Asia Pacific Journal of International Humanitarian Law

2025 Edition

ASIA-PACIFIC JOURNAL OF INTERNATIONAL HUMANITARIAN LAW

VOLUME 06 | 2025 EDITION

Published by U.P. LAW COMPLEX

ISSN: 2719-1141

FOREWORD

The Institute of International Legal Studies (IILS) of the University of the Philippines Law Center is proud to release the 2025 Edition of the Asia-Pacific Journal of International Humanitarian Law. Guided by the Journal's Board of Experts, APJIHL continues to provide peer-reviewed scholarship on significant developments in international humanitarian law (IHL) and related fields, with emphasis on voices and perspectives from the region. Now in its sixth year of publication, we build on the gains of the previous editions and reaffirm our commitment to rigorous, interdisciplinary inquiry that is relevant to practice and policy.

This year marks an important milestone: APJIHL is now indexed in Scopus. Scopus accreditation recognizes the Journal's editorial and peer-review standards, enhances the global visibility and citability of our authors' work, and helps ensure that scholarship from and about the Asia-Pacific is more readily discoverable by researchers, practitioners, and policy makers.

The 2025 Edition appears at a moment of sharpening humanitarian challenges. Contemporary conflicts continue to test environmental protection norms, accountability and reparations frameworks, and the regulation of emerging military technologies, while age-old ethical traditions remain powerful resources for reflection on the conduct of hostilities. In this context, the contributions in this volume illuminate both principle and practice:

- Of Divine Wars: A Comparison of Hindu Teachings with International Humanitarian Law and Jus Ad Bellum by Wamika Sachdev, which revisits ancient ethics of war to illuminate the moral foundations of IHL;
- The Polymorphic Environmental Impact of the USSR and US Wars on Afghanistan: A Forgotten Prism of International Law by Sayed Qudrat Hashimy and Jackson Simango Magoge, which examines long-term ecological damage and gaps in legal protection during armed conflicts;
- India's Regulatory and Ethical Stance on Autonomous Weapons Systems by Anviksha Pachori, which addresses critical questions on accountability, human control, and strategic choices in the age of AI and autonomous warfare;
- Guarantees of Non-Repetition as Reparations: Exploring a Developing Modality in the Context of the Extraordinary Chambers in the Courts of Cambodia by Nathanael Thomas, which explores innovative approaches to victim-centered justice and transitional accountability; and
- Environmental Damage in Outer Space: Increased Risks and the Legal Framework under International Humanitarian Law by Xinyi Pan and Xidi Chen, which proposes a nature-centric, practicable IHL framework for environmental protection in outer space conflicts.

We also note a marked increase in submissions from emerging scholars across the region. This aligns with APJIHL's purpose to serve as a platform where new and diverse perspectives enrich doctrinal debates, inform operational practice, and catalyze reforms in rights protection, international relations, and the rule of law.

The publication of this volume follows our established multi-layer process of editorial screening and double-blind peer review. We are grateful to the members of the Board of Experts and to our anonymous reviewers for their careful engagement and generosity of time.

We extend our gratitude to the research and administrative staff of the UP Law Center, whose steady support made this edition possible. We likewise acknowledge the dedicated work of our editorial team—Associate Editor Atty. Joan Paula Deveraturda; Assistant Editor Prof. Michael Tiu, Jr.; Editorial Assistants Chester Louie Tan, Wenona Dawn Catubig, Aira Lynn Cunanan, Ma. Flordeliza Villar, and Mackie Valenzuela—as well as Marilyn Cellona of the IILS for her administrative support.

As the intersections, challenges, and possibilities for IHL scholarship continue to evolve, APJIHL remains committed to providing a space for interdisciplinary discussion, from and for the Asia-Pacific, to advance the law applicable in situations of armed conflict.

ROMMEL J. CASIS
Managing Editor
2025

TABLE OF CONTENTS

PART I
VOICES FROM THE REGION

Of Divine Wars: A Comparison of Hindu Teachings with International Humanitarian Law and *Jus Ad Bellum*

*Wamika Sachdev**
Legal Research Consultant, National Human Rights Commission of India

ABSTRACT

IHL studies have benefited greatly by drawing parallels with the rules of war in different religions. This article expands this scholarship by further considering the ideas of morality and humanity through the lens of Mahabharata, a text of Hindu origin. This research unravels intriguing insights related to what constitutes Dharma and Dharmayuddha (righteous warfare), the bridge between jus in bello and jus ad bellum, and how IHL is compromised by the realities of war. It argues that the true value of IHL comes from accepting both the ideal and real and accepting accountability for one's actions in war. In doing so, the study discovers how the concept of Dharma may be beneficial, how studying ancient ethics of war is important for the incorporation of humanity in war, why the Bhagavad Gita born out of the Epic is essential to study the correlation of IHL with jus ad bellum, and how this entire context exists in the realities of war.

Keywords: Bhagavad Gita, Comparative IHL, Humanity, Hinduism, Jus Ad Bellum, Mahabharata, Morality in Law, Rules of Battle, Sacred Texts.

Introduction

> *"Whatever is here, may be found elsewhere; what is not cannot[,], be found anywhere else [...]."1 It is said about the Mahabharata.*

The relationship between international humanitarian law (IHL) and religions is one of immemorial interdependence.[2] Many scholars have explored how IHL was shaped by the teachings of different religions, and have discussed the importance of imbibing their focus on peace and humanity even further into the practice of IHL.[3]

---

[1] Bharti Kalra, Manash P. Baruah, and Sanjay Kalra, "The Mahabharata and reproductive endocrinology", *Indian journal of endocrinology and metabolism,* Vol. 20, No. 3, 2016, pp. 404-407.

I am grateful to Dr. Jonathan Kwik for being the most intuitive guide and for Sara Urso for being the most supportive friend. Their contribution to the publication is paramount!

[2] Andrew Bartles-Smith, "Religion and international humanitarian law." *International Review of the Red Cross*, Vol. 104, No. 920-921, 2022, pp. 1725-1761.

[3] William Vendley, and David Little, "Implications for Religious Communities: Buddhism, Islam, Hinduism, and Christianity", in Douglas Johnston and Cynthia Sampson (eds), *Religion, The Missing Dimension of Statecraft*, New York, NY, 1994; online ed., Oxford Academic, 31 Oct. 2023;

The International Committee of the Red Cross (ICRC) similarly pays due attention and respect to the influence religions have had on developments in IHL.[4] Amongst scholars, Singh said that "the influence of religion in regulating warfare to deprive it of its savagery has been nowhere better indicated than by ancient Indian and Islamic laws of war."[5]

Articles such as "The World Is Without Shelter, Without Protector: Buddhism, the Protection of Displaced People, and International Humanitarian Law"[6], "Ethical Paradigm of Buddhism"[7] and about the "Prohibition of the Use of Nuclear Weapons under Islamic Law"[8] are great examples of academic analyses on how ancient religions may fill gaps present in IHL. However, while there have been some contributions to Hinduism and IHL such as "Exploring Hindu ethics in warfare: the Puranas",[9] they remain in the minority. Typically, the exploration of the Epic to IHL by legal scholars has been mostly to discuss the concept of *jus ad bellum*.[10] The theoretical discussion has been limited to the intriguing way in which the concept of just war plays out.[11] I argue in this paper that this narrow focus is short-sighted. Hinduism is one of the oldest religious practices. It is built around the idea of righteous conduct and has dense knowledge related to warfare within itself.[12]

Weeramantry, Christopher G. Weeramantry, *Islamic Jurisprudence: An International Perspective*, 1988; Davis New, *Holy War: The Rise of Militant Christian, Jewish and Islamic Fundamentalism,* 2002; Theodor Meron, "The Humanization of Humanitarian Law", *American Journal of International Law*, Vol. 94, 2000, pp. 239-264.

[4] A. Bartles-Smith, above note 2, p. 1.

[5] Carl Landauer, "Passage from India: Nagendra Singh's India and International Law,", *Indian Journal of International Law*, Vol. 56, No. 3, 2016, pp. 265-305.

[6] "The World Is Without Shelter, Without Protector: Buddhism, the Protection of Displaced People, and International Humanitarian Law." in Deniz Cosan Eke and Eric Trinka (eds), *Religion, Religious Groups, and Migration*, Transnational Press, London, 2023.

[7] Pimchanok Palasmith, "Ethical Paradigm of Buddhism: A Buttress for Compliance with International Humanitarian Law", *Asia Pacific Journal of International Humanitarian Law*, Vol. 4, 2023, p. 64.

[8] Kheda Djanaralieva, "Prohibition of the Use of Nuclear Weapons under Islamic Law: Filling the Gap of International Humanitarian Law?" *Asia Pacific Journal of International Humanitarian Law*, Vol. 4, 2023, p. 31.

[9] Raj Balkaran and Walter Dorn, "Exploring Hindu ethics of Warfare: The Puranas", *International Committee of the Red Cross,* 17 January 2024, available at: https://blogs.icrc.org/religion-humanitarianprinciples/exploring-hindu-ethics-warfare-puranaas/.

[10] Ibid.

[11] Francis X. Clooney, "Pain But Not Harm: Some Classical Resources Towards a Hindu Just War Theory", in Paul Robinson (ed.), *Just War in Comparative Perspective, Ashgate, Aldershot and Burlington*, VT, 2003; Matthew A. Kosuta, "Ethics of War and Ritual; The Bhagavad Gita and Mahabharata as Test Cases", *Journal of Military Ethics,* Vol. 19, No. 3, 2020; Ravi Khangai, "Why Should Arjuna Kill? The Bhagavad Gita's Justification of Selective Violence", *American Research Journal of History and Culture*, Vol. 1, No. 2, 2015.

[12] Raj Balkaran and Walter Dorn, "Charting Hinduism's Rules of Armed Conflict: Indian Sacred Texts and International Humanitarian Law." *International Review of the Red Cross*, Vol. 104, No. 920-921, 2022, pp. 1762-1797.

The exploration of *Dharma* in its myriad aspects is a vast and vibrant thread, the fabric of which is useful material to religious teachers, scientists, philosophers, law-makers, and lawyers alike.[13]

Hindu philosophy is one that IHL can borrow greatly from, and this article aims to take the discourse forward by linking the law of armed conflict to the ancient teachings of Hinduism. To achieve this goal, parts of the Mahabharata will be covered that give clear examples of leadership on the battlefield, codes of conduct, deceit, deception, and the psychological dimension of warfare.[14] The Epic is the longest-known saga, with a scale so vast that it encompasses ideas of great importance to all aspects of humankind.[15]

Many myths and legends run back and forth through the narrative of the Epic, connecting an ever-expanding set of beliefs, emotions, morals, philosophies, customs, rituals and ethics. All these co-exist in the chapters and verses of the Mahabharata. It weaves in philosophical teachings of all kinds, such as that of military law and the ethics of warfare. It arguably provides a cultural context to the study of IHL, describes the social structure of the ancient Indian perspective, and describes the interplay between the intentional setting of laws in war and actual wars.

This article will discuss *Dharma*, the *Mahabharata*, and the *Bhagavad Gita* as propounded by Hinduism, and draw connections between them and the important themes and challenges in contemporary IHL.

This has three main purposes. Firstly, it is a statement of how the law of war has been perceived in the Asian subcontinent. Amid a much larger sociological context in which this Epic exists, there lies an undeniable importance in drawing a link where local values, religions and myths are connected to IHL. The positive impact flows from inculcating value to narratives of IHL that appeal to non-western States.[16] They serve as both valuable inventories of parallels between IHL and older norms, and serve a useful policy purpose by allowing disseminators to re-frame IHL

[13] Carolyn Evans, "The Double-Edged Sword: Religious Influences on International Humanitarian Law", *Melbourne Journal of International Law*, Vol. 6, No. 1, 2005, pp. 1-32.

[14] Jonathan Gosling, Peter Villiers, and Harsh Verma, "Leadership and Dharma: The Indian Epics Ramayana and Mahabharata and Their Significance for Leadership Today", *Fictional Leaders: Heroes, Villains and Absent Friends*, 2013, pp. 182-201; Matthew A. Kosuta, "Ethics of War and Ritual: The Bhagavad-Gita and Mahabharata as Test Cases", *Journal of Military Ethics*, Vol. 19, No. 3, 2020, pp. 186-200; Swarna Rajagopalan, "'Grand Strategic Thought' in the Ramayana and Mahabharata", in *India's Grand Strategy*, Routledge India, 2014, pp. 31-62.

[15] Raashi Saxena, "Mahabharata: A Law Student's Perspective", *Indian Journal of Law & Legal Research*, Vol. 4, No. 1, 2022, p. 1.

[16] Jonathan Kwik, Ai Kihara-Hunt, and Kelisiana Thynne. "From Theology to Technology: A Call for IHL Ambassadors in the Asia-Pacific Region", *International Committee of the Red Cross,* 27 March 2024, available at: https://blogs.icrc.org/law-and-policy/2024/03/28/from-theology-to-technology-a-call-for-ihl-ambassadors-in-the-asia-pacific-region/.

as an evolved form of pre-existing local norms, instead of norms that are externally imposed on a people.[17]

Second, this article aims to address and add to the academic community's comparisons of peace and humanity in armed conflict. Currently, in the literature related to religion and IHL, the principles of peace and humanity are most widely discussed as propounded by Buddhism.[18] Hindu literature has many sources of warfare.[19] The perspective of Hinduism, a religion that allows war as an acceptable last resort, but still has a solidified morally and ethically charged set of rules of battle that all share an underlying and overarching focus on peace, is intriguing to explore. It offers a chance to view the humanisation of armed conflict, concepts of *jus in bello* and *jus ad bellum*, and their connection, through the lens of a religion that has arguably allowed "Just War".[20]

Thirdly, and finally, tracing these stories leads to account for the realities of war, one that both the Epic (with its strictness) and IHL (with its pragmatic practicality) face. The Epic in itself is not concerned with the manifestations of these realities. It purposely limits itself to the rules, ethics and spiritual values. Minowski argued that the *Mahabharata* is the first ever text that "possesses an embedded structure of stories within stories. One story often leads to the telling of another so that they are embedded in a complex web of interlocking narratives".[21]

As an ode to the text from which this article is inspired, and agreeing with this analogy, I intend on similarly approaching this current article. The intention is to draw connections with certain interesting stories and accounts of the Epic that are relevant to the subject of IHL. The epic is vast, and I do not propound to give definite answers to the questions raised while exploring these connections. Instead, the purpose of the article is to draw awareness to the timely relevance of these specific connections to IHL, *jus ad bellum* and their interaction in reality. I argue that the academic community, the ICRC and comparative studies will benefit from delving deeper into these accounts, for the connections have been chosen to address the morality of war and the way it is fought in its various aspects.

I narrate four connections in this regard. The first is of *Dharma* and IHL, the second is of the *Mahabharata*, comparing the Geneva Conventions to the rules of

---

[17] Ibid.

[18] P. Palasmith, above note 7, p. 2.

[19] Gerald Draper, "The contribution of the Emperor Asoka Maurya to the development of the humanitarian ideal in warfare", *International Review of the Red Cross*, No. 305, 1995, pp. 192-206; Romila Thapar, *Asoka and the Decline of the Maurya*, Oxford University Press, Delhi, 1997; Charles Alexandrowicz, "Kautilyan principles and the law of nations", British Yearbook of International Law, 1965-66, Vol. 41, pp. 301-320.

[20] Heike Krieger, Pablo Kalmanovitz, Eliav Lieblich, and Rebecca Mignot-Mahdavi, eds. *Yearbook of International Humanitarian Law – Cultures of International Humanitarian Law,* Vol. 24,, Springer Nature, 2023.

[21] Christophe Z. Minkowski, "Janamejaya's Sattra and Ritual Structure", *Journal of the American Oriental Society*, Vol. 109, No. 3, 1989, p. 412. As mentioned in *Disorienting Dharma: Ethics and the Aesthetics of Suffering in the Mahabharata*, by Emily T. Hudson, p. 23.

battle, the third is the Bhagavad Gita and *jus ad bellum*, and the final account concludes with a connection of *Krishna's* punishment upon wavering from his own rules of war. From these connections that are discussed, set against the backdrop of an interlinkage between *jus ad bellum* and *jus in bello* from an Asian perspective, we see a narrative emerging of the inescapable reality of war which cannot be seen without combining the two.

1. Societal Background of the Mahabharata

For the substantive analysis that follows, it is useful to briefly introduce the Epic upon which this article rests. The *Mahabharata* is one of the two foundational Sanskrit Epics.[22] It has 100,000 verses and is spread across 18 *Parvas* (books). Hinduism states that the Mahabharata was originally composed by a religious Sage *Ved Vyasa*, composed of 1,00,000 *shlokas* (couplets). Multiple versions of the Epic have been developed as time progressed. According to Penna, "[t]wo thousand years before Grotius, Rachel, or Ayala recalled Europe to humanitarianism, ancient Indians had a body of rules for governing the relations between the States of the sub-continent in the event of armed conflicts."[23] It therefore has been compared to the works of Shakespeare and Greek tragedies in terms of literature, and the Bible and Quran in terms of religious wisdom and knowledge in the same breadth.[24] That is to say, it exists at the macro-level of life lessons and value systems, and is a guiding document for the religion of 15% of the world's population.[25] At the same time, it also exhibits the same level of societal relevance of literature in the Asian continent that Shakespeare or others have in the Western world.[26]

The *Mahabharata* emerges as a story of and from ancient India and narrates the lineage of the *Kaurava* Clan (the unjust) and the *Pandava* Clan (the righteous) between whom the war takes place in *Kurukshetra*.[27] The primary narrative is the struggle for the throne of the Kingdom of *Hastinapur* and the battle fought between the warring groups. Lord *Krishna*, the incarnation of the god *Vishnu*, is said to have come to earth to orchestrate and mediate the *Mahabharata*.[28] Right before the

---

[22] R. Balkaran and W. Dorn, above note 9, pp. 1-23.

[23] Arthur Llewellyn Basham and Saiyid Athar Abbas Rizvi, The wonder that was India: A Survey of the Culture of the Indian Sub-Continent before the Coming of the Muslims, Sidgwick and Jackson, London, 1956, p. 8.

[24] Emily T. Hudson, Disorienting Dharma: Ethics and the Aesthetics of Suffering in the Mahabharata. Oxford University Press, USA, 2013.

[25] "Projected Changes in the Global Hindu Population", *Pew Research Center,* 2 April 2015, available at: https://www.pewresearch.org/religion/2015/04/02/hindus/.

[26] William Shakespeare, 'Comedies,Histories, & Tragedies – The Complete Works of William Shakespeare', Project Gutenberg, January 1994 https://www.gutenberg.org/cache/epub/100/pg100-images.html.

[27] John M. Koller, *The Indian Way: Asian Perspectives*, Macmillan, New York,1982, p. 62.

[28] Emily T. Hudson, Disorienting Dharma: Ethics and the Aesthetics of Suffering in the Mahabharata, p. 24.

initiation of the great war in the *Mahabharata*, *Krishna* narrated to *Arjuna* (the great warrior who hesitated to go to war due to the destruction it would inevitably cause, regardless of the righteous cause) the importance of *Dharma* (divine duty, law and actions) and produced what is known as the *Bhagavad Gita*.[29] The *Gita* serves as a manual for ethical, even spiritual conduct on the battlefield,[30] and has been established to present an "intimate link between war and religion."[31] Addressing the 'divinity' of this war leads one to question whether it describes a real war or is merely a religious tale, and whether ancient battles were fought like this historically. Although these concerns cannot be cleared completely, there is enough South Asian literature to prove that these religious texts drive the way wars are fought.[32]

Before diving into the *Mahabharata*, it is imperative to understand the concept of *Dharma* – the backbone and guiding principle upon which all characters of the Epic operate.[33] In Hinduism, *Dharma* is the highest governor of conduct.[34] For a religion famous for the worshipping of many gods, this concept is still its most important and overarching theme. In essence, the philosophy of *Dharma* is to fulfill one's righteous duty in all spheres of life. This includes law, morality, conduct and all else. The literal Sanskrit translation of *Dharma* is 'to bear, uphold, maintain and sustain an individual and State's duty as the law'.[35] It is an overarching principle valid in all spheres of conduct. Radhakrishnan says: "If morality is that which conscience imposes, and law that which state commands, the *Dharma* is neither the one nor the other. It is the tradition sustained by the conviction of countless generations of men, which helps to build the soul of truth in us".[36] Still, from a strictly legal perspective, it can be viewed as the "laws and traditions governing society, applicable to all according to their position in society and stage in life- as that determines their specific dharma".[37]

2. Dharma's connection to International Humanitarian Law

[29] Juan Mascaró (trans.), *Bhagavad Gita*. Bhaktivedanta Book Trust, USA, 1994.

[30] Steven J. Rosen's edited volume, *Holy War: Violence and the Bhagavad Gita.*, Hampton, Virginia, Deepak Heritage Books, 2002.

