

White Paper on The Need to Strengthen International Humanitarian Law to Address the Challenges of 21st Century Warfare

Prepared by the participants of the Cleveland Experts Meetings, convened on
September 26, October 31, November 7, and November 14, 2024¹

I. Introduction

In its 1986 *Nuclear Weapons Advisory Opinion*, the International Court of Justice affirmed that International Humanitarian Law (IHL) applies to “all forms of warfare and to all kinds of weapons, those of the past, those of the present and those of the future.”²

With a total of 196 State Parties, there are no other international treaties as widely ratified as the four 1949 Geneva Conventions on the Laws of War (the Geneva Conventions), which constitute the cornerstone of IHL. The venerable Geneva Conventions were concluded 75 years ago, and their two Additional Protocols of 1977 are 50 years old. Although many of these rules and principles are now considered to be customary in nature, they were created before the age of the computer, space flight, the internet, artificial intelligence, and other modern technologies that have transformed the ways in which contemporary wars are fought.

On the 75th anniversary of the Geneva Conventions, thirty leading experts in the field of IHL from around the world gathered at Case Western Reserve University School of Law in Cleveland, Ohio, on September 26, 2024, to discuss whether there is a need to strengthen IHL to address the challenges of 21st century warfare, and how that could best be accomplished. The experts participated in three follow-up meetings over Zoom on October 31, November 7, and November 14, 2024. The participating experts are listed at the end of this document. The experts participated in their personal capacity; the views expressed in this White Paper do not necessarily reflect those of their university, firm, agency, or organization. Further, the sessions were governed by the Chatham House Rule; this White Paper summarizes the substance of the discussion but does not indicate the specific position taken by any of the participants.

II. Is there a Need to Update IHL?

Debates around whether the Geneva Conventions or IHL more broadly are “fit for purpose” or effective in light of evolutions in warfare are nothing new. The International Committee of the Red Cross (ICRC) has pointed to criticism of the application of the original 1864 Geneva Convention as a reason for publishing its first Commentary on the Geneva Convention in 1870.³ While drafters

¹ Special thanks to Frederick K. Cox International Law Center Fellows Pilar Corso, Alexander Dantoulis, and Nour Safi, who served as Rapporteurs for the Experts Meetings, and Associate Dean Michael Scharf who convened and chaired the meetings. The list of participating experts appears at the end of the White Paper.

² Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, I.C.J Reports 1996, ¶ 86 (July 1996).

³ Ellen Policinski, *War's Long Legacy: The Continued Importance of the Geneva Conventions 75 Years Later*, ICRC Humanitarian Law & Policy Blog (Aug. 8, 2024). <https://blogs.icrc.org/law-and-policy/2024/08/08/wars-long-legacy-the-continued-importance-of-the-geneva-conventions-75-years-later/>

of the Geneva Conventions of 1949 were motivated by the horrors of the Second World War, they also recognized the rules and principles they were articulating needed to be formulated in a manner to take into account the inevitable evolutions in warfare. As seen over the past decades, States have interpreted these rules and principles as such, reflecting developments in warfare, and leading many to conclude that what is needed is not necessarily new IHL but rather better respect for IHL and elaborations of its rules and principles. However, modern warfare in the 21st century has evolved, and future warfare will undoubtedly evolve, in ways unfathomable in 1949/1977 and in other respects that raise questions of the need to update IHL.

The subsections below identify selected substantive areas that the participating experts discussed as potentially warranting clarification, new rules, or interpretations of existing rules found in the Geneva Conventions or other elements of IHL, through new treaties, soft law, and interpretative guidance. The pros and cons of the different approaches to updating IHL are discussed in Section III.

