use technology transfers	42 Participating States	UAVs for military use; related equipment or components including software	States control the transfer of dual-use technologies and munitions depending on their sensitivity	Information exchange on conventional arms transfers; transfer denials of dual-use goods and technologies; risks	Comprehensive information sharing; regular meetings of Licensing Officers; guidelines for implementation	Ambiguity due to different interpretations; exclusive membership and information sharing

EU Community regime for the control of exports, transfer, brokering and transit of dual-use items, EC No 428/2009	Facilitate Member States' compliance with relevant international agreements	All 28 EU Member States	Dual-use items as defined by the Wassenaar Arrangement, MTCR, the Nuclear Suppliers Group and the Chemical Weapons Convention	National exporting and brokering service authorization	Record keeping of exports and brokering services; cooperation and information exchange between competent authorities	Designed to enhance efforts of existing mechanisms; relevant stakeholders are consulted in the review process	National authorities are responsible for export authorizations
Vienna Document of the Organization for Security and Co-Operation in Europe (OSCE), 2011	Confidence-building measures	57 Participating States	Armoured combat vehicles	Military cooperation e.g. joint military exercises and training; observation visits; provision of military experts	Information exchange on military forces; equipment; defence planning; hazardous incidents; certain military activities	Extensive information exchange; related confidence-building measures; reviews and updates have ensured its relevance	Lacking clarity about the relevance for armed UAVs
Legal Weapons. Reviews (Customary Law, codified in Art.36 of API to the 1949 Geneva Conventions)	Ensure intrinsic compatibility with IHL	Universal	Any new weapon, means or method of warfare that a State studies, develops, acquires or adopts	States determine whether a new weapon, means or method of warfare can be used in compliance with international law	None	Encompasses all types of UAVs and, as a rule of customary international law, is binding upon all States	Only between 15 and 20 States are known to conduct reviews; major differences in implementation
Arms Trade Treaty (ATT), 2013	Establish the highest common standards for the trade in conventional arms	130 signatories, 92 State Parties	Combat aircraft and attack helicopters; some provisions apply to components and munitions	States assess transfers regarding international law and security; adopt laws and domestic controls	Reporting on exports and imports; national control lists; designate national points of contact; status of national implementation	Only mechanism with broad membership and mandatory transparency measures; States may seek assistance	Discretion in the design of national controls; Does not cover dual-use platforms and technologies; lacks membership of major armed UAV exporters
EU Common Position defining common rules governing controls of exports of military technology and equipment (2008/944/CFSP), 2008	Prevent export of military technology which might be used for internal repression or international aggression	All 28 EU Member States	UAVs specially designed or modified for military use, related equipment	States assess transfers with regard to their international security risks; establish certain end-use controls	Information sharing and consultations on denied export licenses; reporting on exports of military equipment and implementation	Comprehensive export assessment criteria and interpretive guidance; involvement of EU Parliament in the development of recommendations	All aspects of policy implementation remain in the hands of States



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Increasing Transparency, Oversight and Accountability of Armed Unmanned Aerial Vehicles

Armed unmanned aerial vehicles (UAVs)—often referred to as drones—have become a prominent and sometimes controversial means of delivering lethal force in the 21st century. Yet the international community is some way from reaching consensus on how established international principles are to be interpreted and applied to the use of armed UAVs. This situation is unsatisfactory for promoting civilian protection in conflict, the maintenance of peace and security, or the rule of law. Moreover, UAVs have unique characteristics that make them particularly susceptible to misuse in comparison to other technologies, at the same time as their capabilities are growing rapidly. Taken together, these factors add up to a pressing need for further development of international understandings related to transparency, oversight and accountability in the context of UAV spread and use.

Building on a prior United Nations publication in 2015, this UNIDIR study assesses the current situation and suggests ways to strengthen shared understandings of transparency, oversight and accountability to address challenges raised by armed UAVs.

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