[31] Jeffery D. Long, War and Nonviolence in the Bhagavad Gita: Correcting Common Misconceptions, 2009.

[32] See generally, Lakshmikanth Penna, "Traditional Asian approaches: An Indian view", *Australian Yearbook of International Law*, 1985, Vol. 9, pp. 168-206.

[33] K. R. R. Sastry, "Hinduism and international law", *International Review of the Red Cross*, Vol. 117, No. 1, 1966, pp. 507-614.

[34] Jagdishalal Shastri (trans.), *The Śiva-Purāna, Ancient Indian Tradition and Mythology*, Vol. 1–4, Motilal Banarsidass, Delhi, 1950, p. 901.

[35] Naresh Chandra Sen-Gupta, *Evolution of Ancient Indian Law: Tagore Law Lectures, 1950*, Probsthain and Eastern Law House, 1953.

[36] Sarvepalli Radhakrishnan, "The Hindu Dharma", *International Journal of Ethics*, Vol. 33, No. 1, 1922, pp. 1–22.

[37] Ibid.

Dharma is in its genesis a law of conduct. Some compare it to positive law,[38] and others to the moral and philosophical discussions of law.[39] This section aims to discuss *Dharma* in the context of war, rules of battle and conduct. The relevance of discussing *Dharma* is that it is an ever-present notion in the *Mahabharata*, often quoted by the characters as the driving force behind their decision-making. A verse of the *Manu,*[40] one of the founding documents of laws of Hinduism upon which the *Mahabharata* is based,[41] states that:

> There are restrictions on an honorable warrior, which every soldier must remember during war. This is the declared law for warriors, that a warrior must not transgress from who he is to remain unblemished when he is fighting with his foes on the battlefield. He should fight only following Dharma.42

In a way, it is also the responsibility of individuals to protect the peace and security of the cosmic order – as Hinduism is the religion that inculcated the concept of *Karma*[43] (good deeds and their connection to rebirth and paying for one's sins). The burden of acting correctly, since the consequences are carried into the next life, is therefore heavy.

Originally, scholars of Buddhism arose from Hinduism. There is still often a misconception of the main teachings of *Dharma* flowing from Buddhism.[44] This is because, as pointed to earlier, the ideas of peace are propounded at the forefront by Buddhism,[45] making it also a reliable source of teachings of conduct. In fact, *Dharma* is originally derived from Hinduism,[46] making it equally essential to trace the concept back to its origins. The *Mahabharata* discusses in detail the specific *Dharma* related to warfare, military conduct, and the importance of maintaining humanity during armed conflict. In IHL, the concern is, or ought to be, the 'humanisation' of a

---

[38] R. Balkaran and W. Dorn, above note 12, p. 3.

[39] N. A. Deshpande (trans.), *Padma Purāna, Ancient Indian Tradition and Mythology,* Vol. 39–48, Motilal Banarsidass, Delhi, 1988, p. 129.

[40] Radhabinod Pal, "The History of Hindu Law: In the Vedic Age and in Post-Vedic Times Down to the Institutes of Manu", 1958.

[41] *Ibid,* p. 34.

[42] R. Balkaran and Dorn, above note 12, p. 3.

[43] Baṅkima Candra Caṭṭopādhyāya, *Essentials of Dharma*, Sribhumi Publishing Company, 1977.

[44] "The Dharma: the teachings of the Buddha", *The Pluralism Project - Harvard University*, available at: https://pluralism.org/the-dharma-the-teachings-of-the-buddha.

[45] Dr. Sumana Ratnayaka, "The Path of Peace: Using the Buddhist 'Middle Way' to Encourage IHL Compliance", 2023, available at: https://blogs.icrc.org/religion-humanitarianprinciples/peace-using-buddhist-middle-way-ihl-compliance/; Andrew Bartles-Smith, Kate Crosby, Peter Harvey, et al., , "Reducing Suffering During Conflict: The Interface Between Buddhism and International Humanitarian Law", *Contemporary Buddhism*, Vol. 21, No. 1–2, 2020, pp. 369–435.

[46] Stephanie W. Jamison and Joel Brereton (trans.), *The Rigveda: The Earliest Religious Poetry of India, Vol.3*, Oxford University Press, Oxford, 2014, p. 1652.

conflict.[47] While there is a highly debated paradox concerning the concept,[48] there are no questions about the need for its implementation. The inevitable nature of wars makes Hinduism's *Dharma* appropriate for comparisons of conduct during armed conflict: as Glucklich says, "*Dharma* is not a what, it is the how".[49] Eyffinger further observes that "it was expressly enjoined by the sacred laws of *Dharma* that all belligerents at all times and in all circumstances must adhere to the accepted rules of warfare".[50] Therefore, like IHL, *Dharma*, and the laws of war as showcased in the *Mahabharata*, were "designed to make the conduct of war as humane as possible",[51] recognising the inevitable nature of States resorting to armed conflict.

"States" as we recognise them today could not have been envisioned by the crafters of the ancient rules,[52] just like the way that developments of armed conflicts could not have been accounted for.[53] Thus, it raises the interesting conceptual question: "*What is international humanitarian law's Dharma*"? IHL is first and foremost shaped by the conduct and practice of States.[54] In that case, IHL's primary *Dharma* applies to States. After exploring the ideas of *Dharma* as mentioned above, however, the answer may be broader. It can be said that the ICRC's guiding role ensures Dharma in IHL.[55] Academics too, who contribute to IHL by developing important soft laws such as the Tallinn Manual,[56] take forward the practice of *Dharma*. Humanitarian organisations and NGOs play their part in actively trying to engage all in humanising IHL. As a result, the *Dharma* of IHL remains distributed between a shared responsibility of many. A detailed study of the relationship between IHL and *Dharma* may result in valuable new insights on the morality and responsibility related to the modern laws of war. At the same time, it is equally important to discuss the inculcation of *Dharma* into warfighting. For that reason, the next section will

---

[47] H. Krieger, above note 20, p. 4.

[48] The concept engages on the irony that IHL finds itself in – having to govern an act that involves violence and conflict and make rules around it, potentially having to turn a blind eye to the obvious wrong taking place. See also Kieran RJ Tinkler, "Does International Humanitarian Law Confer Undue Legitimacy on Violence in War?" *International Law Studies*, Vol. 100, No. 1, 2023, p. 18.

[49] Ariel Glucklich, *The Sense of Adharma*, Oxford University Press, April 1991, pp. 7–8.

[50] Arthur Eyffinger and Arthur Witteveen, *The International Court of Justice 1946–1996*, 1966, pp. 204-205.

[51] Above note 33.

[52] Gaurav Arora, Gunveer Kaur, Supritha Prodaturi, et al., "International Humanitarian Law and Concept of Hinduism", *Zenith: International Journal of Multidisciplinary Research*, Vol. 2, No. 2, February 2012.

[53] Mahmoud Cherif Bassiouni, "The Normative Framework of International Humanitarian Law: Overlaps, Gaps and Ambiguities", *Transnational Law and Contemporary Problems* (*Transnat'l L & Contemp Probs*), Vol. 199, 1998, p. 200; Christopher Greenwood, "Historical Development and Legal Basis" in D. Fleck and M. Bothe (eds), *The Handbook of International Humanitarian Law,* Vol. 1, 2008, p. 11.

[54] Antoon De Baets, "The View of the Past in International Humanitarian Law (1860–2020)", *International Review of the Red Cross*, Vol. 104, No. 920-921, 2022, pp. 1586-1620.

[55] Ibid.

[56] Michael N. Schmitt (ed), *Tallinn Manual 2.0 on the International Law Applicable to Cyber Warfare*, 2nd ed., Cambridge University Press, 2017.

delve deeper into the rules of battle in the *Mahabharata*, and what can be learned in this regard for both civilians and the armed forces of States.

3. *Mahabharata* and *Jus in Bello* – Tales of Dharmic Fighting

There is a strong connection between the Epic and the law of armed conflict. The *Mahabharata* is primarily the story of a battle that took many lives, with only a few known survivors.[57] For IHL, its relevance is multi-fold because it explores the rules of conduct and the humanisation of armed conflict. This section aims to establish the relativity of the Epic with IHL by providing an overview of certain accounts within the story. As the *Mahabharata* is considerably lengthy, a comparison of certain rules of conduct is sufficient to highlight this linkage to IHL.

Jus in bello, international humanitarian law and the law of armed conflict are used interchangeably to refer to the rules of lawful conduct during armed conflict.[58] The all-encompassing rules are spread differently across international and non-international armed conflict, land and sea, combatants, the protection of civilians, the prisoners of war, and so on. It is ideally meant to include all those who could be affected by the conflict.[59]

The sixth book of the *Mahabharata* is called the *Bhishma Parva.*[60] It is most widely known for its teachings on military conduct. Interestingly, *Bhishma*, the greatest warrior and teacher imparting knowledge on the fair means of warfare, leads the battle from the "unjust" side of the *Kauravas*.[61] The fact that the rules of battle are preached and taught to both sides by someone representing the "aggressors" is significant. It aims to convey that, like in IHL, once a war has begun the laws of conduct during the conflict apply impartially and equitably to both the aggressor and the aggressed parties. IHL turns a blind eye to the genesis of conflict[62] to focus on the conduct of hostilities between the involved parties devoid of a "moral" allowance for

---

[57] John. L. Brockington, *The Sanskrit Epics*, E.J Brill, Leiden, 1998, pp. 41-66; Aditya Adarkar, "The Mahabharata and Its Universe: New Approaches to the All-Encompassing Epic", *History of Religions,* Vol. 47, No. 4, 2008, p. 317.

[58] Robert Cryer, "Chapter 23: The Impact of Human Rights Advocacy: Between (Mis)stating the Law and Pursuing Humanitarian Policies?", in *Law-Making and Legitimacy in International Humanitarian Law,* Edward Elgar Publishing, 2021, pp. 385-403.

[59] The Geneva Conventions and their Commentaries, International Committee of the Red Cross, available at: https://www.icrc.org/en/war-and-law/treaties-customary-law/geneva-conventions.

[60] Kisari Mohan Ganguli (ed. and trans.), *The Mahābhārata: Vol. 1: The Book of Bhishma,* Bharata Press, Calcutta, 1884.

[61] Sabindra Raj Bhandari, "Bhishma as a Superman in the Mahabharata", *The Outlook: Journal of English Studies*, Vol. 11, 2020, pp. 42-56.

[62] Yishai Beer, "Military Strategy: The Blind Spot of International Humanitarian Law", *Harv. National Security Journal*, Vol. 8, 2017, p. 333; Walter Dorn, Raj Balkaran, Seth Feldman,et. al., *The Justifications for War and Peace in World Religions, Part II: Extracts, Summaries and Comparisons of Scriptures of Religions of Indic Origin (Buddhism, Hinduism, Jainism and Sikhism)*, Contract Report 2010-034, Defence Research and Development Canada, Toronto, 2010.

the "just" belligerent. Hence, like the *Mahabharata*, in IHL both the hypothetical "righteous" side and the "unjust" side share the same rules. However, the necessity of this dissimilitude is validated by the *Mahabharata* through the above-mentioned comparison. There are the blurry lines States often attempt to create to invoke a "justified" reason for aggression.[63] This is *Adharma* (unrighteous conduct or act)[64] and does not conform to principles that international law traditionally set out to protect.

Therefore, the basis of *Dharma's* universal application becomes apparent as we further examine the interplay of politics, wars, and the realities of the interpretations of IHL.

As far as the similarities between the Geneva Conventions and the rules of the *Mahabharata* are concerned, a few of them can be highlighted in particular.

Rules for Combatants

The definition of combatants under IHL is "those members of the armed forces who have the right to directly participate in hostilities between States".[65] If captured, a combatant has the privilege of "prisoner of war" status.[66] In the *Mahabharata*, "warriors" are directly comparable to combatants under IHL.

The verses of *Mahabharata* provide clear unacceptable practices in war such as "[a] warrior in armor must not fight with another warrior without armor",[67] and "[w]arriors should fight only with their equals e.g., cavalry soldiers should not attack a chariot-warrior".[68] Although at first glance, this comparison appears impractical on a battlefield where there are no clear demarcations, the first verse draws an interesting link with the so-called "unlawful combatants".[69] In this manner, the Epic also adds rules that are not found in IHL, such as of different types of combatants clearly not being allowed to fight each other, suggesting a stronger sense of fairness.[70] Unlawful combatants, the role they play as actors of an armed conflict and the

---

[63] For an example, consider the case concerning allegations of genocide brought against Ukraine by Russia.

[64] *Ibid*.

[65] Emily Crawford, "Combatants", in Rain Liivoja and Tim McCormack (eds), *Routledge Handbook of the Law of Armed Conflict*, Routledge, London/New York, 2016, pp. 123-138.

[66] Katherine Del Mar, "The Requirement of 'Belonging' under International Humanitarian Law", *European Journal of International Law (EJIL)*, Vol. 21, No. 1, February 2010, pp. 105-124.

[67] Kisari Mohan Ganguli (trans.), "The Mahabharata, Book 6: Bhishma Parva", Sacred Texts, Verse 45, available at: https://www.sacred-texts.com/hin/m06/m06096.htm.

[68] Kisari Mohan Ganguli (trans.), "The Mahabharata, Book 7: Drona Parva", Sacred Texts, Verse 32, available at: https://www.sacred-texts.com/hin/m07/m07190.htm.

[69] Frédéric Mégret," From 'Savages' to 'Unlawful Combatants': A Postcolonial Look at International Humanitarian Law's 'Others'", in Anne Orford (ed.), *International Law and Its 'Others'*, Cambridge University Press, Cambridge, 2006.

[70] Venkateshwara Subramaniam Mani, "International humanitarian law: An Indo-Asian perspective", *International Review of the Red Cross*, No. 841, 2001, pp. 59-76.

protection (or lack thereof) that they possess under IHL, have been discussed extensively in literature.[71] The distinction here that becomes apparent with the first verse is the *Mahabharata's* strict protection offered to unlawful combatants, who in today's time are arguably not entirely,[72] or at least not sufficiently, protected.[73]

"It does not please me to fight against a man who laid down his weapons, who has fallen, or whose armor and standard are lost".[74] This sentence spoken by *Bhishma* reflects the preferential conduct expected of all warriors.[75] These rules parallel the thoughts submitted in Geneva Convention I[76] and also parallels prohibitions related to attacking those "hors de combat".[77]

For wounded soldiers, the *Bhishma Parva* states, "One who surrenders should not be killed, but he can be captured as a prisoner of war"[78] and "A wounded prisoner should either be sent home or should have his wounds attended to".[79] Both rules are visible in general evolution of the Geneva Convention III.[80] Article 12 regarding the humane treatment of prisoners (POWs are to be sent back after the war ends) specifically is in line with the aforementioned.[81] The *Shanti Parva*, the Book of Peace, discusses the treatment of prisoners even beyond basic humanity and seeks to ensure their overall well-being. Detailed attention is paid to the food, hygiene of the quarters, and general treatment of prisoners. This mirrors the requirements contained in Article 26 of Geneva Convention IV,[82] for example.

Rules for Civilians

---

[71] *Ibid*. p. 306.

[72] Chris Jochnick and Roger Normand, "The Legitimation of Violence: A Critical History of the Laws of War", *Harvard International Law Journal,* 1994, pp. 49- 95.

[73] Elbridge Colby, "How to Fight Savage Tribes", *American Journal of International Law*, Vol. 21, No. 2, 1927, pp. 279-288.

[74] John D. Smith, (ed. and trans.), *The Mahābhārata*, Penguin Classics, London, 2009, p. 402.

[75] The rules set out in the Mahabharata are not simply laid out in a handbook or manual or a separate chapter but are rather spread out through dialogue and discourse.

[76] Geneva Convention (I) for the Amelioration of the Condition of the Wounded and Sick in Armed Forces in the Field of 12 August 1949, 75 UNTS 31 (entered into force 21 October 1950).

[77] Nick Allen, "Just War in the Mahabharata", in Richard Sorabji and David Rodin (eds), *The Ethics of War: Shared Problems in Different Traditions*, Ashgate, Burlington, VT, 2006, p. 139

[78] Samuel C. Duckett White, The Laws of Yesterday's Wars 2: From Ancient India to East Africa, 1st ed, Brill, 2022.

[79] John Duncan Derrett*, Introduction to Modern Hindu Law*, Oxford University Press, California, 1963.

[80] Lakshmikanth R. Penna, "Written and Customary Provisions relating to the Conduct of Hostilities and Treatment of Victims of Armed Conflicts in ancient India*", International Review of the Red Cross*, Vol. 29, No. 271, 1989.

[81] Johannes Van Buitenen (ed. and trans.), *The Mahābhārata: Book 4: The Book of Virāṭa; Book 5: The Book of The Effort*, Vol. 3, University of Chicago Press, Chicago, 1978.

[82] Geneva Convention (IV) relative to the Protection of Civilians in Time of War of 12 August 1949, 75 UNTS 287 (entered into force 21 October 1950), Art. 26.

> "The sleepy, the thirsty, a peaceful citizen walking along the road, the insane, one engaged in eating, a camp-follower, a war musician, and the guards at the gates should not be killed".[83]

Civilians are defined under IHL as "those who in an international armed conflict do not belong to the armed forces and do not take part in hostilities or 'levee en masse'." In this regard, the rules regarding a civilian population in the *Mahabharata* and IHL differ slightly. In battles fought in ancient times, the fact that armies fought in separate allotted battlefields (such as the *Kurukshetra*) itself protected civilians. Therefore, conduct with those who are not combatants is not expressly described in the *Mahabharata*, other than in the way of the aforementioned quote.

Despite this omission in the strict sense, the *Mahabharata* maintains an unwavering dedication to the humanisation of conflict and a strict set of rules of conduct. In the *Mahabharata*, many verses point to absolute intolerance of injuring a woman, child, or elderly. One paragraph states "[n]ever forsake a given word or kill a fallen foe or who has surrendered. No one kills a woman, or a child, or one unseated from his chariot, one gone to pieces, or one whose sword and weapons are broken".[84] In IHL, female combatants can be killed but the abovementioned verse agrees with the protection of women covered under Additional Protocol I, which states, "[w]omen shall be the object of special respect".[85] Similarly, the First Geneva Convention states that "[w]omen shall be treated with all consideration due to their sex".[86] Even though the *Mahabharata* does not specifically provide indicators as to how to treat civilians, through these warnings, it indirectly establishes the need for combatants to engage in hostilities only with opposing combatants.

Specific Principles

A *Kshatriya* (the warrior class according to Hinduism) must fight fairly. Neither poisoned nor barbed arrows should be used. These are instruments of the wicked. One should fight without yielding to wrath or being fond of unnecessary slaughter. Even he that is wicked should be subdued with fair means[87] says *Bhishma* in a verse of the *Shanti Parva*. These rules agree with those given under Article 12 of the First and Second Geneva Conventions, and Articles 35 and 41 of Additional Protocol I –

---

[83] Sushma Garg, "Political Ideas of Shanti Parva," *The Indian Journal of Political Science*, Vol. 65, No. 1, January-March, 2004, p. 77.

[84] J. Van Buitenen, above note 81, p. 145.

[85] Additional Protocol I, Article 76(1).

[86] First Geneva Convention, Article 12, fourth paragraph (cited in Volume II, Chapter 39, Section 1 of the ICRC database). However, the traditional lens of the Mahabharata portrays women as victims and the most vulnerable group, and it does not address developments such as female combatants, etc.

[87] Kisari Mohan Ganguli (trans.), "The Mahabharata, Book 12: Shanti Parva", Sacred Texts, Verse 6, available at: https://www.sacred-texts.com/hin/m12/m12a095.htm.

stating that parties to the armed conflict cannot defer from certain rules.[88] In reality, however, there is an imbalance in the implementation of military necessity.[89] The principle of military necessity often permits armed forces to cause "lawful" destruction[90] that may be necessary and proportionally justified to the harm it will cause.[91] The principles to balance these with are proportionality[92] and humanity.[93] In practice, military necessity usually takes the lead. [94] Although not all commentators adopt this position,[95] the claims in support of this argument go far enough to say that "the laws of war are formulated deliberately to privilege military necessity at the cost of humanitarian values".[96]

So, when it is time to apply the principle of distinction, under which there exists an obligation to target only combatants and not those who are protected under the Geneva Conventions, the infamous balance between military necessity and proportionality gets thrown off, and there is room for ambiguity. The conversations around civilian casualties are tough because while the language proposes that they cannot be harmed, the principle of proportionality suggests that harming them is not per se prohibited. [97] When targeting military objectives, harm to civilians is

---

[88] Paul Kennedy and George J. Andreopoulos, "The Laws of War: Some Concluding Reflections", in Michael Howard, George J. Andreopoulos and Mark R. Schulman (eds), *The Laws of War: Constraints on Warfare in the Western World*, 1994.