A. Outer Space Warfare

State activity in and through outer space is regulated by international law including the U.N. Charter and the 1967 Outer Space Treaty, which commits signatories to the peaceful and cooperative exploration and use of outer space.⁴ States have long recognized the risk of armed conflict extending to outer space and they widely agree that IHL applies to outer space. Thus, the ICRC has concluded that “IHL applies to any military operations conducted as part of an armed conflict, including those occurring in outer space.”⁵

But the Cleveland experts discussed how States may find it complicated to apply some IHL rules and principles to new environments and technology related to outer space and that various questions are not clearly answered. For example, the experts discussed how States might legally assess whether the purposeful creation of space debris to affect an adversary constitutes an “attack”; how the term “attack” applies to interference with space-based operations; when, under the IHL principle of distinction, is a satellite, space station, or payload considered a lawful military objective; whether the risk of the creation of space debris might require States to think anew about the meaning of the terms “indiscriminate” and “disproportionate”; and how might belligerents take all feasible precautions to protect civilians and civilian objects against the effects of military operations in space?

These issues have led some to advocate for a new binding instrument, or statement of best practices, or greater clarification of existing law to better articulate how IHL applies to armed conflict in outer space. The *Woomera Manual Project*, published in 2024, is intended to be an objective statement of existing international law, including IHL, applicable to modern military

⁴ Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, G.A. Res. 2222 (XXI), Dec. 19, 1996.

⁵ International Committee of the Red Cross, *International Humanitarian Law and the Challenges of Contemporary Armed Conflicts – Recommitting To Protection In Armed Conflict On The 70th Anniversary Of The Geneva Conventions*, (Jun. 16, 2020) <https://shop.icrc.org/international-humanitarian-law-and-the-challenges-of-contemporary-armed-conflicts-recommitting-to-protection-in-armed-conflict-on-the-70th-anniversary-of-the-geneva-conventions.html>

space operations.⁶ The Cleveland experts felt *Woomera* was a good start but at the end of the day, the interpretation of the IHL rules applicable to conflict in space need to be further clarified, even if by analogy, so that they can be distilled down to clear rules of engagement that can be trained and implemented by all parties to the conflict.

B. Cyberwarfare

The use of cyberspace in armed conflict is a fact of modern warfare, often with kinetic consequences. The United States military established Cyber Command in 2009 and other States have followed suit.⁷ But military cyber units are operating in a realm where it is not always clear how States apply IHL protections and restrictions. In the context of the work of the UN Open Ended Working Group and Group of Government Experts, which have been endorsed by the General Assembly,⁸ States have affirmed that existing IHL applies to cyber operations in the context of an armed conflict. On the other hand, some scholars continue to debate whether existing IHL rules are sufficient to address military cyber operations or whether a new legal framework is needed to manage cyberwarfare. A decade ago, NATO was involved in the establishment of the *Tallinn Manual* on the application of international humanitarian law to Cyber Operations, but the *Tallinn* principles are non-binding and have not been universally endorsed.⁹

The debate over a cyber-IHL treaty initiative occurs within a broader debate over replacing the current multistakeholder paradigm of Internet governance with a new multilateral paradigm. Western industrialized democracies favor the former (current) model, which gives voice to civil society and the private sector on both technical and policy aspects. Authoritarian states favor the latter model, which is state-centered and excludes other voices. Russia attempted to force the issue with a draft cybercrime treaty that made its way through the UN treaty-making process during COVID but has since stalled out as supportive states have abandoned Russia in the wake of its invasion of Ukraine.¹⁰ Several of the participating experts felt that a cyber-IHL treaty initiative should occur fully within and supporting the multistakeholder model of Internet governance.

⁶ The University of Adelaide, The Woomera Manual on the International Law of Military and Space Operations (Oct. 2018). <https://law.adelaide.edu.au/woomera/system/files/docs/Woomera%20Manual.pdf>

⁷ Robert M. Gates, Memorandum to Secretaries of the Military Departments, Subject: Establishment of a Subordinate Unified U.S. Cyber Command Under U.S. Strategic Command for Military Cyberspace Operations, June 23, 2009.