[89] Michael N. Schmitt, "Military Necessity and Humanity in International Humanitarian Law: Preserving the Delicate Balance", *Essays on Law and War at the Fault Lines*, T.M.C Asser Press, Springer, 2012, pp. 89-129.

[90] Expert Meeting on "Targeting Military Objectives", organized by the University Centre on International Humanitarian Law, Geneva, 12 May 2005, discussing the "controversial interpretation and application".

[91] Dietrich Schindler, "International Humanitarian Law: Its Remarkable Development and Its Persistent Violation", *Journal of the sHistory of International Law*, Vol. 5, 2003, p. 165.

[92] Eric Jaworski, "'Military Necessity' and 'Civilian Immunity': Where is the Balance?", *Chinese Journal of International Law,* Vol 2, No. 175, 2003, pp 179–180.

[93] Chris af Jochnick and Roger Normand, "The Legitimation of Violence: A Critical History of the Laws of War", *Harvard International Law Journal,* Vol. 35, No. 49, 1994, p. 66. Declaration Renouncing the Use, in Time of War, of Explosive Projectiles under 400 Grammes Weight (entered into force 11 December 1868), *American Journal of International Law,* Vol. 1, No. 95.

[94] Josef .L. Kunz, "The Chaotic Status of the Laws of War and the Urgent Necessity for Their Revision:, *American Journal of International Law,* Vol. 45, No. 37, 1951, p. 59.

[95] Frits Kalshoven, "Human Rights and Armed Conflict: Conflicting Views: Remarks", *American Society of International Law Proceedings*, Vol. 67, 1973, p. 159.

[96] Judith Gardam, "Women and the Law of Armed Conflict: Why the Silence?", *The International and Comparative Law Quarterly*, Vol. 46, 1997, p. 62; See generally George Aldrich, "Prospects for United States Ratification of Additional Protocol 1 to the Geneva Conventions", 1991.

[97] Amanda Alexander, "The Genesis of the Civilian", *Leiden Journal of International Law*, Vol. 20, No. 359, 2007, p. 364. [no such supra note]

permissible if not excessive.[98] Though they cannot be targeted, if they are or if they suffer, it is "collateral damage".[99] Kennedy describes this in his chapter "Reassessing International Humanitarianism; the dark sides", where he criticizes the justifications of civilian casualties as "part bureaucratic necessity, part instrumentalism, central to the effectiveness of the mission and the safety of the colleagues – wrapped in honor, integrity, on a culture set off from civilian life, a higher calling".[100] While Article 48 of the Additional Protocol relates to the protection of victims of international armed conflicts (IACs)[101] and Article 51 protects civilians from military operations[102], the principle of distinction allows certain "privileges"[103] and "mistakes"[104] made by combatants which the strict laws of the *Mahabharata* prohibit. However, the permissibility of committing mistakes in IHL is for sure grounded in its pragmatism and practicality. As discussed, even without express declarations, the *Mahabharata* operates in a reality wherein civilians are inherently and unequivocally protected because of factors like the separate battlefield. This offers an easier set-up for disseminating stricter rules as opposed to IHL's need to consider the acceptance of States. In the *Mahabharata*, the humanisation of armed conflict is present in all of its teachings. It can be argued that there is a desired, even if realistically unachievable, equipoise and balance of the principles. This insinuates that the means and method of warfare could never be devoid of adherence to humanity (if not human rights per se). IHL strives to achieve a similar kind of synergy with international human rights law.

The discourse in the *Mahabharata*, with all its connections, brings us a step closer to an ancient take on the collaboration of humanity in war. To that effect, as this section highlighted the rules, it is only natural to explore why these rules exist in the first place – an explanation of which will follow in the next section.

4. The Bhagavad Gita and Jus Ad Bellum

[98] Christopher Greenwood, "A Critique of the Additional Protocols to the Geneva Conventions of 1949" in T.L.H. McCormack and H. Durham (eds), *The Changing Face of Conflict and the Efficacy of International Humanitarian Law,* Vol. 3, 1999, p. 7.

[99] Radhika RV, "Revisiting the Ancient Indian Laws of Warfare and Humanitarian Laws", *IndraStra Global*, Vol. 3, No. 3, pp. 1-4.

[100] Ibid.

[101] Above note 59.

[102] Jean Pictet, The Fundamental Principles of the Red Cross: Commentary, Henry Dunant Institute, Geneva, 1979.

[103] William J. Fenrick, "Attacking the Enemy Civilian as a Punishable Offense", *Duke Journal of Comparative and International Law*, Vol. 7, 1997, p. 539.

[104] Michael Barnett, *Empire of Humanity: A History of Humanitarianism,* Cornell University Press, New York, 2011, pp. 16–17; Oona A. Hathaway, Azmat Khan, "'Mistakes' in War", *University of Pennsylvania Law Review*, Vol. 173, No. 1, 2024, available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4799550.

Jus ad bellum is concerned with proponents of going to war such as a just cause.[105] For fruitful implementation of IHL, it has mostly been agreed upon by the international community to separate it from *jus in bello*. However, in reality, such is hardly the case.

This section explores the connection between the *Bhagavad Gita* and the infamous right to wage war – *jus ad bellum*.[106] The *Bhagavad Gita* or the Song of God is the most significant part of the *Mahabharata.*[107] It is enunciated in Book Six, the *Bhishma Parva*, and is 700 verses in length. It is written in the form of a dialogue between *Arjuna*, the *Pandava* warrior prince, and his guide, mentor and charioteer, the Lord *Krishna*. The scene enunciated is the beginning of the *Dharmayuddha*[108] – the "righteous war".[109]

In the story, *Arjuna* is devastated by his moral, emotional and personal despair and sees no reason to cause violence and the death of his kin. In essence, he questions what the necessity and validity of war could be, no matter how important the moral reason, at the cost of the destruction, atrocities and lives lost. Perplexed and disillusioned, he seeks *Krishna's* advice on the battlefield of *Kurukshetra* right as they are about to begin. An absence of fulfilling this duty of going to war would lead to ill consequences for both the society at large, and his soul. Within what is overarchingly a book of spiritual lessons, interestingly *Krishna* answers the questions – What are the conditions under which armed conflict is justified? What are the conditions under which resorting to military action is seen as acting within "*Dharma*"? "I would appear in every age for protection of the honest, for destruction of miscreants, and for preservation of *dharma*".[110]

Krishna then pauses time and space, shows his true cosmic form, and responds. It is in the *Gita* that the Lord justifies righteous war and urges *Arjuna*, the reluctant warrior, to fulfill his *Dharma* by going into war.[111] *Krishna* counsels *Arjuna* to perform his duty as a warrior and to uphold the *Dharma* through *Karmayoga* by stating "happy are the warriors to whom such fighting opportunities for dharmic

---

[105] Surya P. Subedi, "The Concept in Hinduism of 'Just War'", *Journal of Conflict and Security Law*, Vol. 8, No. 2, October 2003, pp. 339–361.

[106] Tom Ruys, "The Quest for an Internal *Jus Ad Bellum*: International Law's Missing Link, Mere Distraction, or Pandora's Box?", in Claus Kreß, and Robert Lawless (eds), *Necessity and Proportionality in International Peace and Security Law*, Lieber Studies Series, Oxford Academic, New York, 19 November 2020.

[107] Swami Prabhavananda, *Bhagavad Gita - The Song of God*, Read Books Ltd, 2012.

[108] Ibid.

[109] Surya P. Subedi, "The Concept in Hinduism of 'Just War'", *Journal of Conflict and Security Law*, Vol. 8, No. 2, October 2003, pp. 338.

[110] J. Koller, above note 27, p. 62.

[111] Alladi Mahadeva Sastry, The Bhagavad Gita: With the Commentary of Sri Sankaracharya (trans.), 1997, p. 117.

BG 11.32: "The Supreme Lord said: I am mighty Time, the source of destruction that comes forth to annihilate the worlds. Even without your participation, the warriors arrayed in the opposing army shall cease to exist."

causes come unsought, opening for them doors of the heavenly planets".[112] *Karmayoga* is the law of cause and effect, simply translating to one's action. One who follows this path must perform righteous actions.[113] Munshi calls it the "noblest of scriptures and the grandest of sages that the world is beginning to recognise".[114] The *Gita* accepts the necessity of war as a last resort but advocates the necessity of minimizing the suffering it brings within this reality.

Book Five of the *Mahabharata*, called the "Book of the Effort",[115] highlights the attempts made to avoid war. Book Six, then, accepts the waging of war as a result of the failure of all means of diplomacy.[116] Rosen explains the Hindu Doctrine of Just War as the "four means, which include three methods of diplomacy that attempt to avoid war (the fourth and final alternative)".[117] Therefore, "if one observes the first three of these tactics and cannot find a peaceful solution, then war becomes inevitable, and may even be deemed righteous".[118] He also states that "a righteous war, by this definition, is not religious but based on principles of justice and self-defense and is always engaged in as a last resort".[119]

In contemporary international law, there are two ways in which "legitimacy" may be derived for an armed conflict to qualify as lawful. The first is an act of self-defense under Article 51 of the UN Charter[120], and the second is a mandate by the Security Council.[121] Both are often contested as being politically motivated and provide for problematic "just" circumstances of war.[122] Therefore, and rightfully so, the preferred language over time has shifted from Just War to the lawful use of force.[123] This change has a definite element of detaching morality from law.[124]

---

[112] Ibid.

[113] *Ibid*.

[114] Kanaiyalal M. Munshi, in his foreword to Kamala Subramaniam's *Mahabharata* (1977).

[115] James L. Fitzgerald (ed. and trans.), *The Mahābhārata: Volume 11: The Book of the Women; Volume 12: The Book of Peace, Part One*, Vol. 7, University of Chicago Press, Chicago, IL, 2004.

[116] Ganguli, Kisari Mohan (ed. and trans.), *The Mahābhārata: Vol. 1: The Book of Bhishma*, Bharata Press, Calcutta, 1884.

[117] S. Subedi, above note 105, pp. 339–61.

[118] Robert N. Minor (ed.), "Modern Indian Interpreters of the Bhagavad Gita", *SUNY Series in Religious Studies*, State University of New York Press, Albany, New York, 1986, p. 3.

[119] Steven Rosen, "Holy War: Violence and the Bhagavad Gita", *Indic Heritage Series*, Deepak Heritage Books, Hampton, Virginia, 2002.

[120] Josef L. Kunz, "Individual and Collective Self-Defense in Article 51 of the Charter of the United Nations", *American Journal of International Law*, Vol. 41, No. 4, 1947, pp. 872-879.

[121] Stefan Talmon, "The Security Council as World Legislature", *American Journal of International Law*, Vol. 99, No. 1, 2005, pp. 175–193.

[122] Jeroen van den Boogaard, "Determining Excessiveness and a Plea for Tilting the Balance towards Humanity", in *Proportionality in International Humanitarian Law: Refocusing the Balance in Practice*, Cambridge University Press, 2023, pp. 253-282.

[123] Martin L. Cook, "Applied Just War Theory: Moral Implications of New Weapons for Air War", *The Annual of the Society of Christian Ethics*, Vol. 18, 1998, pp. 199–219.

[124] Hilly Moodrick-Even Khen, "Aidōs and Dikē in International Humanitarian Law: Is IHL a Legal or a Moral System?", *The Monist*, Vol. 99, No. 1, 2016, pp. 26–39.

IHL, as a sub-system of international law, upholds protections during a circumstance (war and armed conflict) that in itself is condemned on humanitarian grounds.[125] The Korean War, for example, was fought by the UN Command.[126] It often presents contradictions in international law as the use of force is customarily recognised as an unlawful practice.[127] That is not to say that IHL contradicts international law, but that war in itself contradicts international law. To have a law governing an established unlawful exercise,[128] then, is quite a moral paradox. The teachings of Hinduism share similarities in this nuance as will be highlighted, and therefore are worthwhile to explore.

Just War theorists who advocate for justifications of advancing aggression have upon themselves the onus of providing a clear consensus of what exactly constitutes a "just" cause.[129] As a result, given the quest for legal backing that States strive to fall back on after committing all atrocities, in the aftermath wherein justifying the preconditions of the aggression becomes important, self-defense is considered the safe option.[130] It can be said that "aggressive war is only permissible if its purpose is to retaliate against a wrong already committed".[131] States frequently interpret this to fulfill their political purposes and establish a form of "righteousness" in their conduct. The case against Ukraine by the Russian Federation in the International Court of Justice is a perfect example of an attempt made by a State to circumvent duties arising under international law for illegal aggression by drawing a veil of "just cause for just war" on their gross violations of IHL, human rights and the basic governing principles of the United Nations Charter as provided under Article 2(4).[132]

An interpretation by Chattopadhyay describes the relationship between acting on the philosophy of *Dharma* or a lack thereof, to aggression and use of force by States.[133] He compares self-preservation and protection[134] from this kind of aggression as the only justified form of force, following *Dharma*. The *Mahabharata*, however, allowed for wars of conquest to be justifiable as well. In this manner, the teachings of the *Gita* are in line with Article 51 of the United Nations Charter affirming the "inherent right of self-defense" as the legal means of resorting to force. However, there is no exclusivity of *jus ad bellum* from *jus in bello*. Adding to Moseley's

---

[125] Antoon De Baets, "The View of the Past in International Humanitarian Law (1860–2020)", *International Review of the Red Cross*, Vol. 104, Nos. 920-921, 2022, pp. 3, 1586-1620.

[126] *Ibid*.

[127] *Ibid*, p. 26.

[128] Jeroen van den Boogaard, Proportionality in International Humanitarian Law: Refocusing the Balance in Practice, Cambridge University Press, 2023.

[129] James Pattinson, "The Ethics of Diplomatic Criticism: The Responsibility to Protect, Just War Theory, and Presumptive Last Resort", *European Journal of International Relations*, Vol. 21, No. 4.

[130] Ian Brownlie, International Law and the Use of Force by States, 1963, p. 118.

[131] Ibid.

[132] *Ibid,* p. 119.

[133] M. Kosuta, above note 11, pp. 186-200.

[134] Bankimchandra Chattopadhyay, *The Principle of Dharma*, Gangchil, pp. 90-91.

idea[135], the overlapping occurs in legal morality and guidelines of the proportionality of the war and the conduct in war. These connections are all in the foreground of the *Gita*.

The bridge lacking between *jus ad bellum* and *jus in bello* in IHL is one that the *Gita* profoundly attempts to mend. Essentially, all rules of war mentioned in the *Mahabharata,* morality, humanity and ethical conduct were to be non-negotiable and upheld by the warriors. *Krishna's* actions which will be addressed in a later section, however, showed some exception to this rule although not completely. Not only to fight a "Just War", but to supplant the war with "Just Actions". Scholars mostly agree[136] that there exists a lacuna between the practice of human rights law and IHL.[137] As arguably one of the earliest incarnations connecting *jus ad bellum* and *jus in bello*, the words of the *Gita* in connection to the *Mahabharata* stand to attempt to fill this lacuna.

However, even the Epic universally known for placing morality in conduct and humanity above all fell prey to the realities of war.

5. Even God Cannot Waver

"The dance between idealistic and pragmatic approaches to battle has been well rehearsed",[138] state Balkaran and Dorn when concluding the relationship between combat ethics and the considerable gap in the actual behavior on which the rules are predicated in the *Mahabharata*.

Book Ten, the "Book of the Night Massacre", showcases many rules of *Dharmayuddha* being broken when an attack is conducted by the *Kauravas* during the final night.[139] This is the last night in the gradual diminishing of morality resulting in breaches of military laws.[140] There is a breach of *Dharma* in the very Epic that propounds and spreads the idea of it. Although killing combatants in their sleep is not disallowed in IHL, it is prohibited in the *Mahabharata*. Therefore, the link to IHL here is more directed at the reality of its shortcomings in the face of foul play by States – displaying illegal means that shatter notions of justice across *jus ad bellum* and *jus in bello*.

The *Mahabharata* and the *Bhagavad Gita* place *Dharma* above everything. Despite this, both the "righteous" *Pandavas* and the "unjust" *Kauravas*, and even Lord

---

[135] Alexander Moseley and Richard Norman (eds), *Human Rights and Military Intervention*, Ashgate, 2001.

[136] Anthony Cassimatis, "International Humanitarian Law, International Human Rights Law, and Fragmentation of International Law," *International and Comparative Law Quarterly,* Vol. 56, 2007, p. 623; Christine Byron, "A Blurring of the Boundaries: The Application of International Humanitarian Law by Human Rights Bodies", 47 *Virginia Journal of International Law,* Vol. 47, No. 839, 2006–2007.

[137] Francois Bugnion, "Customary International Humanitarian Law", *ISIL Yearbook of International Humanitarian and Refugee Law*, Vol. 7, 2004.

[138] Raj Balkaran and A. Walter Dorn, above note 12, p. 5.

[139] See generally W.J. Johnson, *The Sauptikaparvan of the Mahabharata: The Massacre at Night*, Oxford Publications, 7 April 2010.

[140] Ibid.

Krishna himself, indulged in the unfair means of *Kutayuddha*. Despite the clear scripture outlining just military conduct, despite the need to adhere to *Dharma* for a peaceful afterlife, all sides resorted to unlawful means in certain cases towards the end of the battle. This does not reduce the credibility of the Epic concerning the rules and knowledge of conduct it aims to impart. Indeed, in the view of the current author, it makes the Epic even more human. In the *Mahabharata*, the *Lord Krishna* is put in a position where he falters too. The most intriguing step the Epic takes is that he too, is punished for this conduct.

The superstition related to the *Mahabharata*, owing to its intensity, is that it is forbidden to keep or read the text in one's home, as doing so will almost certainly result in conflict within the household. The *Gita* on the other hand, although born out of the same story, blesses the home of the reader and keeper and brings good fortune and *Karma*. It would seem strange that the fruit of the *Mahabharata*, given the context of it being narrated to persuade *Arjuna* to fulfill the *Dharma* of participating in a war, is also the sacred text that governs the religion. However, after an exploration of the above-mentioned parts of the Epic, it is no longer strange. It is an ode to life and spiritual forces within all people. It is also the truth of the politics and realities of war, the inevitable nature of it, and the legal rules that are necessary to govern it regardless. "Progressive accounts of IHL use the past to mark how bad things used to be, and how better they are now. The past is a stool on which the present elevates itself".[141] However, in contrast, the Epic can set the standard high for IHL.[142] The *Mahabharata* has instances where *Krishna* himself not only falters but is also punished.

Lord Krishna's "divine intervention" has been questioned on many accounts. The *Mahabharata* recounts that even *Krishna* was punished for both the idea of war, and wavering from its rules. The instance is beautifully told by Nandy[143], in the framing of an introduction elsewhere[144], as he re-narrated one of the final scenes of the war when Lord Krishna himself intervenes and leads one of the *Pandavas* to victory despite the duel going in favor of the *Kaurava* he was fighting against. One day, *Duryodhana* goes to a pond and sits underwater to deal with anguish, pondering on an incoming potential defeat. *Krishna* tells *Bhim* (a *Pandava*) to use this timing to his advantage and lure *Duryodhana* out of the pond to engage in a fight. In this way, the scene is set for the final duel. In a fit of rage, *Duryodhana* is almost about to defeat *Bhim* when *Krishna* intervenes and reminds *Bhim* of a vow he had once taken to break *Duryodhana's* thighs. However, according to the rules, in a mace fight (which was their weapon of choice), warriors are not allowed to hit below the belt. *Krishna* knew

---

[141] Heike Krieger, Pablo Kalmanovitz, Eliav Lieblich, and Rebecca Mignot-Mahdavi (eds), *Yearbook of International Humanitarian Law, Volume 24 (2021): Cultures of International Humanitarian Law*, Springer Nature, 2023.

[142] Torkel Brekke, "Between Prudence and Heroism", in Torkel Brekke (ed.), *The Ethics of War in Asian Civilizations*, Routledge, London, 2006, pp. 137–138.

[143] Ashis Nandy, "The Other Within: The Strange Case of Radhabinod Pal's Judgment on Culpability", *New Literary History*, Vol. 23, No. 1, 1992, pp. 45-67.

[144] Ibid.

it was the only way to kill him as it was the only part of his body unprotected by his mother's spiritual spell of invincibility. On the verge of death, *Duryodhana* (a *Kaurava*) "delivers a majestic admonition to *Krishna* for participating in dishonorable conduct in war".[145] Duryodhana dies a slow death, though arguably and visibly for the greater good because of his unjust actions, but lamenting solely on *Dharma* and the rules of war, he too is awarded a punishment given to *Krishna* for initiating the wrongful conduct of swaying from the rules.

The conclusion Nandy draws is that the moral codes of battles are not to be contextualised, and possibly forgiven on that front. Moral past and reasons are not relevant to conduct that is forbidden to be swayed from. "In such a world the rules of combat have priority of the demands of vengeance. For only such rules can boast of moral constancy in a world of the imperfectly moral and the imperfectly immoral".[146] By stating this, he highlights what is essential for this article too – "In Indian epics, no one is all-perfect".[147] By doing so, we realise that not even a god (Vishnu in the avatar form of *Krishna*) can waver from rules, and if he does, he will also be punished. His punishment, a curse from *Duryodhana's* mother the Queen, was that he and all his following generations would die and he would mourn the death of his children and the end of his dynasty.[148]

Conclusion

This article drew parallels between IHL and the ethics of warfare in the *Mahabharata*, the *Bhagavad Gita*, and *Dharma*: *jus in bello* as recorded in the *Mahabharata*, *jus ad bellum* as preached in the *Bhagavad Gita*, and an exploration of their co-existence. It becomes strikingly visible that the resemblance between the ancient and modern is not only of normative similarities of the laws but of two other realities. The first is that even an ancient Epic, one that supposedly justified "Just War", preached strict humanization and morality while performing military duties taking place at the cost of war. IHL, on the other hand, better recognises the illegality of war but still sanctions some form of collateral damage. The second, is the effect of the realities of war on the implementation of these rules, regardless of the nature of their interpretation and the strictness of the morality attached to their application.

"The laws of war are probably as old as war itself."[149] – It is claimed by many that IHL made wars more humane as if it were not a part of traditional old wisdom to do so.[150] While this may be true for the European context,[151] it is not for Hinduism.

---

[145] Ibid.

[146] Ibid.

[147] Briony Hill, "Reason and lovelessness: Tagore, war crimes, and Justice Pal", in *Indo-Australian Relations*, Routledge, 2017, pp. 59-74.

[148] Pushkarprabhat D. Saxena, "The Curse of Gandhari", *Medium,* 22 December 2021, available at: https://medium.com/thehindumythology/the-curse-of-gandhari-96a92b7cd004.

[149] S. Subedi, above note 105, pg 166-200.

[150] Ibid.

[151] Ibid.

The *Mahabharata* thereby becomes an important place to learn and ponder about many nuanced aspects of IHL as we know them. As such, the teachings of Hindu philosophy in comparison to IHL deserve a more detailed study, as this article attempts to do.

In wartime, everyone falters at some point, even the supposed "righteous". This includes victims of aggression, belligerents who earnestly want to apply IHL, and humanitarian interveners driven by genuine intentions. What reclaims the sanctity of the intentions of IHL does not rest in the fact that they never waver, because they do. The moral of the story lies in the importance of holding accountability even if they do – even *Lord Krishna* was.

The Polymorphic Environmental Impact of the USSR and US Wars on Afghanistan: A Forgotten Prism of International Law

Sayed Qudrat Hashimy[*]
Jackson Simango Magoge[**]

ABSTRACT

The wars in Afghanistan, first by the USSR (1979-1989) and later by the US (2001-2021), have left indelible marks on the country's environment. These armed conflicts have resulted in widespread ecological damage, affecting land, water, and air quality. The US military's largest base in Afghanistan, Bagram Airfield, and the destruction of the agrarian system serves as a case study for the environmental impact of military activities. This paper explores the multifaceted environmental impacts of the USSR and US-led Coalition Forces interventions in Afghanistan, and examines these impacts through the lens of international law. The analysis highlights the long-term ecological consequences, the legal frameworks governing wartime environmental protection, and the current gaps in international legal responses to environmental degradation caused by armed conflicts. Concepts of International Humanitarian Law (IHL) and environmental treaties like the 1977 ENMOD Convention and Geneva Protocols have been discussed for their inadequacies and calling for substantial reforms for better protection of the environment during conflicts.

Keywords: Environmental Impact, Armed Conflict, Afghanistan, International Humanitarian Law, International environmental crime

DOI: https://doi.org/10.5281/zenodo.16907976

Introduction

War has always been a catalyst for destruction, but its tools have evolved dramatically over time. From the rudimentary bows and arrows crafted from forest

[*] PhD Scholar (Law), Department of Studies in Law, University of Mysore, INDIA - 570006.
Email: sayedqudrathashimy@law.uni-mysore.ac.in
ORCID: https://orcid.org/0000-0001-9835-0575

[**] Assistant Lecturer, Department of Humanities and Social Sciences, National Institute of Transport, TANZANIA
Email: simangojackson@gmail.com
ORCID: https://orcid.org/0000-0001-8096-6929

timber to the devastating nuclear, chemical,[152] and intelligent technologies of today, the methods of warfare have grown increasingly destructive not only to human life but also to the environment.[153] The environmental toll of prolonged conflict is starkly evident in Afghanistan, a nation that has endured decades of warfare. From the Soviet invasion in 1979 to the U.S.-led intervention in 2001, the country has suffered extensive ecological degradation, including the loss of biodiversity, soil erosion, water contamination, and air pollution. Yet, the legal responsibility for such environmental harm remains murky.[154] While international humanitarian law (IHL) and principles like ius in bello and ius ad bellum prohibit environmental damage during war, their enforcement is riddled with gaps.[155]

The environmental degradation witnessed in Afghanistan was the cumulative result of actions taken by multiple actors not solely foreign militaries, but also Afghan civil war,[156] Afghan National Defense Forces (ANDSF), and Non-States Armed Groups (NSAGs). While this article concentrates on the environmental harm arising from the Soviet invasion in the 1980s[157] and the US-led coalition operations in the 2000s given their scale and the availability of documentation these interventions represent only part of a broader pattern of conflict-induced ecological damage. Notwithstanding the severity and persistence of such damage, current international legal frameworks, including international humanitarian law and international environmental law, have proven inadequate in addressing the environmental consequences of these hostilities. This lacuna raises a fundamental and pressing question: how might international law be developed or reformed to ensure the effective protection of the natural environment during armed conflict, particularly in complex and protracted conflict zones such as Afghanistan?

---

[152] Thilo Marauhn, "The Prohibition to Use Chemical Weapons", Yearbook of International Humanitarian Law, Vol. 17, No. 25, 2014, available at: https://doi.org/10.1007/978-94-6265-091-6_4; Ahmet Üzümcü, "One Hundred Years of Chemical Warfare and Disarmament: Then and Now", Yearbook of International Humanitarian Law, Vol. 17, No. 9, 2014, available at: https://doi.org/10.1007/978-94-6265-091-6_2...

[153] The era of military adventurism, and widespread incendiary armed conflicts harming the environment, and destroying tangible property. Today, not only in Ukraine, Palestine, and Iraq, but also in Afghanistan, one can clearly see the toxic legacy of dumped weapons and vehicles, the crater-ridden landscape, and the loss of forests, wildlife, and ecosystems.

Article 2(4) of the UN Charter prohibits the use of force against another state.

[154] Zhijie Zhang et al., "The Impact of the Armed Conflict in Afghanistan on Vegetation Dynamics", Science of the Total Environment, Vol. 856, No. 159138, 2023.

[155] International humanitarian law and the challenges of contemporary armed conflicts: Recommitting to protection in armed conflict on the 70th anniversary of the Geneva Conventions, International Review of the Red Cross, Vol. 101, No. 869, 2019, pp. 9-12.

[156] Following the Soviet withdrawal in 1989, Afghanistan's Mujahideen factions turned their conflict inward, waging a civil war that devastated not only society but the environment. Urban warfare, especially in Kabul, polluted air, water resources, and left a landscape scarred by shelling and fire.

[157] Tareq Formoli, "Impacts of the Afghan–Soviet War on Afghanistan's Environment", *Environ Conservation Journal,* Vol. 22, No. 66, 1995.

The lack of clarity on accountability underscores a broader issue: the failure of international law to deter environmental destruction during armed conflict. The scarcity of reliable data on the environmental consequences of wars waged in Afghanistan further compounds the problem.[158] Despite the establishment of the National Environmental Protection Agency (NEPA) in 2005 and subsequent legislative efforts,[159] the country continues to grapple with the ecological fallout of decades of conflict. The destruction of natural resources not only undermines Afghanistan's environmental resilience but also fuels ongoing instability, as competition for scarce resources often reignites violence. This vicious cycle highlights the urgent need for robust legal mechanisms to safeguard the environment during and after conflict.

The current international legal framework reveals significant gaps in addressing environmental degradation resulting from armed conflicts in Afghanistan, particularly during the Soviet invasion in the 1980s and the US-led coalition operations post-2001. Existing provisions under international humanitarian law, such as Articles 35(3) and 55 of Additional Protocol I to the Geneva Conventions,[160] establish thresholds for environmental harm that are exceptionally high, requiring damage to be "widespread, long-term and severe" which renders them practically inapplicable to the cumulative and diffuse environmental destruction experienced in Afghanistan, such as deforestation, soil degradation, and contamination of water sources. Furthermore, major military actors like the United States are not party to these protocols,[161] limiting their applicability. International environmental treaties, including the Convention on Biological Diversity and the Convention to Combat Desertification, are primarily designed for peacetime and lack enforceable provisions during armed conflict. Customary international law offers limited guidance, with norms related to environmental protection in warfare remaining vague and non-justiciable. Post-conflict accountability mechanisms similarly fall short, as there are no binding legal obligations compelling occupying or intervening forces to engage in environmental restoration or provide reparations. Institutional fragmentation exacerbates these deficiencies, as bodies such as the United Nations Environment Programme (UNEP) lack enforcement authority and are reliant on voluntary cooperation.

In addition to these international legal shortcomings, domestic factors have further entrenched the neglect of environmental damage in Afghanistan. Following

---

[158] David Taylor, "Policy: New Environment Law for Afghanistan", *Environmental Health Perspectives,* Vol. 114, No. A152, 2006.

[159] Ibid.

[160] "Faculty of Business and Law, Do Articles 35 and 55 of Additional Protocol I to the 1949 Geneva Convention Effectively Protect the Environment during an Armed Conflict?" *Bristol Law School Blog*, 27 November 2023, available at: https://blogs.uwe.ac.uk/bristol-law-school/do-articles-35-and-55-of-additional-protocol-i-to-the-1949-geneva-convention-effectively-protect-the-environment-during-an-armed-conflict/.

[161] George Aldrich, "Prospects for United States Ratification of Additional Protocol I to the 1949 Geneva Conventions", American Journal of International Law, Vol. 85, No. 1, 1991.

Soviet withdrawal in 1989,[162] national attention was focused almost exclusively on the perceived victory of the Mujahideen,[163] with no consideration given to assessing or remedying wartime environmental harm. The prevailing national sentiment prioritised political and religious triumph over ecological restoration, leaving the extensive environmental degradation by Soviet forces unrecognised. The subsequent civil war among Mujahideen factions led to the large-scale destruction of urban infrastructure, particularly in Kabul, [164] with no regard for environmental consequences or adherence to international humanitarian law. During this period, no institutional or legal mechanisms existed within Afghanistan to monitor or address ecological harm. Moreover, Afghanistan, as a state, demonstrated prolonged negligence toward environmental governance: although the 2004 Constitution spells out environmental protection, comprehensive environmental legislation was not enacted until 2007,[165] leaving a three-year legal gap. The country joined the Rome Statute in 2003,[166] but the issue of environmental accountability for the US-led intervention remains unaddressed, especially following the 2021 US withdrawal and the Taliban's return to power.[167] The Taliban, whose military operations have also contributed significantly to environmental destruction and the collapse of public infrastructure, lack international legal recognition and, consequently, legal standing (locus standi) to pursue environmental claims before international bodies. This combination of international legal deficiencies, domestic institutional absence, political instability, and non-state actor governance has rendered Afghanistan both a victim of environmental degradation and a paradigmatic example of international law's failure to protect the environment during and after armed conflict.

Therefore, this paper explores the complexities of humanitarian law breaches, wartime regulations, and the enforcement of environmental protections. By employing a doctrinal legal approach, the study assesses the effectiveness of existing laws, such as the Fourth Geneva Convention and the Environmental Modification Convention (ENMOD), in mitigating environmental damage.[168] It also

---

[162] Conor Tobin, "The United States and the Soviet-Afghan War*,* 1979–1989*"*, Oxford Research Encyclopedia of American History, available at: https://doi.org/10.1093/acrefore/9780199329175.013.832..

[163] Ruchi Kumar & Hikmat Noori, "'The Victory Was so Strong': Afghans Celebrate Soviet Pullout", *Al Jazeera,* 15 February 2019, available at:| https://www.aljazeera.com/news/2019/2/15/the-victory-was-so-strong-afghans-celebrate-soviet-pullout.

[164] Sarah Mendelson, "Internal Battles and External Wars: Politics, Learning, and the Soviet Withdrawal from Afghanistan", *World Politics,* Vol. 45, No. 327, 1993.

[165] United Nations: Information Service Vienna, *Environmental Legislation Comes of Age in Afghanistan -- New Act Signals New Hope to People, Ecology of Country*, 4 January 2006, available at: https://unis.unvienna.org/unis/en/pressrels/2006/afg283.html.

[166] "Afghanistan", *International Criminal Court,* available at: https://www.icc-cpi.int/afghanistan.

[167] "Taliban are back - what next for Afghanistan?", *BBC News*, 8 September 2019, available at: https://www.bbc.com/news/world-asia-49192495.

[168] Lawrence Juda, "Negotiating a Treaty on Environmental Modification Warfare: The Convention on Environmental Warfare and Its Impact Upon Arms Control Negotiations*"*, International Organization, Vol. 32, 1978.

proposes actionable recommendations for strengthening international legal frameworks to prevent ecological devastation in future conflicts. In a world where environmental sustainability is increasingly intertwined with global security, addressing the environmental costs of war is not just a legal imperative; it is a moral one.

1. Warfare and Environmental Devastation in Afghanistan

The history of the war in Afghanistan is not limited to the deaths of combatants or civilians; it has also extended to significant environmental damage, which is still being felt by civilians in the post-USSR (1979–1989)[169] and subsequent interventions by the United States-led coalition forces (2001-2021).[170] These damages include respiratory failure, destruction of physical property, and an increase in the frequency of droughts (caused by low precipitation and reduced snowfall, which has increased by 10–25% over the last 30 years).[171] The prolonged proxy war damaged Afghanistan's ecosystem, and the country has less deforestation than the USSR and the USA. For example, the United States' use of pilotless drones to bomb randomly and indiscriminately across Afghanistan, disregarding IHL principles, resulted in ecological harm. There are no resources, initiatives, scientific efforts, or research teams dedicated to surveying and cleaning up the layers of chemical, biological, and medical waste left behind by US and Soviet military installations.[172]

2. Soviet Union–Afghan War (1979-1989)

The Soviet war caused significant environmental damage, including deforestation, soil erosion, and oil spill pollution. The use of defoliants and heavy artillery by the Soviet military exacerbated these issues, leading to further deforestation and water resource destruction.[173] War-induced air pollution results from greenhouse gas emissions from military vehicles, equipment, and weapons. Since 1979, the Soviet

---

[169] Barnett Rubin, "Afghanistan: The Last Cold-War Conflict, the First Post-Cold-War Conflict", in E. Wayne Nafziger, Frances Stewart & Raimo Väyrynen (eds), *War Hunger, and Displacement,* Vol. 2, 2000, available at: https://doi.org/10.1093/acprof:oso/9780198297406.003.0002.

[170] "Human and Budgetary Costs to Date of the U.S. War in Afghanistan, 2001-2022", *Watson Institute for International and Public Affairs - Brown University*, August 2021, available at: https://watson.brown.edu/costsofwar/figures/2021/human-and-budgetary-costs-date-us-war-afghanistan-2001-2022.

[171] The temperatures in Afghanistan have doubled the current global rate and are, on average, 1.8 degrees Celsius higher than those recorded in 1950.

[172] There is no post-conflict environmental assessment to indicate which regions are safe and which agricultural lands remain suitable for harvesting. Additionally, there is no medical survey showing the average age at death prior to the war, nor is there data on post-war changes in life expectancy or increases in death rates due to respiratory issues resulting from the conflict. Furthermore, there has been no funding from the UN, the international community, the USSR, or the US to address or restore the environmental damage in Afghanistan.

[173] T. Formoli, above note 7.

military in Afghanistan has used millions of barrels of oil to power vehicles, causing deforestation and affecting ecosystem services like food production and water quality.[174]

The Red Army's fierce warfare in Afghanistan resulted in significant human deaths and severe damage to the natural and ecological systems, and received less attention. Due to this negligence, there is a dearth of post-war data regarding the Red Army's impact on Afghanistan's ecosystems, with most of the data being based on approximations or "best judgments."[175]

The Soviet takeover of Afghanistan led to a catastrophic battle that damaged the environment and caused health effects for both civilians and those who fought. Agriculture was the main driver of the Afghan economy, employing 67% of the labour force.[176] The Soviet war destroyed farming infrastructure, forcing many farms to abandon and degrading the topsoil. Agricultural productivity fell by almost 70% during the invasion.[177] The conflict also led to the removal of vegetation from highways, demolishing old irrigation systems, and the loss of over 50% of the livestock population, including 9.5 million sheep and goats. Afghanistan had a greater stocking density ratio before the war. One of the largest environmental disasters in Afghanistan's history was brought about by the legal and illegal export of valuable wood from pistachio woodlands to Pakistan for commercial use, which resulted in a major fall in forests. Afghanistan's ecology, flora, and general health were all impacted by the war devastation. The Afghans and the international community did not take any measures against the Soviet Union to make up for lost time or pay damages. The Afghans who were fleeing disaster saw a ray of optimism with the Soviet Union's withdrawal. Environmental harm was also created by the uncontrolled burning of military garbage in open pits. The Soviet Union's military activities were mainly uncontrolled and unmonitored, which left an environmental legacy in Afghanistan.

3. United States-led War (2001- 2021)

The US has caused significant ecological damage to Afghanistan since 2001, with over 85,000 bombs dropped on the country.[178] The bombardment campaign,

---

[174] Randall Hansen, "Drunk on Oil and Gas: The Soviet Invasion of Afghanistan", in Randall Hansen (ed.), *War, Work, and Want: How the OPEC Oil Crisis Caused Mass Migration and Revolution,* 2023. available at: https://doi.org/10.1093/oso/9780197657690.003.0007.

[175] T. Formoli, above note 7.

[176] Julie Lowenstein, *US Foreign Policy and the Soviet-Afghan War: A Revisionist History*, Harvey M. Applebaum '59 Award, 2016, available at: https://elischolar.library.yale.edu/applebaum_award/9.

[177] Tooryalai Wesa, *The Afghan Agricultural Extension System : Impact of the Soviet Occupation and Prospects for the Future*, 2002, available at: https://open.library.ubc.ca/soa/cIRcle/collections/ubctheses/831/items/1.0055586.

[178] Lynzy Billing, "A Toxic Legacy: What America Left Behind In Afghanistan", *Undark Magazine,* 25 September 2023, available at: =https://undark.org/2023/09/25/afghanistan-war-toxic-pollution/.

including the largest bomb ever used, the "mother of all bombs," [179] has had devastating environmental ramifications. [180] The military hardware generates greenhouse gas emissions, contaminates the atmosphere, and bombards essential infrastructure with hazardous chemicals. [181] The release of toxic chemicals also contributes to water, air, and soil pollution, posing a greater risk than the actual explosion, resulting in irreparable consequences. [182]

Afghanistan's ecosystem suffered from contamination brought on by military operations, testing of armaments, equipment, and protocols, as well as during base restoration and combat operations. Apart from the chemicals employed in warfare, the uncontrolled discharge of substantial heat must be carefully scrutinised, as it appears to accumulate and affect the dispersion and aerodynamics of the airflow. The harm to the environment stems from the attempts to contextualise nuclear warfare and the use of conventional and chemical weapons. [183]

Weapons used by the military that contribute to air pollution include hand grenades, small bombs, cluster bombs, and large bombs. The bombs caused many casualties and fatalities, while the poisons from chemical weapons were intended to irritate and damage targets. Generally speaking, the effects of war on the environment include: changing the ozone layer, modifying the ionosphere, causing earthquakes, deforestation; inciting floods or droughts, using herbicides, starting fires (e.g., using napalm and other agents), seeding clouds, spreading invasive species, eradicating species, storm-making, destroying crops, ecology and ecosystem. One of the enduring legacies of the US war is the environmental degradation it has caused, leaving a profound and lasting impact on the ecosystem. The environment has been severely affected by various factors, including the use of weaponry, troop movements, landmines, deforestation, contamination of water sources, target shooting of animals, and the consumption of endangered species due to desperation. [184]

---

[179] Laura Tribess, "Afghanistan/US, 'Mother of all bombs'", *How does law protect in war?*, available at: https://casebook.icrc.org/case-study/afghanistanus-mother-all-bombs.

[180] Lynzy Billing, "How America's War Devastated Afghanistan's Environment", *New Lines Magazine,* 25 September 2023, available at: https://newlinesmag.com/reportage/how-americas-war-devastated-afghanistans-environment/.