⁸ United Nations General Assembly (UNGA), Report of the Group of Governmental Experts on Developments in the Field of Information and Telecommunications in the Context of International Security, UNGAOR, 68th Sess, UN Doc [A/68/98*](#)(2013) (2013 GGE Report) (later adopted by the UNGA Resolution [A/RES/68/243](#)); UNGA, Report of the Group of Governmental Experts on Developments in the Field of Information and Telecommunications in the Context of International Security, UNGAOR, 70th Sess, UN Doc [A/70/174](#) (2015) (2015 GGE Report) (later adopted by the UNGA Resolution [A/RES/70/237](#)); UNGA, Report of the Open-ended working group on developments in the field of information and telecommunications in the context of international security, UN Doc [A/75/816](#) (2021) (2021 OEWG Report); UNGA, Report of the Group of Governmental Experts on Advancing Responsible State Behaviour in Cyberspace in the Context of International Security, 76th Sess, UN Doc [A/76/135](#) (2021) (2021 GGE Report) (both later adopted by UNGA Resolution [A/RES/76/19](#)).

⁹ Tallinn Manual on the International Law Applicable to Cyber Operations (Michael N. Schmitt eds., Cambridge University Press, 2017).

¹⁰ Valentin Weber, *The Dangers of a New Russian Proposal for a UN Convention on International Information Security*, Council on Foreign Relations (Mar. 21, 2023), <https://www.cfr.org/blog/dangers-new-russian-proposal-un-convention-international-information-security>.

The experts discussed two new issues that arise from viewing IHL in a digital context. First, some of the infrastructure we refer to as cyberspace is often owned, provided, managed and secured by private companies. As private companies provide goods and services to parties to the conflict, experts discussed the IHL implications, notably that a company's personnel and assets would ordinarily be protected as civilians and civilian objects, respectively, but that those protections may be lost when personnel are directly participating in hostilities and when their assets qualify as military objectives. Second, in addition to the harm that military operations may cause to digital infrastructure, experts discussed harm that may be caused by an inappropriate collection and/or use of data. In view of the use of technology and data in armed conflict, article 36 of Additional Protocol I obliges the parties in the study, development, acquisition or adoption of a new weapon, means, or method of warfare, to determine whether its employment would, in some or all circumstances, be prohibited by the Protocol or by any other applicable rule of international law. The participating experts discussed the importance for States to recognize that technology and data in general – and AI systems in particular – can be part of new weapons, means, or methods of warfare and therefore fall within the scope of the obligation laid down in article 36.

C. Autonomous Weapons

Additional Protocol I to the Geneva Conventions prohibits weapons that cause superfluous injury or unnecessary suffering and requires that parties review their weapons to ensure their use is not prohibited under the rules of international law, including IHL. The 1980 Inhumane Weapons Convention (CCWC), which was last amended in 1996, supplements Protocol I by specifically restricting or prohibiting the use of certain weapons such as landmines, blinding lasers, and incendiary devices.¹¹

Some commentators have argued that fully autonomous weapons cross the threshold of acceptability and should be banned by a new international treaty.¹² Specifically, some argue that human judgment is necessary to apply IHL rules such as distinction and proportionality. There are also questions about who could be held accountable, from the programmer to the manufacturer, to the seller and end-user, as well as those who choose to deploy and utilize such weapons and those who have command responsibility for their use.¹³ The Geneva Conventions and their Additional Protocols were designed to be implemented by and enforced against humans, not machines. Therefore, advocates of a new treaty seek to impose a general obligation for states to maintain meaningful human control over the use of force.

¹¹ International Committee of the Red Cross, *Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects* (1980), https://www.icrc.org/sites/default/files/document/file_list/dp_consult_8_1980_convention_on_ccw.pdf.

¹² Bonnie Docherty, *The Need for and Elements of a New Treaty on Fully Autonomous Weapons*, Human Rights Watch, (Jun. 1, 2020), <https://www.hrw.org/news/2020/06/01/need-and-elements-new-treaty-fully-autonomous-weapons>.

¹³ Russell Christian, *Mind the Gap: The Lack of Accountability for Killer Robots*, Human Rights Watch (Apr. 9, 2015), <https://www.hrw.org/report/2015/04/09/mind-gap/lack-accountability-killer-robots>.

The ICRC has taken a more nuanced position that recommends that States make new law that prohibits certain autonomous weapons systems and regulates others¹⁴ -- a position endorsed by the participating experts.

D. Attacks Against or Impacting the Environment

The 1907 Hague Regulations,¹⁵ the 1949 Geneva Conventions,¹⁶ the 1976 Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques (ENMOD),¹⁷ and Additional Protocol I of 1977¹⁸ contain provisions related to protecting the environment in armed conflict. Over the years there have been disagreements over how the rules and principles of IHL applied to attacks against the environment, though many States recognize that the civilian protections in IHL apply to the environment. Work to provide clarification began in the 1990s after the Iraqi military set fire to more than 600 oil wells during a scorched-earth retreat from Kuwait in 1991, but concern dates back at least to the Vietnam War, when the US military used Agent Orange to clear millions of hectares of forest with dire consequences for human health and wildlife.

Some protections related to the environment are encompassed within certain of the crimes under the Rome Statute of the International Criminal Court: Art. 8(2)(b)(iv) (war crimes), Art. 6 (c) (genocide), and Art. 7 (k) (crime against humanity, other inhumane acts).¹⁹ A proposed amendment to add "ecocide" as a Rome Statute crime has recently been submitted by Vanuatu.²⁰

In an effort to clarify the law, in 2020 the ICRC produced *Guidelines on the Protection of the Natural Environment in Armed Conflict*²¹ as an update of their 1994 predecessor. The ICRC

¹⁴ International Committee of the Red Cross, *ICRC Position on Autonomous Weapon Systems* (Dec. 5, 2021), <https://www.icrc.org/en/document/icrc-position-autonomous-weapon-systems>.

¹⁵ Article 23(g) of the Regulations Annexed to the 1907 Hague Convention (IV) Respecting the Laws and Customs of War on Land (Hague Regulations) provides a foundational safeguard for the environment by forbidding parties "to destroy or seize the enemy's property, unless such destruction or seizure be imperatively demanded by the necessities of war."

¹⁶ Article 53 of the 1949 Geneva Convention (IV) relative to the Protection of Civilian Persons in Time of War provides: "Any destruction by the Occupying Power of real or personal property belonging individually or collectively to private persons, or to the State, or to other public authorities, or to social or cooperative organizations, is prohibited, except where such destruction is rendered absolutely necessary by military operations."

¹⁷ Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques, May 18, 1977, 1108 U.N.T.S. 151.

¹⁸ Protocol Additional to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of International Armed Conflicts, June 8, 1977, 1125 U.N.T.S. 3., art. 35.3 & 55.

¹⁹ Rome Statute of the International Criminal Court, art. 8(2)(b)(iv), art. 6(c), art. 7(k), July 17, 1998, 2187 U.N.T.S. 3.

²⁰ Rebecca Root, *Ecocide and the Rome Statute*, International Bar Association (Oct. 14, 2024), <https://www.ibanet.org/ecocide-rome-statute>.

²¹ International Committee of the Red Cross, *Guidelines on the Protection of the Natural Environment in Armed Conflict* (Sept. 2020),

Guidelines consist of thirty-two rules and recommendations under IHL, each accompanied by a commentary explaining their legal basis and providing guidance for interpretation. Two years later, the International Law Commission submitted Draft Principles Related to Protecting the Environment During Armed Conflict to the U.N. General Assembly for adoption.²² Ultimately, the UN General Assembly decided merely to take note of the ILC Draft Principles rather than call for the convening of a Diplomatic Conference to negotiate a new Protocol to the Geneva Conventions.²³ It is significant that the General Assembly characterized the Draft Principles as a mix of progressive development of law and codification of existing IHL.²⁴ In 2023, the Prosecutor of the ICC called for input on developing a framework for prosecuting environmental crimes.²⁵ To the extent environmental crimes will be operationalized by the Office of the Prosecutor, the ICC's efforts are likely to produce increased visibility and ongoing discussions in this area.