[181] Galina Barinova, Dara Gaeva & Eugene Krasnov, "Hazardous Chemicals and Air, Water, and Soil Pollution and Contamination", in Walter Filbo et al. (eds), *Good Health and Well-Being*, Vol. 255, 2020, available at: https://doi.org/10.1007/978-3-319-95681-7_48.

[182] Hanqing Xu et al., "Environmental Pollution, a Hidden Culprit for Health Issues", *Eco-Environment and Health*, Vol. 31, 2022.

[183] "Humanitarian impacts and risks of use of nuclear weapons", 29 August 2020, *International Committee of the Red Cross,* available at: https://www.icrc.org/en/document/humanitarian-impacts-and-risks-use-nuclear-weapons.

[184] Hailemariam Meaza et al., "Managing the Environmental Impacts of War: What Can Be Learned from Conflict-Vulnerable Communities?", *Science of the Total Environment*, Vol. 927, No. 171974, 2024.

4. The Multifaceted Environmental Consequences of Armed Conflict in Afghanistan

Wars have repercussions. These days, the ravages of conflict extend beyond the pain, relocation, and devastation of people and property. Warfare's far-reaching effects affect the environment directly or indirectly.[185] It is becoming increasingly clear that the environment is a victim of armed conflict. Examining the regions impacted by violence reveals a story of soil poisoning, deforestation, oil pollution, air pollution, and contaminated water supplies. Armed conflict has a negative impact on the ecosystem. Wars can cause environmental harm in two ways: directly, through the deployment of high-explosive weapons, or indirectly, by the release of hazardous chemicals into the environment. Management of the environment and natural resources may be indirectly harmed by military operations and their costs. Furthermore, conflict-related instability results in disrespect for the institutions and laws put in place at the national level to safeguard the environment.

Military waste, including lead, mercury, and dioxins, can cause harmful effects on organs and bodily systems, leading to cancer, congenital anomalies, and kidney and cardiovascular issues.[186] Long-term burn pit exposure can cause various illnesses and infertility across various species. The long-term effects of open-air burn pits on the environment and people may include modification of the biological range of species and the environment. Burning military waste can release toxic smoke tainted with dioxins, lead, mercury, and irritating gases, which can harm internal organs and systems.[187] Burn pit exposure can lead to major health problems, such as renal, heart, gastrointestinal, and skin disorders, congenital malformations, and various cancers. Infertility and illness in a variety of creatures can also result from the toxicity, affecting not just humans but the ecosystem as a whole.

5. Landmines

Landmines and unexploded ordnance pose a long-term environmental threat, particularly in war-torn regions such as Afghanistan. The Soviet invasion (1979–1989), the civil wars of the 1990s, and the US-led War on Terror all contributed to this crisis. Landmines are not just a humanitarian issue; they also have devastating environmental consequences. Afghanistan alone has an estimated 10 million

---

[185] Joanna Santa Barbara, "Impact of War on Children and Imperative to End War", *Croatian Medical Journal*, Vol. 47, No. 891, 2006.

[186] Joshua Reno, Military Waste: The Unexpected Consequences of Permanent War Readiness, available at: https://www.jstor.org/stable/j.ctvp7d49w.

[187] Xinyu Wang, Taylor Doherty & Christine James, "Military Burn Pit Exposure and Airway Disease: Implications for Our Veteran Population", *Annals of Allergy, Asthma & Immunology*, Vol. 131, No. 720, 2023..

landmines, remnants of conflicts spanning decades.[188] These landmines not only maim and kill thousands of civilians and animals every year but also render vast tracts of land unusable for agriculture. Farmers are forced to abandon fertile land, exacerbating food insecurity and economic instability. In provinces such as Helmand, Kandahar, and Nangarhar, thousands of acres of prime farmland remain abandoned due to the presence of unexploded ordnance.

Afghanistan, heavily mined since the 1980s, faces severe ecological and soil damage due to landmines. These mines undermine the economy, disrupt the food chain, and contribute to biodiversity decline. The World Health Organisation found that removing landmines from agricultural fields in Afghanistan could increase food production by 88–200%, providing a potential lifeline for millions of people suffering from malnutrition.

By 2021, only one of Afghanistan's 34 provinces had ever been declared mine-free, though this status was recognised as temporary. The remaining 33 provinces still contained explosive ordnance. Despite this, funding for the nation's mine action industry has been decreasing, going from $113 million (£86 million) in 2011 to $32 million in 2020.[189] The August 2021 Taliban takeover has put these streams at even greater risk since, despite better operating circumstances and access to formerly inaccessible areas, many donors are still hesitant to work with the new administration. Since 1989, landmines have killed or injured over 45,000 Afghan civilians, according to the United Nations Mine Action Service.[190]

However, demining operations are expensive and time-consuming, often requiring decades of work and billions of dollars in funding. The United Nations Mine Action Service (UNMAS) estimates that it would take decades and over $1 billion to fully clear Afghanistan's landmines.[191] In the meantime, the ecological impact continues as wildlife is displaced, soil becomes contaminated with explosives, and forests remain inaccessible due to hidden dangers.[192] Clearing these costly and challenging tasks is challenging in war-torn and impoverished countries.

6. Air Pollution

---

[188] Suzanne Fiederlein et al., *The Human and Financial Costs of the Explosive Remnants of War in Afghanistan*, 19 September 2019, available at: https://watson.brown.edu/costsofwar/files/cow/imce/papers/2019/Explosive%20Remnants%20of%20War%20in%20Afghanistan_Costs%20of%20War.pdf.

[189] "Afghanistan to be mine-impact free in 10 years", *ReliefWeb,* 8 May 2012, available at: https://reliefweb.int/report/afghanistan/afghanistan-be-mine-impact-free-10-years.

[190] Afghanistan - Programmes, *United Nations Mine Action Service,* available at: https://www.unmas.org/en/programmes/afghanistan.

[191] Samuel Hall, "30 Years of Impact: An Evaluation of the Mine Action Programme of Afghanistan", commissioned by UNMAS Afghanistan, November 2021, available at: https://www.unmas.org/sites/default/files/evaluation_report_of_mine_action_programme_of_afghanistan.pdf.

[192] Neil Andersson, Cesar Palha da Sousa & Sergio Paredes, "Social Cost of Land Mines in Four Countries: Afghanistan, Bosnia, Cambodia, and Mozambique", *British Medical Journal*, Vol. 311, No. 718, 1995.

Air pollution is a growing problem in Afghanistan, and armed conflict has significantly contributed to its worsening. Explosive weapons, military convoys, and diesel-powered aircraft released harmful pollutants, including carbon dioxide, sulfur dioxide, and nitrogen oxides. These vehicles emit harmful levels of carbon dioxide, sulfur dioxide, hydrocarbons, nitrogen oxides, and carbon monoxide. Thousands of people in the region lose their lives to the dust and debris of these weapons every year, and the effects are long-lasting. Air pollution has a major negative impact on human health. In war zones like Afghanistan, military vehicles emit dangerous air pollutants such as carbon dioxide, sulfur dioxide, hydrocarbons, nitrogen oxides, and carbon monoxide. Every year, the detonation of explosive weapons results in hundreds of fatalities and grave health consequences for the local populace. For instance, Kabul, Afghanistan's capital, ranks among the most polluted cities in the world due to a combination of war-related air pollution and rapid urbanisation.[193] The impact of air pollution has been devastating for public health. Kabul hospitals have recorded a 45% increase in respiratory diseases over the last two decades, and children exposed to war-related air pollution have a significantly higher risk of developing asthma and lung infections.[194]

7. Agriculture

Agriculture relies heavily on a healthy environment, including fertile soil, clean water, and stable ecosystems, to sustain crop production, livestock, and food security. The devastation of Afghanistan's agriculture highlights the profound interplay between environmental degradation and armed conflict and its implications under International Humanitarian Law (IHL). IHL, which governs the conduct of war and seeks to mitigate its humanitarian consequences, includes provisions that protect the environment and civilian infrastructure, such as agricultural systems, from unnecessary harm. IHL also emphasises the protection of objects indispensable to civilian life, such as agricultural land and water systems, which are critical for food security and livelihoods. Afghanistan's agriculture has been devastated by war, with nearly half of its fertile land being rendered unusable due to bombings, chemical contamination, and the destruction of irrigation systems. Afghanistan's war has severely damaged nearly half of its agrarian land and its traditional Karez irrigation system, which has sustained Afghan agriculture for over 3,000 years, threatening its survival as the Karez system is on the brink of

[193] Ali Latifi, "Kabul air pollution on a par with world's most polluted cities", *TRTWorld*, 2016, available at https://www.trtworld.com/magazine/kabul-air-pollution-on-a-par-with-world-s-most-polluted-cities-23181.

[194] Omar Hahad, "Burden of Disease Due to Air Pollution in Afghanistan-Results from the Global Burden of Disease Study 2019", International Journal of Environmental Research and Public Health, Vol. 21, No. 2, 8 February 2024, available at: https://doi.org/10.3390/ijerph21020197.

disappearing due to frequent bombardments and heavy military vehicles.[195] Contaminated water supplies have impacted the environment and human health. The Soviet invasion (1979-1989) destroyed hundreds of Karez tunnels to deny Mujahideen fighters access to underground water supplies. Consequently, Afghanistan's agricultural production has decreased by half since pre-1979 levels, accounting for 48% of total export revenues.[196] The agricultural sector stagnated after the Soviet Union and US-led invasions, reducing its GDP share from 71% in 1994 to 25% in 2020. Restoring the nutritional status of the land is very costly for a poor country like Afghanistan.

8. Deforestation

Afghanistan's traditional forest protection has been disrupted by conflict, leading to deforestation and destruction of forested areas and farmlands. In 1970, Afghanistan had 2.8m hectares (6.9m acres) of forest, covering 4.5% of the country. By 2016, this had shrunk to about 1.5%. In Nuristan, a province in eastern Afghanistan, forest cover had reduced by 53% in that time.[197] The Soviet-Afghan War saw Mujahideen fighters bombing forests, while illegal mining and smuggling have led to watershed protection, soil erosion, and biodiversity loss. Poverty, lack of alternative income sources, and lack of environmental awareness contribute to this illegal trade. Deforestation also increases the risk of long-term droughts and frequent floods in Afghanistan.

Between 2001 and 2021, the United States of America launched almost 85,000 bombs on Afghanistan, according to a statistic published in the Progressive magazine.[198] Scientists discovered that the spread of poisons caused plant yields to plummet by half in areas like Nangarhar province, where enormous ordnance air burst bombs, often known as "the mother of all bombs," were dropped. It was discovered that water or the wind might potentially carry these contaminants to other areas. Furthermore, in provinces such as Kunar and Nuristan, entire forests have been cleared, leading to increased landslides, reduced soil fertility, and rising temperatures. Hence, without reforestation efforts, Afghanistan risks turning large portions of its land into permanent deserts.

---

[195] Rajat Ghai, "*Will Afghanistan's Centuries-Old 'Karez' System of Irrigation Survive the Taliban"*, Down To Earth Magazine, 13 August 2021, available at: https://www.downtoearth.org.in/water/will-afghanistan-s-centuries-old-karez-system-of-irrigation-survive-the-taliban-78451.

[196] Jake Hussona, "The Reverberating Effects of Explosive Violence on Agriculture in Afghanistan"*, ReliefWeb*, 13 November 2019, available at: https://reliefweb.int/report/afghanistan/reverberating-effects-explosive-violence-agriculture-afghanistan.

[197] Kern Hendricks, "A Rare Glimpse into Afghanistan's Spectacular, Vanishing Forests", *Scientific American,* 26 April 2023, available at https://www.scientificamerican.com/article/a-rare-glimpse-into-afghanistans-spectacular-vanishing-forests/.

[198] Mariam Amini, "War, deforestation, flooding: in Afghanistan, they are all linked", *The Guardian,* 14 September 2024, available at: https://www.theguardian.com/world/2024/sep/14/afghanistan-war-deforestation-flooding-climate-change.

9. Natural Habitat

Owing to the remarkable variation in the country's topography, climate, and geology, Afghanistan's ecosystems encompass three of the eight biogeographical realms in the world: the Afrotropic, Palaearctic, and Indo-Malayan. Because of this habitat diversity and its strategic location between biological zones, it is one of South Asia's most biologically diverse and ecologically productive nations.[199] Afghanistan's animals and natural environments have suffered irreversible harm due to decades of war, drought, and deforestation that have severely destroyed the country's wetlands. Since drone attacks and other forms of bombardment have changed migratory bird paths, the population of animals and birds has also declined. This demonstrates the long-term effects of environmental deterioration brought on by violence on the local populace. In 2021, conservationists discovered that some of Afghanistan's last remaining snow leopards had disappeared from the Wakhan Corridor, likely due to illegal hunting and habitat destruction.

10. Biodiversity

Afghanistan was once home to diverse ecosystems, but decades of war have severely impacted its wildlife. Key species such as snow leopards, Marco Polo sheep[200], and Persian leopards have declined sharply due to habitat destruction and poaching.[201] War has severely damaged Afghanistan's natural biodiversity "hotspots," leaving nature as a silent victim of the armed conflict. Armed conflict has a serious negative impact on biodiversity throughout all of the provinces and at the regional level, especially when it occurs in areas with a rich biodiversity.[202] Ecological change can be impacted by damage caused by explosives and bullets, poisonous chemical leaks into waterways and soil, or the violent and long-lasting churning of tank tracks in the ground.[203] There are gaps in the implementation of legal frameworks in countries like Afghanistan.[204] Overgrazing, fuel collection, animal exploitation, and the four-

[199] Miklos Udvardy, "A Classification of the Biogeographical Provinces of the World", *IUCN Occasional Paper*, No. 18.

[200] Marco Polo, *The Travels of Marco Polo*, The Modern Library, 1953.

[201] Aishwarya Maheshwari, "Biodiversity conservation in Afghanistan under the returned Taliban", *Nature Ecology and Evolution*, Vol. 6, pp. 342–343, 2022, available at: https://doi.org/10.1038/s41559-021-01655-1.

[202] Karen Hulme, "Using International Environmental Law to Enhance Biodiversity and Nature Conservation During Armed Conflict", *Journal of International Criminal Justice,* Vol. 20, No. 1155, 2022.

[203] Ibid.

[204] Ibid.

decade war have significantly impacted Afghanistan's biodiversity, affecting a diverse range of species and wetlands. [205]

11. Customary International Environmental Law in Conflict Zones

Customary International Environmental Law (CIEL) is rooted in the principle of sic utere tuo ut alienum non laedus[206], which prohibits states from causing trans-boundary harm. Key principles include prevention, polluter pays, good neighbourliness, and collaboration. This principle is particularly relevant to Afghanistan, where transboundary environmental harm has occurred, such as river pollution and dust storms affecting neighbouring countries like Iran and Pakistan. However, disagreements persist due to the evolving nature of International Environmental Law (IEL). These principles, embedded in various IEL agreements, aim to protect the environment even during armed conflict. For instance, the Stockholm Declaration's Principle 21 mandates states to prevent environmental harm beyond their borders, which is pertinent in Afghanistan's context, where military operations have led to cross-border pollution and deforestation.

Principle 26 prohibits nuclear weapons due to their destructive impact;[207] although Afghanistan is not a nuclear-armed state, the principle supports international efforts to limit highly destructive technologies in conflict zones. Similarly, the World Charter for Nature and the Rio Declaration emphasise environmental protection during conflicts, though they lack legal enforceability.[208]

Moreover, the precautionary principle, a cornerstone of IEL, is particularly significant in conflict-affected regions like Afghanistan, where environmental degradation, such as the contamination of water sources from military waste, directly impacts human health. The principle remains ambiguous but is crucial for environmental and human health protection, especially in conflict zones where environmental degradation exacerbates health risks.[209] It shifts the burden of proof to those proposing potentially harmful activities, ensuring proactive environmental

---

[205] Afghanistan is implementing the Rio Conventions through its National Capacity Needs Self-Assessment project, prioritizing protected areas, wetlands, flora development, monsoon-dependent forests, and preserving native landraces to promote sustainable development.

[206] Ignacio Gómez Arriola, "Sic Utere Tuo Ut Alienum Non Laedas", *Michigan Law Review,* Vol. 5, No. 8, p. 673, 1907..

[207] "Stockholm Declaration: UN Conference on the Human Environment 1972", *ClearIAS,* 1 December 2022, available at: https://www.clearias.com/stockholm-declaration/.

[208] Petra Gümplová, "Sovereignty over Natural Resources – A Normative Reinterpretation", *Global Constitution,* Vol. 9, No. 1, March 2020.

[209] Carl F Cranor, "Some Legal Implications of the Precautionary Principle: Improving Information-Generation and Legal Protections", *International Journal of Occupational Medicine and Environmental Health,* Vol. 17, 2004.

safeguards.[210] However, its application in armed conflict is complex, particularly regarding proportionality and prudence under International Humanitarian Law (IHL).[211] While IHL focuses on minimising collateral damage, the precautionary principle prioritises environmental protection, offering more detailed guidelines for assessing threats.[212]

Furthermore, the polluter-pays principle (PPP), which holds those responsible for environmental damage financially accountable, is difficult to enforce in Afghanistan due to challenges in identifying polluters during the ongoing conflict and weak legal enforcement. However, incorporating PPP into both IEL and IHL frameworks could improve accountability. For example, reparations could be demanded for environmental damage caused by foreign military operations or extractive industries operating irresponsibly during instability.[213]

Henceforth, while IEL provides crucial frameworks for environmental protection in conflict settings like Afghanistan, principles such as the precautionary approach and PPP need clearer integration with IHL to effectively address the complex environmental harms caused by war.

12. Enforcement of Environmental Law in Armed Conflict: The Case of Afghanistan

The issue of enforcing environmental protection during armed conflict remains deeply problematic, and Afghanistan illustrates these challenges well. There is no foolproof mechanism for ensuring environmental accountability in wartime. Despite post-Gulf War efforts to evaluate whether the law of war sufficiently protects the environment, no Nuremberg-style tribunal or similar legal forum has emerged. For instance, while the United Nations established the International Criminal Tribunal for the Former Yugoslavia (ICTY) in 1993 to try war crimes, no tribunal—including the ICTY or the International Criminal Court (ICC) has prosecuted individuals for environmental harm during war.[214] In Afghanistan, decades of conflict have led to

---

[210] Dayna Scott, "Shifting the Burden of Proof: The Precautionary Principle and Its Potential for the Democratization of Risk", 2005, available at: https://www.academia.edu/1043244/Shifting_the_Burden_of_Proof_The_Precautionary_Principle_and_Its_Potential_for_the_Democratization_of_Risk.

[211] Raphaël van Steenberghe, "International Environmental Law as a Means for Enhancing the Protection of the Environment in Warfare: A Critical Assessment of Scholarly Theoretical Frameworks", *International Review of the Red Cross,* 2023, Vol. 105.

[212] Kirsten Stefanik, "The Environment and Armed Conflict: Employing General Principles to Protect the Environment", in Carsten Stahn, Jens Iverson and Jennifer Easterday (eds), *Environmental Protection and Transitions from Conflict to Peace: Clarifying Norms, Principles, and Practices*, Oxford University Press, 2017, available at: https://doi.org/10.1093/oso/9780198784630.003.0005.

[213] Ibid.

[214] Thomas Smith, "The New Law of War: Legitimizing Hi-Tech and Infrastructural Violence", *International Studies Quarterly,* Vol. 46, 2002.

extensive deforestation, groundwater contamination, and destruction of farmland, yet no formal enforcement actions have been taken against responsible actors.[215]

When NATO operations intensified in Afghanistan, environmental degradation, such as pollution from military bases, use of toxic materials, and infrastructure damage, went largely unaddressed legally. No international court has taken up these harms, reflecting the broader issue: violations of international environmental norms in conflict zones often go unpunished. Similar to Yugoslavia's unsuccessful appeal to the International Court of Justice during the Kosovo War, Afghanistan has not seen any significant international legal responses to its environmental damages.[216] While UNEP did assess environmental conditions in post-conflict Kosovo, Afghanistan's environmental crises have not received the same institutional attention, and no equivalent task force has been established.[217]

1. Enforcement Challenges

In Afghanistan, the environmental consequences of war have been substantial oil spills, toxic waste dumping, and ecosystem destruction, but enforcement remains weak. What punishment awaits a state or actor that violates environmental law during conflict? In reality, consequences are rare. For example, the bombing campaigns across Afghanistan's countryside led to scorched earth and habitat loss, yet the responsible parties faced no environmental accountability. This reflects a broader disillusionment with the enforcement of environmental norms during wartime. Institutions like the ICC rarely prioritise environmental crimes, focusing more on genocide and crimes against humanity, which sidelines ecological issues despite their long-term implications.[218]

Furthermore, Afghanistan shows how reluctant the international community can be in establishing concrete wartime environmental standards. Despite widespread environmental damage caused by both foreign military actions and internal conflict, few binding rules have been developed or enforced. This lack of clarity and enforcement undermines environmental protection and perpetuates impunity.