The participating experts endorsed these initiatives and called for further efforts to clarify the application of IHL to attacks against the environment.

E. Treatment of Non-State Actors

The modern controversy about the application of IHL to non-state actors stems from the fact that the Geneva Conventions explicitly recognize only two statuses – civilians and combatants. Both are entitled to specific protections when detained. In 2002, the Bush administration argued that neither the protections for civilians nor POWs applied to “unlawful combatants” captured in the so-called “Global War on Terror.” Since the Obama Administration, the U.S. has used the term “unprivileged combatants” instead of “unlawful combatants,” but with a similar effect.²⁶

After the 9/11 attacks, such individuals were taken to the U.S. military installation at Guantánamo Bay, Cuba, as well as other sites such as “secret prisons” in a variety of countries, as well as detention facilities in Afghanistan and Iraq, and subjected to extraordinary methods of interrogation which would have been prohibited by the Geneva Conventions if applied to civilians or POWs. The U.S. position engendered widespread criticism, but the debate about what

https://www.icrc.org/sites/default/files/document_new/file_list/guidelines_on_the_protection_of_the_natural_environment_in_armed_conflict_advance-copy.pdf.

²² International Law Commission, *Draft Articles on the Protection of the Environment in Relation to Armed Conflicts* (Jul. 8, 2022), https://legal.un.org/ilc/texts/instruments/english/draft_articles/8_7_2022.pdf.

²³ G.A. Res. 77/104, *International cooperation in the peaceful uses of outer space*, U.N. Doc. A/RES/77/104 (Dec. 7, 2022).

²⁴ U.N. General Assembly, *Report of the International Law Commission: Seventy-fourth Session*, U.N. Doc. A/77/10, at 97, ¶ 3 (Aug. 12, 2022).

²⁵ Public International Law & Policy Group “PILPG”, Debevoise & Plimpton & Baker McKenzie, *Comments on the ICC Office of the Prosecutor’s Environmental Crimes Policy Initiative* (Mar. 2024). <https://static1.squarespace.com/static/5900b58e1b631bffa367167e/t/65f98c207494177464ac33f5/1710853155053/PILPG+Comments+OTP+ICC+Environmental+Crimes+March+2024.pdf>

²⁶ Sean D. Murphy, *Evolving Geneva Convention Paradigms in the 'War on Terrorism': Applying the Core Rules to the Release of Persons Deemed 'Unprivileged Combatants'*, 75 Geo. Wash. L. Rev. 1105 [pg. 2] (2007). https://scholarship.law.gwu.edu/cgi/viewcontent.cgi?article=1901&context=faculty_publications.

protections apply to such non-state actors continues to this day.²⁷ And while the U.S. Supreme Court's *Hamdan* decision was viewed as confirming that basic protections of Common Article 3 of the Geneva Conventions did apply to all detainees (e.g., prohibitions on cruel treatment or torture), some have interpreted the decision to provide legal justification for the United States' controversial policy of targeted killing of non-state actors beyond the traditional "hot battlefield."²⁸

Meanwhile, the number of non-state armed groups engaging in armed conflicts have grown exponentially, with some States opting to enter into partnerships with them.²⁹ This in turn has required the application of IHL (particularly, customary international law) to regulate their conduct and to ensure the protections of IHL to populations under their control, including detainees, bringing with it further questions about interpretation.³⁰

Unlike the provisions concerning grounds and procedures for deprivation of liberty in International Armed Conflict,³¹ the Geneva Conventions and Additional Protocols provide little guidance in Non-International Armed Conflict.³² Debate concerning the application of Human Rights Law as a gap filler, and the role of the *lex specialis* doctrine, have not been settled.³³

²⁷ Sean D. Murphy, *Evolving Geneva Convention Paradigms in the 'War on Terrorism': Applying the Core Rules to the Release of Persons Deemed 'Unprivileged Combatants'*, 75 *Geo. Wash. L. Rev.* 1105 [pg. 32] (2007). https://scholarship.law.gwu.edu/cgi/viewcontent.cgi?article=1901&context=faculty_publications.

²⁸ Shane R. Reeves, Winston Williams & Amy H. McCarthy, *How Do You Like Me Now? Hamdan v. Rumsfeld and The Legal Justifications for Global Targeting*, 41 *U. Pa. J. Int'l L.* 2, 329, 373 (2019). <https://www.armfor.uscourts.gov/ConfHandout/2022ConfHandout/Williams41UnivOfPAJournalOfInternationalLaw329.pdf>; See also ICRC, INTERNATIONAL HUMANITARIAN LAW AND THE CHALLENGES OF CONTEMPORARY ARMED CONFLICTS, 19-24 (2024), available at: <https://shop.icrc.org/international-humanitarian-law-and-the-challenges-of-contemporary-armed-conflicts-building-a-culture-of-compliance-for-ihl-to-protect-humanity-in-today-s-and-future-conflicts-pdf-en.html>, which discusses the detention of individuals associated with non-state armed groups in armed conflicts. IHL protections apply to all detainees, regardless of affiliation, and the report rejects claims for exclusion of non-state group members from such protections. It also highlights the role of states in promoting IHL and ensuring that non-state groups they support comply with IHL obligations.

²⁹ Matthew Bamber-Zryd, *ICRC Engagement with Armed Groups in 2023*, International Committee of the Red Cross (Oct. 10, 2023), <https://blogs.icrc.org/law-and-policy/2023/10/10/icrc-engagement-with-armed-groups-in-2023/>.

³⁰ See ICRC, INTERNATIONAL HUMANITARIAN LAW AND THE CHALLENGES OF CONTEMPORARY ARMED CONFLICTS, 22-24 (2024), available at: <https://shop.icrc.org/international-humanitarian-law-and-the-challenges-of-contemporary-armed-conflicts-building-a-culture-of-compliance-for-ihl-to-protect-humanity-in-today-s-and-future-conflicts-pdf-en.html>, (discussing legal safeguards to prevent arbitrary detention by non-state armed groups and the role of States in promoting IHL and ensuring that non-state armed groups they support comply with IHL obligations).

³¹ Gabor Rona, *Is There a Way Out of the NonInternational Armed Conflict Detention Dilemma?*, 91 *INT'L L. STUD.* 32 (2015), <https://digital-commons.usnwc.edu/cgi/viewcontent.cgi?article=1001&context=ils>.

³² Raphaël van Steenberghe, *The Impacts of Human Rights Law on the Regulation of Armed Conflict*, 919 *Int'l Rev. Red Cross* (Jun. 2022), <https://international-review.icrc.org/articles/the-impacts-of-human-rights-law-on-the-regulation-of-armed-conflict-919>.

³³ See Francoise Hampson, "The Relationship Between the Law of Armed Conflict and International Human Rights Law", *Lieber Institute West Point*, 1 July 2022, available at <https://lieber.westpoint.edu/relationship-law-of-armed-conflict-international-human-rights-law/>

The proliferation of private military operations in armed conflict has also generated consternation. Treaty law concerning mercenaries is moribund or of questionable applicability to Private Military and Security Companies, whose applications in armed conflict place them neatly into neither of the categories of persons recognized in the law of armed conflict: combatants and civilians.³⁴

The participating experts recognized that many of these issues have arisen in the context of recent conflicts and this body of law continues to evolve and require clarification post 9/11.³⁵