---

[215] Lindsay Moir, "The Implementation and Enforcement of the Laws of Non-International Armed Conflict", *Journal of Armed Conflict,* Vol. 3, 1998.

[216] T. Smith, above note 65.

[217] "UNEP-Led Balkans Task Force Mission Leaves Yugoslavia", *ReliefWeb,* 27 July 1999, available at: https://reliefweb.int/report/serbia/unep-led-balkans-task-force-mission-leaves-yugoslavia.

[218] "Enforcement of International Law", in Afshin Akhtarkhavari et al. (eds), *International Law: Cases and Materials with Australian Perspectives*, Cambridge University Press, 2010) available at: https://www.cambridge.org/core/books/international-law/enforcement-of-international-law/D0F50A39CA6C54741414233E5F9D1B0B.

Given these enforcement gaps, some experts propose a different solution: embedding environmental ethics into military training and operations.[219] In Afghanistan, where prolonged war has weakened governance and legal institutions, the military often remains the only functioning structure in conflict zones. Therefore, indoctrinating armed forces with environmental responsibility could be a practical alternative. By incorporating environmental standards into military doctrine, training, and operations, states can encourage respect for nature even during war.

Afghanistan's military has taken modest steps in this direction. Environmental training modules have been introduced for officers, emphasizing the importance of minimizing harm to natural resources and civilian infrastructure. This mirrors soft-law approaches seen in countries like the United States and India, where military manuals include sections on avoiding unnecessary environmental damage. For example, the U.S. Navy's Commander's Handbook on the Law of Naval Operations outlines the importance of minimizing collateral environmental damage where feasible. Although Afghanistan lacks a formalized doctrine of this kind, its military structure has begun integrating environmental awareness programs for field commanders.

In post-conflict Afghanistan, where civil institutions are rebuilding, the military may serve as the first line of response to environmental crises resulting from combat. Armed forces trained in environmental protection can help fill the legal and administrative void that exists during and immediately after the conflict. Operational plans, rules of engagement, and internal directives could all serve as vehicles for transmitting environmental guidelines to troops in real time, promoting a culture of restraint and respect for nature.[220]

13. International Law's Failure in Afghanistan's Environmental Devastation

The lack of accountability for war-related crimes and ongoing environmental devastation without fear of punishment underscores the ineffectiveness of international law as a deterrent.[221] This failure is exemplified not only by historical cases like the Nuremberg trials but also by contemporary examples from Afghanistan.[222] For instance, the extensive environmental damage caused by

---

[219] Rymn J Parsons, "The Fight to Save the Planet: U.S. Armed Forces, 'Greenkeeping', and Enforcement of the Law Pertaining to Environmental Protection During Armed Conflict", *Georgetown International Environmental Law Review,* Vol. 10, 1997, available at: https://www.academia.edu/40451495/Rymn_James_Parsons.

[220] "Opinio Juris (International Law)", *Legal Information Institute*, available at: https://www.law.cornell.edu/wex/opinio_juris_(international_law).

[221] André Nollkaemper, "'Failures to Protect' in International Law'", in Marc Weller (ed.), *The Oxford Handbook of the Use of Force in International Law*, Oxford University Press, 2015 available at: https://doi.org/10.1093/law/9780199673049.003.0021

[222] Dino Kritsiotis, "International Law and the Relativities of Enforcement", in James Crawford & Martti Koskenniemi (eds), *The Cambridge Companion to International Law,* Vol. 245, 2012, available at:

decades of conflict in Afghanistan, ranging from deforestation and soil degradation to the contamination of water sources due to military operations, has gone largely unaddressed by international legal mechanisms. Several factors contribute to international law's inability to prosecute environmental war crimes effectively. Firstly, environmental protection laws suffer from a pervasive lack of clarity and uniformity. Specifically, there is minimal global consensus on the implementation of international agreements. Terms such as "widespread," "long-term," and "severe" damage to the environment, endorsed by the Rome Statute, ENMOD, and Additional Protocol, are often too broad or poorly defined, making their application inconsistent. For example, the destruction of agricultural lands and water systems in Afghanistan during the U.S.-led military campaigns could arguably meet these criteria, but the lack of precise definitions has hindered legal action.

Moreover, the Rome Statute, [223] ENMOD, [224] and Additional Protocol implicitly permit a certain degree of ecological impact by setting permissible thresholds for environmental damage.[225] This has allowed military operations in Afghanistan, such as the use of depleted uranium munitions and the destruction of natural habitats, to remain insufficiently regulated. Neither incidental war-related environmental damage nor deliberate harm is explicitly prohibited, provided such actions do not contravene established norms. The absence of precise criteria, particularly in assessing the proportionality of military necessity against environmental detriment, further complicates enforcement. Additionally, the fact that these international agreements only apply to countries that have ratified them presents another issue. For example, Afghanistan's fragile ecosystems have suffered due to military operations conducted by foreign powers, yet international agreements often lack the legal force to hold these actors accountable.

---

https://www.cambridge.org/core/books/cambridge-companion-to-international-law/international-law-and-the-relativities-of-enforcement/8163FD38F7B51F61E7BA418F3368156B.

[223] "Rome Statute of the International Criminal Court", in William Schabas (ed.), *An Introduction to the International Criminal Court,* Vol. 167, 2001, available at: https://www.cambridge.org/core/books/an-introduction-to-the-international-criminal-court/rome-statute-of-the-international-criminal-court/9070B0B3D6664F75373C4A6DA0E2F09C.

[224] Emily Crawford, "Accounting for the ENMOD Convention: Cold War Influences on the Origins and Development of the 1976 Convention on Environmental Modification Techniques", in Gerry Simpson, Matthew Craven & Sundhya Pahuja (eds), *International Law and the Cold War*, Vol. 81, 2019, available at: https://www.cambridge.org/core/books/international-law-and-the-cold-war/accounting-for-the-enmod-convention-cold-war-influences-on-the-origins-and-development-of-the-1976-convention-on-environmental-modification-techniques/E9266F7050E2336D690605F40A50A0FD.

[225] Knut Dörmann, "Elements of War Crimes Under the Rome Statute of the International Criminal Court: Sources and Commentary", 2003, available at: https://www.cambridge.org/core/books/elements-of-war-crimes-under-the-rome-statute-of-the-international-criminal-court/133E9566AE9A646D91A38827C998E60E.

The ICC, established under the Rome Statute, has also proven ineffective in deterring environmental transgressions. This is partly due to its mandate, which prioritizes crimes against humanity, war crimes, and genocide, leaving environmental offences inadequately addressed. For instance, while the Taliban's destruction of ancient Buddha statues in Bamiyan drew global condemnation, the environmental damage caused by their mining operations and illegal logging in the region has received little attention. Judges at the ICC typically lack expertise in environmental law, making it less likely for environmental harm to be prosecuted effectively. Furthermore, the ICC's jurisdiction is limited to natural individuals, preventing states or militaries from being held accountable for environmental damage. For example, the U.S. military's use of burn pits in Afghanistan, which released toxic chemicals into the environment, has not been subject to ICC scrutiny. Lastly, the ICC's penalties are limited to fines and incarceration, excluding restitution or civil liability, which could help repair environmental damage. State sovereignty issues further complicate efforts to prosecute environmental war crimes, as states may be reluctant to cede jurisdiction to international bodies. However, the ICC's indictment of Sudanese President Omar al-Bashir, which included charges related to the destruction of property and looting of natural resources in Darfur, sets a precedent for considering environmental impacts within broader war crimes prosecutions.[226] Applying this precedent to cases like Afghanistan could help address the environmental devastation caused by prolonged conflict and hold perpetrators accountable.

14. Strategies for Mitigating Environmental Damage in Warfare: Insights from Afghanistan

1. Enhance the Enforcement Mechanism

International law requires significant revisions to better address environmental damage in conflicts, particularly in regions like Afghanistan, where decades of war have caused severe ecological harm. The Additional Protocol I and the ENMOD Convention should be revised or replaced with a new treaty to improve their effectiveness.[227] Legal terms like "widespread", "long-term", and "severe" need clear, consistent definitions to ensure accountability. For example, the destruction of Afghanistan's forests for military purposes and the contamination of water sources by military waste could be classified as "widespread" and "long-term" damage under clearer legal frameworks. Reforms must prioritise environmental protection, covering both deliberate and incidental harm. Specifically, Article 35(3) of Protocol I should be revised to lower the culpability threshold for environmental damage,

[226] "Al Bashir Case: The Prosecutor v. Omar Hassan Ahmand Al Bashir", International Criminal Court, available at: https://www.icc-cpi.int/darfur/albashir.

[227] Joanna Jarose, "A Sleeping Giant? The ENMOD Convention as a Limit on Intentional Environmental Harm in Armed Conflict and Beyond", *American Journal of International Law,* Vol. 118, 2024.

allowing liability based on any one of the criteria, widespread, long-term, or severe, instead of requiring all three.[228] Additionally, incorporating explicit provisions for environmental protection and the Polluter-Pays Principle (PPP) within International Humanitarian Law (IHL) can provide a clearer legal basis for enforcement. Strengthening agreements like the Environmental Modification Convention (ENMOD) to include specific clauses on the PPP during armed conflicts would also enhance accountability.

2. Eliminate Dangerous Military Weapons

Eliminating weapons that cause severe environmental damage, such as nuclear, chemical, and biological weapons, is crucial for reducing ecological harm. In Afghanistan, the use of depleted uranium munitions and other hazardous materials has left lasting environmental scars, including soil and water contamination. Despite many states' commitments to banning such arms, their continued existence poses proliferation risks. Prohibiting these weapons would be complex and costly, but the cost of restoring environmental damage afterwards would be even higher. Increasing military vigilance and intelligence-gathering can help prevent ecological harm by better identifying and addressing threats. For instance, monitoring the use of explosives in Afghanistan's mountainous regions could mitigate landslides and soil erosion caused by military operations.

3. Promote Environmental Awareness and Justice

Open communication between the public and government is essential to protect the environment effectively. In Afghanistan, public concern over the destruction of agricultural lands and water systems could prompt the government to consider environmental issues before military actions. Disclosing government-caused environmental damage, such as the impact of burn pits used by foreign militaries, can increase public awareness and pressure for accountability. Establishing a global network for disseminating environmental impact information, similar to the Emergency Planning and Community Right to Know Act of 1986 of the USA,[229] is crucial. Additionally, affected individuals in Afghanistan should have access to environmental justice and compensation for harm caused by military activities. This approach would encourage states to consider environmental consequences more carefully during conflicts.

---

[228] Matthew Gillett, "Environmental Damage and International Criminal Law", in Marie-Claire Cordonier Segger & Sébastien Jodoin (eds), *Sustainable Development, International Criminal Justice, and Treaty Implementation,* Vol. 73, 2013, available at: https://www.cambridge.org/core/books/sustainable-development-international-criminal-justice-and-treaty-implementation/environmental-damage-and-international-criminal-law/9B60F77D6F7DB4463741DC87C5A10D7F.

[229] "Emergency Planning and Community Right-to-Know Act EPCRA", *GT Environmental,* available at: https://gtenvironmental.com/service/emergency-planning-community-right-to-know/.

4. Establish Environmental Damage Funds and Insurance Schemes

Entities responsible for wartime environmental damage should be required to fund cleanup and restoration efforts. For example, the destruction of Afghanistan's natural resources, such as forests and water systems, by military operations necessitates significant remediation. Developing insurance schemes that require parties involved in conflicts to cover potential environmental damages could also ensure accountability. Given the challenges in assigning state culpability, an international fund is necessary to ensure adequate remediation. This fund could be financed by taxing nations that export weaponry, such as the U.S., Russia, and others. Such a fund would support environmental restoration in cases where a state avoids accountability or cannot cover costs, as seen in Afghanistan's ongoing ecological crisis.

5. Integrate Environmental Considerations into Military Systems

To effectively address ecological issues in military operations, the Afghan Army should hold annual meetings in Kabul with the Environmental Commission, Forestry Department, and NGOs. These meetings would support the development of strong environmental plans and incorporate external expert recommendations. For instance, collaboration with NGOs could help address the deforestation caused by military activities and promote reforestation efforts. Establishing ongoing relationships with relevant agencies and NGOs would integrate environmental considerations into military planning, enhancing both protection efforts and operational effectiveness. This approach would ensure that Afghanistan's fragile ecosystems are safeguarded during and after conflicts.

Conclusion

The environmental devastation caused by decades of conflict in Afghanistan underscores the urgent need for stronger international legal frameworks and proactive measures to address war-related ecological harm. From landmines rendering vast tracts of land unusable to air pollution, deforestation, and the destruction of agricultural systems, the environmental consequences of war have been profound and far-reaching. These impacts not only threaten Afghanistan’s ecosystems but also exacerbate human suffering, food insecurity, and economic instability.

Furthermore, international law, as it stands, has failed to hold perpetrators accountable for environmental crimes during armed conflict. The lack of clear definitions, enforceable mechanisms, and jurisdictional limitations has allowed environmental damage to persist without consequences. The case of Afghanistan highlights the need for reforms, including clearer legal standards, the integration of environmental protection into military practices, and the establishment of international funds for environmental restoration. Moving forward, it is imperative

to priorities environmental justice in conflict zones. This includes strengthening peacekeeping efforts to monitor and report environmental harm, revising military handbooks to incorporate eco-friendly practices, and promoting public awareness to hold governments and militaries accountable. Additionally, international cooperation is essential to support demining efforts, reforestation, and the restoration of Afghanistan's natural habitats. The lessons from Afghanistan serve as a stark reminder that the environment is a silent victim of war, and its protection must be a central consideration in both conflict and post-conflict recovery. By addressing these challenges through legal, institutional, and community-driven approaches, the international community can work towards a future where the ecological costs of war are minimized, and sustainable recovery becomes a reality for conflict-affected regions like Afghanistan.

India's Regulatory and Ethical Stance on Autonomous Weapon Systems

Anviksha Pachori *
Abhishek Bhati *

ABSTRACT

India has progressively integrated emerging technologies, particularly artificial intelligence (AI), autonomous weapon systems (AWS), and robotics into its military modernization agenda. Given India's security needs and cross-border infiltration, a substantial number of investments in these areas reflects a strategic shift, enhancing operational effectiveness while minimizing human risk during combat. India's official stance further emphasizes a commitment to align conventional war-fighting strategies with digital technologies, signalling the inclusion of autonomous systems in future operational planning. The paper analyses current military doctrine envisioning a broad spectrum of AWS applications, participation in global forums delving into key themes of accountability, human control, and transparency, highlighting India's policy gaps and strategic choices.

Keywords: Autonomous weapon systems, artificial intelligence, armed forces, India, military

Introduction

Today, with nearly 53 percent of the world's population living in urban areas,[230] armed conflict[231] in such settings is often especially brutal and complex. Urban

* Assistant Professor, Institute of Law, Nirma University (India) Email: anvikshapachori@gmail.com. Orchid ID: https://orcid.org/0000-0003-2314-5598.

* Law Clerk cum Research Associate at the Supreme Court of India under Hon'ble Justice Vikram Nath, Supreme Court (India).
Email: abhishekbhati@gmail.com.

[230] Ana Moreno-Monroy, Marcello Schiavina and Paolo Veneri, "Metropolitan Areas in the World: Delineation and Population Trends", *Journal of Urban Economics*, Vol. 125, 2021, p. 103242, available at: https://doi.org/10.1016/j.jue.2020.103242.

[231] *Prosecutor v. Tadic* [2005] ICTY IT-94-1 [2005], Judgment pronounced the definition of an armed conflict, "An armed conflict exists whenever there is a resort to armed force between States or protracted armed violence between governmental authorities and organized armed groups or between such groups within a State. International humanitarian law applies from the initiation of such armed conflicts and extends beyond the cessation of hostilities until a general conclusion of peace is reached, or, in the case of internal conflicts, a peaceful settlement is achieved. Until that moment, international humanitarian law continues to apply in the whole territory of the warring States or, in the case of internal conflicts, the whole territory under the control of a party, whether or not actual combat takes place there."

warfare challenges commanders to distinguish combatants from non-combatants in densely populated zones, navigate intricate cityscapes, and deal with a host of environmental and logistical obstacles that rarely emerge on open battlefields. Notwithstanding these complexities, rapid technological developments, particularly Autonomous Weapon Systems (AWS), are reshaping the strategic, ethical, and humanitarian dimensions of modern conflict. AWS encompasses a broad range of military technologies capable of selecting and engaging targets with minimal or no human oversight. Their use in urban settings can, in principle, protect soldiers from direct harm and enhance precision by leveraging artificial intelligence (AI) from target recognition to real-time threat assessment. The crucial point is whether fully autonomous or heavily AI-dependent weapons can reliably adhere to the principles of International Humanitarian Law (IHL),[232] it is recommended by the International Committee for Red Cross (ICRC) that states should determine where these limits must be placed by adopting new legally binding rules in compliance with IHL norms[233] and by assessing the degree and type of human control needed to carry out the use of those weapons at a critical time which will also satisfy the ethical considerations. On the other hand, Stockholm International Peace Research Institute (SIPRI) highlights that compliance with IHL is an important benchmark, but the limits placed by IHL norms on AWS development are not fully settled, and unpredictability and lack of human control pose significant risks.[234]

Critics also argue that algorithms may be unable to evaluate the fluid nuances of an urban battle space, leading to algorithm injustice based on racial profiles[235], and the technology blurring the line between civilian and combatant[236]. Others note the difficulty of establishing accountability: if an AWS malfunctions and causes unintended harm, should responsibility lie with the developer of the software,

---

[232] Shahrullah Rina and Muhammad Saputra, "The Compliance of Autonomous Weapons to International Humanitarian Law: Question of Law and Question of Fact", *Wacana Hukum*, Vol. 28, No. 2, 2022, pp. 8–17, available at: https://doi.org/10.33061/1.wh.2022.28.1.6689.

[233] Neil Davison, "A Legal Perspective: Autonomous Weapon Systems under International Humanitarian Law", *UNODA*, Occasional Paper No 30, available at: https://www.icrc.org/sites/default/files/document/file_list/autonomous_weapon_systems_under_international_humanitarian_law.pdf. *See also* "Statement to the Convention on Certain Conventional Weapons (CCW) Meeting of Experts on Lethal Autonomous Weapons Systems (LAWS)", *ICRC*, Geneva, 11 April 2017, available at: https://www.icrc.org/en/document/statement-icrc-lethal-autonomous-weapons-systems.

[234] Vincent Boulanin, Laura Bruun and Netta Goussac, "Autonomous Weapons Systems and International Humanitarian Law, Identifying Limits and the Required Type and Degree of Human-Machine Interaction", *SIPRI*, 2021, available at: https://www.sipri.org/sites/default/files/2021-06/2106_aws_and_ihl_0.pdf.

[235] Ishmail Bhila, "Putting Algorithm Bias on Top of the Agenda in the Discussion of Autonomous Weapon Systems", *Digital War*, 2024, available at: https://doi.org/10.1057/s42984-024-00094-z.

[236] Andreas Wenger and Simon J.A. Mason, "The Civilianization of Armed Conflict: Trends and Implications", *International Review of the Red Cross*, Vol. 90, p. 872, December 2012, available at: https://www.icrc.org/sites/default/files/external/doc/en/assets/files/other/irrc-872-wenger-mason.pdf.

the commanding officer who deployed it, or the machine's onboard logic itself? These questions become even more pressing, given that many states, such as China, Israel, Russia, South Korea, Türkiye, the United Kingdom, India, and the United States, are rapidly investing in AWS research,[237] spurred by the promise of reduced military casualties and potentially decisive tactical advantages. Meanwhile, arms control experts and human rights advocates stress that robust legal frameworks, or outright prohibitions, may be essential to prevent an arms race that could further endanger civilian populations.[238]

On the one hand, AWS promises to enhance military capabilities, reduce the risk to soldiers, and potentially increase precision in targeting, while on the other hand, their deployment in urban settings raises serious ethical and legal questions. Chief among these concerns is compliance with the core principles of IHL and human rights standards, particularly the principles of distinction and proportionality.[239] Ensuring that AWS can reliably discriminate between military and civilian objects in crowded urban areas remains a profound technical challenge. The potential for algorithmic bias, errors in target identification, or unforeseen malfunctions could lead to unintended harm, triggering questions about accountability, transparency, and oversight. International legal debates on AWS have been ongoing in various forums, most prominently under the framework of the Convention on Certain Conventional Weapons (CCW) and its related Group of Governmental Experts (GGE) on Lethal Autonomous Weapons Systems (LAWS). [240] Many states and civil society organizations advocate for clear regulations or outright prohibitions on fully autonomous systems, citing the paramount need to safeguard civilians.