III. What Form should any New Instrument(s) Take?

The sections above identify areas of IHL that could benefit from clarification as applied to new technologies and methods of warfare. Except as noted above, the participating experts largely agreed that the solution does not lie in the negotiation of a new treaty, at least in the immediate future. With the exception of the Treaty on the Prohibition of Nuclear Weapons which was adopted in 2017,³⁶ there has not been much progress in recent years on the international negotiation of new treaties related to the laws of war. Some liken the current era to a “new Cold War”³⁷ in which States are increasingly reluctant to adopt international treaties which they perceive as constraining their national security interests. In addition to the political barriers to negotiation and ratification of a new treaty or protocol, several of the Cleveland experts were concerned that such an effort could open up the existing Geneva Conventions and related International Humanitarian Law treaties to revision that would water down or weaken their provisions. Other participating experts felt that with respect to some of the areas described above there is value in pursuing a new binding instrument.

An alternative route favored by many of the participating experts is global adoption of a “soft law” instrument, such as the *Tallinn Manual for Cyberwarfare* and the *Woomera Manual for Space Warfare* described above, which the participating experts believe can be extremely useful in giving broad guidance even if not universally adopted. In addition, such a soft law approach offers flexibility with respect to new developments. But obtaining global consensus on a non-binding instrument has been challenging. For example, in 2017, there was an attempt to reach a consensus at the United Nations on the applicability of the fundamental International Humanitarian Law rules to cyberwarfare. According to accounts, the effort was blocked by Russia

³⁴ See *OAU Convention for the Elimination of Mercenarism in Africa*, Art. 1, Organization of African Unity, https://au.int/sites/default/files/treaties/37287-treaty-0009_-_oau_convention_for_the_elimination_of_mercenarism_in_africa_e.pdf. See also International Convention Against the Recruitment, Use, Financing and Training of Mercenaries, Art. 1, <https://www.ohchr.org/en/instruments-mechanisms/instruments/international-convention-against-recruitment-use-financing-and>

³⁵ See Michael Schmitt, “21st Century Conflict: Can the Law Survive?”, *Melbourne Journal of International Law*, Vol. 8, 2007, available at: <https://ssrn.com/abstract=1600627>. See also Michael Schmitt, “Lieber Papers Series - the United States and (Most of) the Rest: A Legal Interoperability Primer.” *Lieber Institute West Point*, 28 Oct. 2024, lieber.westpoint.edu/united-states-most-rest-legal-interoperability-primer/

³⁶ Text of the Treaty available at: https://www.icanw.org/tpnw_full_text

³⁷ Michael Scharf and Emma Peters, *Forward: International Law and the New Cold War*, 55 CASE WESTERN RESERVE JOURNAL OF INTERNATIONAL LAW 1-6 (2023), <https://scholarlycommons.law.case.edu/cgi/viewcontent.cgi?article=2646&context=jil>

and China.³⁸ Similarly, the General Assembly was blocked from action stronger than “taking note” of the ILC’s Draft Principles Related to Protecting the Environment During Armed Conflict.

An avenue that the ICRC has undertaken is the promulgation of updates to its Commentaries on the Geneva Conventions of 1949 and their Additional Protocols.³⁹ The ICRC’s original “Pictet commentary”⁴⁰ is frequently cited as the authoritative source of interpreting the Geneva Conventions. By integrating and reflecting social and international legal developments, the ICRC’s updated Commentaries depart from the Pictet commentary in certain respects.⁴¹ Many of the participating experts supported further updates focusing on cyberwarfare, space warfare, autonomous weapons, attacks against the environment, mercenaries and private military and security contractors, and other areas discussed above. The *Guidelines on the Protection of the Natural Environment in Armed Conflict* issued by the ICRC in 2020 (referenced above),⁴² while not being part of the ICRC’s Commentaries project, is another model for interpretive guidance supported by the participating experts. The participating experts felt that several soft law approaches could be pursued in parallel.

This White Paper is intended as a call to action and roadmap for evolving IHL to respond to the challenges of 21st century warfare. The participating experts agreed that until new instruments, commentaries, or guidelines governing application of IHL to space warfare, cyber warfare, use of autonomous weapons, attacks against the environment, and/or treatment of non-state actors are developed, it is understood that these areas remain subject to the relevant existing rules of IHL, International Criminal Law, International Human Rights Law, and Public International Law.

IV. List of Participating Experts

Svenja Berrang, Legal Adviser, German Federal Ministry of Defence

³⁸ Michael Schmitt and Liis Vihul, *International Cyberlaw Politicized: The UN GGE’s Failure to Advance Cyber Norms*, JUST SECURITY (Jun. 30, 2017), <https://www.justsecurity.org/42768/international-cyber-law-politicized-gges-failure-advance-cyber-norms/>

³⁹ International Committee of the Red Cross, *Convention (I) for the Amelioration of the Condition of the Wounded and Sick in Armed Forces in the Field. Geneva, 12 August 1949. Commentary of 2016* (2016), <https://ihl-databases.icrc.org/en/ihl-treaties/gci-1949/introduction/commentary/2016>.

⁴⁰ Jean Pictet, ed., *The Geneva Conventions of 12 August 1949 Commentary – IV Geneva Convention relative to the Protection of Civilian Persons in Time of War*, International Committee of the Red Cross (Dec. 31, 1958).

⁴¹ Dapo Akande, *Changes in Treaty Interpretation: The ICRC’s Updated Commentaries to the Geneva Conventions*, EJIL TALK, August 14, 2023, <https://www.ejiltalk.org/changes-in-treaty-interpretation-the-icrcs-updated-commentaries-to-the-geneva-conventions/>. According to Akande, three notable changes in the 2016 updated Commentary on the First Geneva Convention are that (1) it changed the definition of armed conflict in the context of use of force against non-state actors in the territory of another state, (2) it narrowed the definition of “occupation” to that specified in the Hague Regulations of 1907, and (3) it specifies that the only State whose consent is required for the provision of humanitarian aid is the territorial State.

⁴² International Committee of the Red Cross, *Guidelines on the Protection of the Natural Environment in Armed Conflict: Rules and Recommendations Relating to the Protection of the Natural Environment Under International Humanitarian Law with Commentary* (Sept. 2020), <https://shop.icrc.org/guidelines-on-the-protection-of-the-natural-environment-in-armed-conflict-rules-and-recommendations-relating-to-the-protection-of-the-natural-environment-under-international-humanitarian-law-with-commentary.html>.

John Bellinger, Arnold & Porter, former Legal Adviser of the U.S. Department of State and of the National Security Council

Prof. Laurie Blank, Emory University School of Law

Prof. Els de Busser, University of Amsterdam

Prof. Avidan Cover, Associate Dean for Academic Affairs and Director of the Institute for Global Security Law & Policy, Case Western Reserve University School of Law

Prof. Laura Dickinson, George Washington University School of Law

Dr. Amos Guiora, University of Utah S.J. Quinney College of Law, former Commandant of the IDF School of Military Law

Hon. Philip Hadji, Judge, U.S. Court of Federal Claims, formerly Assistant General Counsel in the U.S. Navy Office of General Counsel

Sandra Hodgkinson, Senior Vice President, Leonardo DRS, former Assistant Secretary of Defense for Detainee Affairs

James C. Johnson, Prosecutor of the Residual Special Court for Sierra Leone, Director of the Henry King War Crimes Office at Case Western Reserve University School of Law

Christian Jorgensen, Legal Counsel, International Humanitarian Law, American Red Cross National Headquarters

Prof. Michael Kelly, Creighton University School of Law

Prof. Craig Martin, Washburn University School of Law

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