---

[237] Charukeshi Bhatt and Tejas Bharadwaj, "Understanding the Global Debate on Lethal Autonomous Weapons Systems: An Indian Perspective", *Carnegie India*, 30 August 2024, available at: https://carnegieendowment.org/research/2024/08/understanding-the-global-debate-on-lethal-autonomous-weapons-systems-an-indian-perspective?lang=en. *See also* US Office of General Counsel, U.S. Working Paper, Characteristics of Lethal Autonomous Weapons Systems", 10 November 2017, para. 30, available at: https://docs.un.org/en/CCW/GGE.1/2017/WP.6. *See also* "Working Paper entitled Principles and Good Practices on Emerging Technologies in the Area of Lethal Autonomous Weapons Systems submitted by Australia, Canada, Japan, the Republic of Korea, the United Kingdom, and the United States", 2022, para. 32. *See also* "United States of America, Department of Defence Directive 3000.09 "Autonomy in Weapon Systems", 21 November 2012.

[238] John Cherry and Durward Johnson, "Maintaining Command and Control (C2) of Lethal Autonomous Weapon Systems: Legal and Policy Considerations", *Southwestern Journal of International Law*, Vol. 27, 2020, available at: https://www.swlaw.edu/sites/default/files/2021-03/1.%20Cherry%20%5Bp.1-27%5D.pdf. *See Also* Geneva Academy of International Humanitarian Law and Human Rights, "Autonomous Weapons Systems Under International Law", Academy Briefing No. 8, 2014, available at: https://www.geneva-academy.ch/joomlatools-files/docman-files/Publications/Academy%20Briefings/Autonomous%20Weapon%20Systems%20under%20International%20Law_Academy%20Briefing%20No%208.pdf.

[239] R. Shahrullah and M. Saputra, above note 3, p. 2.

[240] *Ibid.,* p. 2

In light of these challenges and spurred by the global debate on LAWS and its development, this paper seeks to analyse the current military doctrine of India with respect to its present strategic standing. It also reflects upon current trends, the development of indigenous AWS, and the debate surrounding the usage of AWS. It discusses the legal and policy standing of India in a global discourse, comparing its standing with other countries. The objective is to critically examine the emerging challenges that lead to shifts in its strategic imperatives, its foreign policy, and national security. This shift has been more evident in India's willingness to employ proactive military measures in response to cross-border terrorism. The recent retaliation of India under *Operation Sindoor*[241] carried out against Pakistan following the *Phalgam* (Kashmir, India) terrorist attack in 2025 signalled a new doctrinal stance, demonstrating not only methodical preparedness[242] to defend its territorial integrity, but also a resolve to project its military strength when provoked using modern military technology, elaborated in further sections.

This policy posture was also reinforced in the aftermath of the *Pulwama* attack[243] back in 2019, wherein the tragic loss of over forty paramilitary personnel in Jammu and Kashmir led to the India Air Force conducting targeted airstrikes in *Balakot*, Pakistan. Together, these incidents reflect a broader recalibration of India's security paradigm, grounded in the proclamation of sovereign rights and safeguarding its national interest.

India emerges out to be an important actor at this moment because of its rapidly evolving military doctrine, heavy investment in the development of military technology, and its partnership with the global west, located at the cusp of transforming geo-political scenarios with rising tensions with its neighbouring countries. As it faces complex security challenges on multiple fronts, its doctrinal and technological evolution will have significant implications for regional stability, the global arms control debate, and the future of AWS governance. This article presents a useful overview of India's stance on AWS from political, legal, and ethical perspectives, and makes some predictions about how this stance may evolve, given the increasing global focus on the ethical and legal dimensions of emerging military technologies. Against the backdrop of evolving strategic assertiveness, it gauges challenges and reflects on India's foreign policy and national security stance with

---

[241] Ministry of External Affairs, Government of India, "Statement by Foreign Secretary: OPERATION SINDOOR", 7 May 2025, available at: https://www.mea.gov.in/Speeches-Statements.htm?dtl/39473/Statement_by_Foreign_Secretary_OPERATION_SINDOOR.

[242] Press Information Bureau, "Operation SINDOOR: India's Strategic Clarity and Calculated Force", 22 April 2025, available at: https://static.pib.gov.in/WriteReadData/specificdocs /documents/2025/may/doc2025514554501.pdf

[243] Ministry of External Affairs, Government of India, "India Strongly Condemns the Cowardly Terrorist Attack on our Security Forces in Pulwama, Jammu and Kashmir", 14 February 2019, available at: https://www.mea.gov.in/press-releases.htm?dtl/31053/India_strongly_condemns_the_cowardly_terrorist_attack_on_our_security_forces_in_Pulwama_Jammu_amp_Kashmir.

particular emphasis on the imperative to intuitionalism research and development of LAWS.

Out of 127 countries that fundamentally supported the initiative under the CCW framework, India is one among them, regulating and prohibiting the use of certain conventional weapons. India has also been an active participant in a group of government experts, where it chaired the session in 2017 and 2018, and led to the development of eleven guiding principles under lethal autonomous weapon systems[244] (LAWS). Numerous countries have objected to the working of GGE that the consensus model is not leading to a stricter regime, so a legally binding document will be more effective. In December 2023, the United Nations General Assembly (UNGA) adopted a resolution to seek suggestions from the member states to deal with the issues of LAWS and to submit a substantive report to which India voted against the resolution stating that it will lead to replication of consolidated work done by GGE so far considering and negotiating with each stakeholder by bringing all of them into one forum. She opined that a legally binding instrument will be a premature step as the impact of technology and veracity of harm has not been completely assessed. Also, the IHL rule of distinction is a technology-neutral stand and is sufficient to regulate LAWS. Presently, India has realised the need for the development of AWS to protect its interests and curtail the cross-border infiltrations. It has also criticised the complete denunciation of these technologies as ineffective; rather, it focuses on the positive side of these technologies, noting that autonomy in weapons can ensure meticulousness and efficacy, thus avoiding human errors.

1. India's Approach to Autonomous Weapon Systems

India's approach to AWS is shaped by its security environment, technological ambitions, and legal-ethical commitments. As a rising military power facing diverse threats, India is actively developing AWS from armed drones to unmanned ground vehicles, while grappling with how to integrate these systems into its defense doctrine.[245] At the same time, Indian policymakers navigate international pressure to regulate "killer robots"[246] and must ensure compliance with IHL principles if AWS

---

[244] "Annexure III, Guiding Principles affirmed by the Group of Governmental Experts on Emerging Technologies in the Area of Lethal Autonomous Weapons System", CCW/MSP/2019/9, available at: https://ccdcoe.org/uploads/2020/02/UN-191213_CCW-MSP-Final-report-Annex-III_Guiding-Principles-affirmed-by-GGE.pdf.

[245] Brijesh Singh, "India's Evolving Defense Doctrine", *Indian Council of Global Relation*, 26 May 2025, available at: https://www.gatewayhouse.in/indias-evolving-defencedoctrine/#.

[246] "United Nations, "Report of the Secretary General, Our Common Agenda, 2021, Promote Peace and Prevent Conflicts, Action 11: Prevent the weaponization of emerging domains and promote responsible innovation, considers the transformative potential of emerging technologies in conflict and warfare, the threat of their use by non-state actors, and the risks posed to human rights due to issues with accuracy, reliability, human control and data and algorithmic bias", available at: https://www.un.org/en/content/common-agenda-report/assets/pdf/Common_Agenda_Report_English.pdf.

are deployed, especially in complex urban warfare scenarios. This section critically examines India's evolving stance on AWS, including its development status, envisioned uses in domestic security, regulatory and ethical positions (e.g., in UN forums), and the IHL implications of deploying such systems in cities. Comparisons are drawn with other major powers' approaches to highlight where India mirrors global trends and where it diverges. Throughout, key themes of accountability, human control, transparency, and urban operational complexity are emphasized in evaluating India's policy gaps and doctrinal choices.

1.1. Technological Advancement and Indigenous Development

India has steadily embraced emerging technologies like AI-driven weapons and robotics as part of its military modernization. The Indian Army publicly demonstrated a swarm of 75 autonomous drones in January 2021, showcasing offensive "low-cost precision" strike capabilities enabled by artificial intelligence.[247] This marked a shift in doctrine from a manpower-intensive force to a technology-enabled force, with heavy investments in AI, autonomous weapon systems, and robotics to augment traditional war-fighting. Official statements underscore the Army's commitment to converging its war-fighting philosophy with digital technologies, indicating that autonomous systems are being factored into future battle plans.[248] Indeed, India's military doctrine now envisions a spectrum of AWS applications from surveillance and target acquisition to direct combat as a force multiplier that can reduce risks to soldiers and enhance mission effectiveness in challenging environments.[249]

This shift can be noticed through the active involvement of India's defense research institutions and key private industry in the development of indigenous AWS prototypes.[250] The Defence Research and Development Organisation (DRDO) and allied start-ups have launched projects ranging from unmanned ground vehicles (UGVs) to AI-enabled combat platforms. Notably, DRDO's Combat Vehicles Research Establishment has proposed an unmanned combat vehicle based on the "*Arjun*" main battle tank, equipped with a 120mm gun for remote operation in

[247] Press Information Bureau, "Indian Army Demonstrates Drone Swarms During Army Day Parade", *Press Information Bureau*, Delhi, 15 January 2021, available at: https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1688807.

[248] Vinod Sahay, "Defence Budget of 2024-25: Boosting Self-reliance, Modernization and Indigenous Production", *FICCI* Blog, 24 September 2024, available at: https://www.pib.gov.in/PressReleaseIframePage.aspx?PRID=2001375.

[249] R Shashank Reddy, "India and the Challenge of Autonomous Weapons", *Carnegie Endowment for International Peace,* 22 June 2016, available at: https://carnegieendowment.org/research/2016/06/india-and-the-challenge-of-autonomous-weapons?lang=en.

[250] Ibid.

hazardous theatres.[251] The Army has spelled out requirements for such UGVs to perform surveillance, reconnaissance, and targeting roles in high-altitude and desert border areas, underscoring the doctrinal intent to deploy autonomous or semi-autonomous platforms where terrain or enemy fire makes human operation perilous.

In the aerial domain, India has acquired and deployed loitering munitions like the Israeli-origin Harop drone,[252] which can autonomously home in on enemy radar emissions and destroy them. The Air Force already maintains over a hundred Harop (P-4) drones[253], a SEAD-oriented loitering weapon that can operate in a fully autonomous "fire-and-forget" mode or under human supervision, and will abort and return to base if no target is found. The use of such systems indicates that India is not merely theorizing about AWS but is fielding platforms with automated targeting capabilities in specific niches (e.g., anti-air defense suppression). Meanwhile, the Navy and paramilitary forces are exploring unmanned systems for maritime surveillance and border security, aligning with Prime Minister Narendra Modi's "*Aatmanirbhar Bharat*" (self-reliant India) vision to indigenously develop next-generation defense technology.[254] Overall, India's defense doctrine increasingly views autonomy as a critical enabler to address its strategic needs from force protection to precision strike and to achieve technological parity with leading military powers.

2. International Conflicts and Shifting Defense Doctrine

India faces a range of internal security challenges, i.e., cross-border terrorism, insurgencies, and potential urban terror attacks that drive interest in AWS for domestic applications. The Indian leadership has noted that autonomous weapons could augment internal defenses and even outperform humans for certain objectives, such as checking cross-border infiltration by militants.[255] Along India's volatile frontiers, the Line of Control in Jammu and Kashmir, intrusions by armed insurgents have traditionally been countered by manned patrols incurring high risk. AWS offers a tantalizing alternative: unmanned systems can survey rugged terrain and even engage infiltrators without exposing Indian soldiers to ambush. This logic underpinned recent policy moves. In 2019, the Army announced plans to deploy

---

[251] Inder Singh Bisht, "India to Develop Unmanned Tank for Desert Warfare", *The Defense Post*, 15 April 2022, available at: https://thedefensepost.com/2022/04/15/india-unmanned-tank/.

[252] H. Ben-Yishai, "Drones in the Israeli-Palestinian Conflict: Evolution and Strategic Impact", *Journal of Strategic Studies*, Vol. 43, No. 5, 2020, pp. 789–810.

[253] Approval for 54 Israeli attack drones Harop for Indian Air Force", Army Recognition, 13 February 2019, available at: https://armyrecognition.com/news/aerospace-news/2019/india-approuval-for-54-attack-drones-harop-from-israel-for-indian-air-force

[254] "India Unveils Indigenous AI-Driven Autonomous Weapon Platform, Enters Global Race for Lethal AWS", *Aviation Defence Universe*, 16 April 2025, available at: https://www.aviation-defence-universe.com/india-unveils-indigenous-ai-driven-autonomous-weapon-platform-enters-global-race-for-lethal-aws-autonomous-weapon-system/.

[255] R. S. Reddy, above note 20.

"mechanised formations, such as tanks and infantry combat vehicles" in sensitive border sectors to reduce troop vulnerability.[256] Such formations would likely include remotely operated autonomous vehicles operating in extreme climates and high-threat zones where human presence is dangerous. Likewise, India has been compelled to respond to hostile drone use by terrorists. For example, Pakistan-based groups have used small drones to drop weapons and explosives into Indian territory. This has galvanized India's pursuit of counter-drone systems and potentially automated air defense networks to detect and neutralize unmanned threats. In short, domestic conflict scenarios from Kashmir to the northeast are accelerating India's consideration of AWS as tools for border security, counter-infiltration, and force protection.

Recent escalations along the Line of Control underline how quickly those considerations are moving from concept to practice. During "Operation Sindoor,[257]" launched by India retaliation for a brutal terror attack on civilians at a tourist place in Pahalgam, Kashmir (India) on 22 April 2025, Pakistan attempted to overwhelm Indian positions with dozens of small swarm-drones and stand-off munitions. The Army responded with a layered, partly automated air-defence web, legacy "L-70 and Zu-23 guns" and radar-guided "*Schilka*", a self-propelled anti-aircraft gun handling low-altitude targets, while the long-range "S-400 Sudarshan Chakra" batteries stationed in Punjab, India, intercepted higher-flying drones and missiles. Sensors feeding India's Integrated Air Command and Control System (IACCS) auto-classified tracks and cued individual weapons, where human operators retained the final "engage" command but neutralised more than fifty hostile drones in minutes.[258] The India Air Force has also reported to have launched Israeli-origin Harop loitering munitions against Pakistani air-defence sites around Lahore, thereby, demonstrating that the same autonomous technologies India fields for border protection can be flipped for precision counter-strike even in densely populated areas.[259]

Looking ahead, the indigenous *AkashTeer* is a multilayered, AI-driven defence system developed by DRDO and Bharat Electronics Limited (BEL) and integrated by the Indian Space Research Organisation (ISRO), which has tightened that defensive-offensive loop still further. Now being inducted across Army Air

---

[256] Anoushka Soni and Elizabeth Dominic, "Legal and Policy Implications of Autonomous Weapons Systems", *CIS-India Blog*, 31 October 2020, available at: https://cis-india.org/internet-governance/blog/legal-and-policy-implications-of-autonomous-weapons-systems-1.

[257] "Ministry of External Affairs, Government of India, Statement by Foreign Secretary: Operation Sindoor", 7 May 2025, available at: https://www.mea.gov.in/Speeches-Statements.htm?dtl/39473/Statement_by_Foreign_Secretary_OPERATION_SINDOOR.

[258] "L-70 Guns, Zu-23 mm, Schilka, S-400: Weapons India Deployed to Intercept Pakistan Drones", *The Times of India*, 9 May 2025, available at: https://timesofindia.indiatimes.com/india/l-70-guns-zu-23mm-schilka-s-400-weapons-india-deployed-to-intercept-pakistan-drones/articleshow/121016434.cms.

[259] "What Are Harop Drones? Weapon Used by India to Target Pakistan Air Defence Systems", *Times of India*, 8 May 2025, available at: https://timesofindia.indiatimes.com/india/what-are-harop-drones-weapon-used-by-india-to-target-pakistan-air-defence-systems/articleshow/120995810.cms.

Defence formations, *AkashTeer* fuses ISRO real-time satellite imagery, NAVIC navigation, ground radars, and AI-directed kamikaze-drone swarms into a single, decentralised "combat cloud" capable of detecting, deciding, and engaging within seconds.[260] Deployed from jeep-mounted or hardened command nodes, the system is intended to give local commanders, city-scale airspace control or border-sector denial without waiting for higher headquarters. It is a capability with obvious appeal for protecting urban centres such as Jammu or Srinagar against mass-drone incursions. Yet, the speed and autonomy that make this defensive weapon attractive also magnify unresolved questions about meaningful human control, target verification, and proportionality in crowded environments. Ensuring that those AI-driven engagements remain reviewable and interruptible, therefore, becomes a doctrinal imperative for India, which is shifting from demonstration to routine AWS deployment on its own soil. So, an intriguing nuance that surrounds this discussion is the usage of defensive AWS, which is legal under IHL norms presently, but can raise similar legal issues if not used in a stable environment or against an unpredictable target.

2.1 Ways to Strengthen Domestic Security

Under the domestic law of India urban security and counterterrorism operations are dealt with under a range of national laws such as the National Security Act[261] (NSA), the Unlawful Activities Prevention Act 2019[262] (UAPA) and other mentioned under Part III of the Indian Constitution Act, 1949[263] are substantial national security laws formulated to counter anti-national activities that endanger the security of the states and its citizens. These laws empower the Union government of India to take actions against any organisation or person deemed unlawful and to take any preventive action against them to combat their unlawful activities. The NSA empowers both state and central government to detain and arrest persons for acts that may endanger national security in addition to maintaining law and order and ensuring the continuity of essential goods and services of the area under the Essential Commodities Act.[264] NSA provides a three tier National Security Council chaired by the Prime Minister of India; this act further reads with the National Investigation Agency Act[265] which was enacted after the 26/11 Mumbai terror attack in 2008.

---

[260] "Akashteer: Transforming India's Air Defence with Cutting-edge Technology", *The Economic Times*, New Delhi, 12 November 2024, available at: https://economictimes.indiatimes.com/news/defence/akashteer-transforming-indias-air-defence-with-cutting-edge-technology/articleshow/115218211.cms.

[261] India Ministry of Home of Affairs, National Security Act, 1980, available at: https://www.mha.gov.in/sites/default/files/ISdivII_NSAAct1980_20122018.pdf.

[262] Unlawful Activities Prevention Act 2019

[263] Indian Constitution Act, 1949

[264] Essential Commodities Act, 1955

[265] National Investigation Agency Act, 2008

At present, urban security and counter terrorism threats are another potential theatre for Indian AWS deployment, albeit one approached with caution. Indian forces have gradually integrated unmanned tools for dangerous tasks in urban environments. The National Security Guard (NSG) and military bomb squads already utilize robots like the *DRDO Daksh UGV* to remotely dispose of improvised explosive devices, including those which were within city settings.[266] These remotely operated robots are equipped with sensors, manipulators, and even shotguns for blasting suspicious objects, which have proven their worth in defusing bombs without risking human life. Building on such successes, the army is scaling up the use of ground robots for urban combat support. In 2019 it signalled the need to procure over 500 robotic surveillance platforms to assist in counter-terrorism operations in built-up areas, explicitly to "avoid casualty to own troops during initial breach" of insurgent-held buildings or rooms[267]. This move reveals a doctrinal shift, before soldiers storm a terrorist stronghold in a city. India envisages sending in robotic scouts or "robotic mules" to locate threats and perhaps engage or distract them, minimizing risk to human operators. Such robots might carry cameras, sensors, and possibly small arms or stun devices, serving as the first entrant in high-risk urban raids. The "Robot Sentry" or "RoboSen" prototype developed by DRDO exemplifies this trend as a mobile robot intended for patrolling and surveillance in semi-public urban spaces like campuses[268]. While primarily unarmed, it could be adapted for security patrols or perimeter defense with less-than-lethal capabilities.

Despite these advances, India has so far refrained from deploying fully lethal AWS in domestic law enforcement or counterterrorism, but it is actively researching and developing AI-enabled and semi-autonomous weapon[269] systems which are currently designed to operate with a human on the loop for critical target engagement advocating for operational capabilities enabling systems to function without human intervention after aligning military AI applications with IHL. In recent time, India and the United States (U.S.) have also announced to co-produce advanced systems under the Autonomous Systems Industry Alliance (ASIA) initiative[270] which will

[266] Palak Gupta, "Army of Robots", *Force India*, 2025, available at: https://forceindia.net/feature-report/army-of-robots/.

[267] "Can Robots Help Indian Army Fight Terror in Kashmir", *The New Indian Express,* 13 November 2025, available at: https://www.newindianexpress.com/nation/2019/Nov/13/can-robots-help-indian-army-fight-terror-in-kashmir-2061280.html.

[268] C. Bhatt and T. Bharadwaj, above note 8.

[269] Vishal Sengupta, "Aero India 2025: Indian Army Displays AI-based Weapon Systems", *Janes*, 14 February 2025, available at: https://www.janes.com/osint-insights/defence-news/weapons/aero-india-2025-indian-army-displays-ai-based-weapon-system.

[270] Jon Harper, "Trump, Modi Announce New US-India Autonomous Systems Partnership", *Defensescoop*, 14 February 2025, available at: https://defensescoop.com/2025/02/14/trump-modi-announce-us-india-autonomous-systems-industry-alliance/.

bolster the defence capabilities of India and the U.S. and enhance the security in the strategically vital Indo-Pacific Region.[271]

Every use case from Kashmir valley counterinsurgency to metropolitan counter-terror scenarios involves dense civilian presence and complex rules of engagement, which demand high human control. Indian security forces continue to rely on human judgment for the use of lethal force in populated areas, using drones and robots in supporting roles for surveillance, bomb disposal, and delivering tear gas. The government is acutely aware that an errant autonomous strike in a domestic context would carry heavy political and ethical costs. Thus, current doctrine for urban security treats AWS as adjuncts to human-led operations involving eyes and ears in the form of unmanned reconnaissance drones, or tools to neutralize specific hazards in tightly supervised settings. Still, Indian planners see increasing roles for autonomy even in urban security, provided the systems can discriminate against threats and be controlled to avoid unintended harm. The push for AI-enabled surveillance networks in smart cities and the use of drones for crowd monitoring during large events also indicate a blurring line between military AWS and domestic security tech. This raises urgent questions about how India will regulate and oversee the use of autonomy in force application on its soil; an issue closely tied to ethical and legal considerations discussed in further sections.

3. Regulatory and Ethical Stance on AWS

India's public stance on regulating lethal autonomous weapons reflects a pragmatic balance between security interests and rule-based order. At several international forums, the United Nations Convention on Certain Conventional Weapons (CCW), India has resisted calls for a blanket ban on AWS, deeming such a step as "*premature*." Indian delegates[272] point out that the technology is still evolving and that no internationally agreed definition of AWS exists, making a prohibition impractical at this stage. Instead, India aligns with a growing consensus that any use of autonomous weapons must remain firmly subject to the regulation of universally accepted humanitarian principles. It emphasizes that the existing IHL framework is adequate, given that these laws are "technology-neutral[273]" and regulate weapons based on their effects rather than the means of operation. In other words, from India's perspective, regardless of whether a weapon is autonomous or not, for as long as it

---

[271] "India and US to Co-Produce Advanced Autonomous Systems Under ASIA Initiative", *Indian Defence Research Wing*, 23 February 2025, available at: https://idrw.org/india-and-us-to-co-produce-advanced-autonomous-systems-under-asia-initiative/.

[272] "Convention on Certain Conventional Weapons, Intervention by Ambassador Pankaj Sharma, Permanent Representative of India to the conference on Disarmament during the First Session of the 2021 GGE on LAWS," 3 August 2021, available at https://meaindia.nic.in/cdgeneva/?13789?000.

[273] "Convention on Certain Conventional Weapons, Statement by Ms. Muanpuii Saiawi, Joint Secretary (Disarmament & International Security Affairs) at the Second Session of the Group of Governmental Experts (GGE) on Lethal Autonomous Weapons Systems (LAWS), Geneva", 16 May 2023, available at: https://meaindia.nic.in/cdgeneva/?17885?000.

can be used in compliance with the principles of distinction, proportionality, and necessity, it is not per se unlawful. India often cites how novel technologies have been managed under IHL in the past, such as laser weapons were used for targeting[274] even when Protocol IV of the CCW bans blinding laser weapons completely. Thus, India argues that new rules should focus on weapon effects and proper use rather than banning enabling technologies. Consistent with this view, India joined other states in affirming that responsibility and accountability for any use of AWS lies with human commanders and operators[275], thereby preserving the chain of command and oversight required by IHL. By stressing human responsibility, India maintains that deploying AWS does not mean abdicating complete human control; on the contrary, it means that a commander will always be accountable for decisions to use force, even if an autonomous agent executes the attack.

At the CCW GGE meetings as well, India has positioned itself as a constructive voice advocating in favour of a regulation which may not be completely binding on the nation states, but establishes an agreement based on effective compliance. It has supported the formulation of eleven non-binding guiding principles, which were adopted in 2019, and has backed the idea of a high-level political declaration on AWS. Through such a declaration, India reaffirms its commitments to IHL acquiescence, human oversight, and prompt development of national policies, all without the delays of treaty negotiation. This approach mirrors that of other major powers like the United States, which in 2023 issued its voluntary guidelines for responsible military AI use[276] and Russia, both of which prefer flexible norms over hard law in this domain. Indeed, India voted against the December 2023 UN General Assembly resolution that sought to move AWS discussions toward a new legally-binding instrument, on the grounds that an enormous amount of work has already been done by GGE after involving all the key stakeholders, and it is inappropriate, time-consuming, as this duplication would waste all the previous efforts. India's priority is to continue deliberations within the CCW, where it even chaired early discussions in 2017–2018, and to build on the substantive work already done, rather than to rush into a mandating treaty that key military powers may boycott or reserve the provisions for the future will not be an effective way.[277] Notably, Indian officials have warned that "blanket condemnation" of autonomous weapons could be counterproductive and stigmatize beneficial use cases. The underline positive aspects in some cases are autonomy in weapons, which might increase precision and reduce human error or emotional recklessness on the

---

[274] "Article 1, Protocol on Blinding Laser Weapons, Protocol IV to the 1980 Convention", 13 October 1995

[275] CCW Convention, above note 43.

[276] "U.S. Department of State, Bureau of Arm control, Deterrence and stability - Political Declaration of Responsible Military Use of Artificial Intelligence and Autonomy", *REAIM* 2023.

[277] Bedavyas Mohanty, "Command and Control: India's Place in the Lethal Autonomous Weapons Regime", *Observer Research Foundation*, Issue Briefs, 25 May 2016, available at: https://www.orfonline.org/research/command-and-ctrl-indias-place-in-the-lethal-autonomous-weapons-regime.

battlefield.[278] This nuanced stance implies that India is not blind to the ethical concerns raised by AWS, but it prefers to address those through careful design and use, rather than outlawing the technology outright.

On the home front, India's ethical and legal deliberations on AWS are progressing in tandem with its technological development. The government has convened internal expert groups and tracked dialogues to debate the risks and safeguards required for military AI. For instance, a high-level seminar in early 2025 focused on technical and legal safeguards, accountability measures, and governance frameworks for integrating AI and AWS into India's defense architecture.[279] Such efforts indicate an understanding that doctrinal clarity and policy guidance must keep pace with innovation. Yet, critics note a degree of policy opacity and ambiguity in the case of India, in that it has not issued a public doctrine on AWS use, nor has it detailed how it will ensure "meaningful human control" in practice.[280] Indian representatives have conceptually endorsed the need for human involvement at critical stages of targeting cycles, but without using the exact phrase.[281] Still, evidence of India's commitment to ethical constraints can be seen in its procurement and development choices. The recently unveiled prototype of an indigenous AI-driven autonomous weapon platform was explicitly built with multiple ethical safeguards, it is programmed with strict rules of engagement, secure control protocols to prevent unauthorized use, and a "human override mechanism" to allow commanders to intervene or abort engagements if needed.[282] Incorporating a human override in the system's design reflects India's adherence to the principle of human control over lethal decisions, even as it pushes the frontier of autonomy. Additionally, India emphasizes the responsibility of the state not only in using AWS, but also in

---

[278] Ibid.

[279] "India's Approach to AI in Military Domain and Emerging Technologies in Areas of Lethal Autonomous Weapon Systems (LAWS)", *Manohar Parrikar Institute for Defence Studies and Analyses*, 28–30 January 2025, available at: https://www.idsa.in/idsa-event/indias-approach-to-ai-in-military-domain-emerging-technologies-in-areas-of-lethal-autonomous-weapon-systems-laws/

[280] Anna-Kathrina Ferl, "Imagining Meaningful Human Control: Autonomous Weapons and the (De-) Legitimisation of Future Warfare", *Global Society,* Vol. 38, No. 1, pp. 139–155, available at: https://doi.org/10.1080/13600826.2023.2233004.

[281] "Convention on Certain Conventional Weapons, Intervention by Ambassador Pankaj Sharma, Permanent Representative of India to the conference on Disarmament during the First Session of the 2021 GGE on LAWS, 3 August 2021; All member state should be encouraged to share good practices in areas of human control and human machine interaction in the emerging technologies pertaining to LAWS. The technology should not be stigmatized, and any potential policy measure taken within the context of the CCW should not hamper progress in or access to peaceful uses of intelligent autonomous technologies."

[282] "India Unveils Indigenous AI-Driven Autonomous Weapon Platform, Enters Global Race for Lethal AWS", *Aviation Defence Universe*, 16 April 2025, available at: https://www.aviation-defence-universe.com/india-unveils-indigenous-ai-driven-autonomous-weapon-platform-enters-global-race-for-lethal-aws-autonomous-weapon-system/.

preventing their proliferation to non-state actors.[283] Indian officials frequently raise concerns that terrorist groups or rogue entities could acquire autonomous capabilities, and argue for international regimes or export controls to keep AWS out of malicious hands. This ties into India's broader ethical stance, where AWS development is acceptable and even necessary for national security, but it must be paired with accountability, oversight, and measures against misuse. By championing state accountability, calling for normative guidelines, and instituting domestic review of AWS projects, India signals that it seeks to be a responsible innovator in this arena, rather than an outlier.

3.1. Accountability under International Humanitarian Law

The ultimate test of India's approach to AWS will be compliance with International Humanitarian Law when these systems are deployed in an armed conflict, especially in the intricate milieu of urban warfare. Urban combat presents a nightmare scenario for autonomous systems striving to meet IHL requirements, when cities are densely populated with civilians, friendly forces, and adversaries intermingled, making the core principle of distinction extraordinarily difficult. Even for human soldiers, identifying legitimate targets in a crowded street or an apartment building can be fraught with uncertainty; for an AI-driven machine, the challenge is magnified. As India in recent times has recognised the potential of AI usage for Defence purposes and how it acts as a force multiplier in achieving military objectives, the defence ministry bore the task of integrating this technology[284] through planning, preparing, processing, and complying with structural changes at the user level. India should recognize this concern by affirming that IHL fully applies to AI- enabled defence technology alongside AWS, and any use of autonomy must be "compliant with the principles of distinction, proportionality and precautions in attack" just as with conventional forces.[285] However, assuring such compliance in practice is an open question. An autonomous drone or UGV operating in an Indian city would need robust sensors and training data to distinguish a hostile armed insurgent from an innocent civilian, which current AI vision systems can do only in constrained scenarios. The risk of misidentification leading to unlawful harm is a primary reason India has not yet authorized lethal AWS for independent operation in urban areas.

Proportionality is another IHL pillar under strain, as this rule requires weighing anticipated military advantage against collateral civilian damage. That

---

[283] Government of India, "Statement by India: An Exploration of the Potential Challenges Posed by Emerging Technologies in the Area of Lethal Autonomous Weapons Systems to International Humanitarian Law", *UNODA Documents Library*, 26 March 2019, available at: https://unoda-documents-library.s3.amazonaws.com/Convention_on_Certain_Conventional_Weapons_-_Group_of_Governmental_Experts_(2019)/5%2Ba%2B26%2BMar%2B2019%2Bforenoon.pdf.

[284] "National Initiatives on Artificial Intelligence in Defence", *United Service Institution of India*, 2023, available at: https://usiofindia.org/publication/cs3-strategic-perspectives/national-initiatives-on-artificial-intelligence-in-defence/.

[285] R.S Reddy, above note 20.

calculation involves value judgments and contextual awareness; however, understanding the difference between an active shooter and a surrendering fighter, or the significance of destroying one terrorist at the cost of ten civilian lives in an apartment, is quite difficult. Programming an AWS to make such nuanced judgments is exceedingly complex. Indian strategic study experts have noted that any AWS would need rigorous testing to ensure it can follow rules of engagement and yield to human judgment in ambiguous cases.[286] In essence, human oversight remains critical as a safety net for proportionality, a human operator can decide not to fire if a situation is too uncertain, whereas a fully autonomous system might lack that broader intuition or hesitation. Consequently, India is likely to mandate a human in the loop or on the loop for any AWS deployment in dense civilian areas, at least until artificial cognition vastly improves.

The principle of precaution in attack further compels India to be careful about AWS in urban warfare. Precaution means doing everything feasible to verify targets and minimize civilian harm. For India, this would translate into operational measures like restricting autonomous engagements to clearly defined combat zones or using AWS only after civilians have been warned or evacuated. One can envision, for example, a future scenario where an Indian platoon corners terrorists in an urban enclave and then deploys an autonomous ground vehicle to enter the building first. In line with precaution, that vehicle might be constrained to use non-lethal force unless it positively identifies a hostile firearm, and even then, might seek confirmation from a human controller before using deadly force. Such human-in-the-loop authorization is a likely requirement for India's use of AWS in compliance with Article 57 of Additional Protocol I[287] to the extent that India has also accepted this as a customary international law rule regarding verification of targets.[288] Indeed, India has stressed in UN discussions that while autonomy can assist in faster decision-making, full autonomy in critical functions would challenge the ability to assign responsibility and ensure IHL compliance, so any such capabilities must be carefully circumscribed and made compliant with IHL during the conceptualisation, design, and development of the system.[289] This suggests that India is looking at a

---

[286] Yogesh Joshi, "Emerging Technologies and India's Defence Preparedness", *Observer Research Foundation,* Special Report No. 209, 5 May 2023, available at: https://www.orfonline.org/research/emerging-technologies-and-india-s-defence-preparedness.

[287] Protocol Additional (I) to the Geneva Convention of 12 August 1949 and Relating to the Protection of the Victims of International Armed Conflicts, 1125 UNTS 3, 8 June 1977 (entered into force 12 July 1978), Art. 57.

[288] T. Bhatt and C. Bharadwaj, above note 8.

[289] "Statement by India: Further Consideration of the Human Element in the Use of Lethal Force; Aspects of Human Machine Interaction in the Development, Deployment and Use of Emerging Technologies in the Area of Lethal Autonomous Weapons Systems, Statement by Commodore Nishant Kumar, Director (Military Affairs), Ministry of External Affairs, Government of India on Agenda item 5(b) Further consideration of the human element in the use of lethal force; aspects of human machine interaction in the development, deployment and use of emerging technologies in

"compliance by design" approach, building AWS that has IHL principles encoded as constraints, for instance, no-fire zones such as hospitals and schools hardwired into targeting algorithms, friend-or-foe recognition to prevent fratricide, and fail-safes to shut down the weapon if the situation exceeds the system's validated parameters.

In terms of accountability, India faces the same dilemma as all states developing AWS: how to attribute fault if an autonomous system commits a violation. Under the laws of armed conflict, commanders and operators can be held responsible for war crimes, if they deploy a weapon in a negligent or indiscriminate manner.[290] India's position is that this doctrine of command responsibility remains fully intact with AWS, the human who deploys an autonomous weapon must do so with due care and will be accountable for its actions. But practical accountability could be muddied if an AI "decides" on a target that a human operator did not explicitly intend. India has not announced any special legal framework for AWS accountability, implying it will rely on existing military justice systems, i.e., if an Indian AWS were to mistakenly kill civilians, an investigation would determine if the commanders followed the prescribed protocols. If not, they would be culpable, or if they did follow protocols and the AI erred due to an unforeseen flaw, the incident would likely be treated as a tragic accident and perhaps prompt improvements in the system. This scenario underscores why transparency of AI in weapons is crucial, for which India will need systems that can log decisions and provide post hoc explanations[291] or at least data to assess compliance. Without such transparency, it would be challenging to apply the accountability mechanisms that India insists upon. To achieve that, the government of India constituted a task force to facilitate around 75 AI-enabled projects[292] to be solely utilised for the defence imperatives.

3.2. AWS and Its Implications under AI

The development of AI- driven products relevant for defence experts has also started to discuss incorporating "explainable AI programme" in line with the U.S. defence

---

the area of Lethal Autonomous Weapons Systems", 2019, Session of GGE on LAWS, Geneva, 26 March 2019", *Embassy of India*, available at: https://eoi.gov.in/eoisearch/MyPrint.php?7926?001/0002.

[290] Vivek Sehrawat, "Autonomous Weapon System and Command Responsibility", *Florida Journal of International Law*, Vol. 31, No. 3, 2021, available at: https://scholarship.law.ufl.edu/fjil/vol31/iss3/2.

[291] Lt. Gen. Deependra Singh Hooda, "Implementing Artificial Intelligence in the Indian Military", *Delhi Policy Group Brief*, 16 February 2023, available at: https://www.delhipolicygroup.org/publication/policy-briefs/implementing-artificial-intelligence-in-the-indian-military.html#_ftn11.

[292] ANI, "Rajnath Singh Launches 75 Newly-Developed AI-Enabled Defence Products", *The Business Standards,* 12 July 2022, available at: https://www.business-standard.com/article/current-affairs/rajnath-singh-launches-75-newly-developed-ai-enabled-defence-products-122071200094_1.html.

research agency[293] that aims to create explainable models of AI so that the experts could infer actions of autonomous weapons by a human reviewer, which in turn helps establish a chain of accountability and trust. While AI's role in decision-making related to the lethal use of force remains a subject of debate, government officials have largely dismissed the possibility of its application in this context.

Another IHL aspect India must consider is the obligation to perform legal reviews of new weapons. Although India is not a party to Additional Protocol I, which explicitly requires Article 36 legal reviews,[294] it is broadly accepted that any state introducing a novel weapon should ensure it doesn't contravene fundamental IHL rules or produce indiscriminate effects. For AWS, India's review process would have to involve not just lawyers but also technologists who understand AI behaviour. Ensuring that an AWS can consistently operate within IHL bounds may require extensive simulation of urban combat scenarios. This raises a practicality: given the unpredictability of war, especially in cities with cluttered electromagnetic environments, civilians unexpectedly emerging, etc., can India confidently certify an autonomous system as IHL-compliant in all cases? This uncertainty is at the heart of global hesitancy about AWS, and Indian policymakers are grappling with it. They have cited the Martens Clause as a general clause of IHL that appeals to the principles of humanity and dictates of public conscience, as an essential guide. India asserts that it "respects the universality of the Martens Clause from a humanitarian perspective", implying that even in the absence of a specific AWS treaty, it will measure the use of autonomous weapons against fundamental humanistic considerations. [295] This could serve as a self-imposed check: if a particular autonomous strike would shock the public conscience or seems to contravene basic humanitarian principles, then it should be halted. In practice, we can expect India to deploy AWS in urban settings only incrementally and with stringent controls. Early uses might be confined to surveillance drones, bomb-disposal robots, or unarmed support bots in cities, roles that pose little risk of IHL violation, while armed AWS might first be deployed in more clear-cut battlefields where distinguishing targets is easier. Over time, as technology and confidence grow, India might expand AWS roles in urban combat, but always with a doctrine of "human on the loop" as a fail-safe.[296] In summary, India's challenge is to harness the tactical advantages of AWS

---

[293] "Explainable Artificial Intelligence", *Defense Advanced Research Projects Agency*, available at: https://www.darpa.mil/program/explainable-artificial-intelligence.

[294]"Protocol Additional (I) to the Geneva convention of 12th August 1949 and relating to the protection of the victims of international armed conflict, 8th June 1977, Art. 36, 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."

[295] "Statement by India, the Absence of a Dedicated AWS Treaty Does Not Imply a Legal Vacuum", *Ministry of External Affairs*, *Government of India*, available at: https://eoi.gov.in/eoisearch/MyPrint.php?7927%3F001%2F0002.

[296] Ibid.

in urban warfare with speed, persistence, and risk reduction for soldiers without undermining the legal and moral framework that governs the use of force. How India manages this balance in the future will not only impact its compliance with IHL but also influence the international legitimacy of AWS deployment in future conflicts.

4. Comparison with Other Global Approaches

India's approach to AWS both converges with and diverges from the approaches of other major actors such as the EU, the United States, and Russia. In many respects, India's stance is closer to that of the U.S. and Russia than to the more precautionary European position. As Washington, Moscow, and New Delhi have resisted calls for an outright ban on autonomous weapons and instead advocate continued development under agreed guidelines. India has advocated that imposing a new legal regime, too, could hinder beneficial innovation and that it is better to first understand the technology and agree on rule-based development. This parallels the U.S. Department of Defence (DoD) policy of pursuing military AI advantages while unilaterally ensuring that appropriate human judgment is involved,[297] an approach which the U.S. has formalized in 2023 as Declaration on Responsible AI use.[298] Russia, too, has openly opposed any binding instrument on AWS and insists the CCW remain the sole forum for discussion, a position broadly in harmony with India's insistence on the CCW process.[299] Thus, India, the U.S., and Russia prioritize strategic and technical freedom of action in AWS development, underpinned by the assurance that existing IHL norms and national accountability are sufficient constraints. It is also clear that those states which are strongly object to a killer-robot ban, [300] the U.S., Russia, Israel, and others, implicitly counted on India's understanding, showing an implied support. India's refusal to align with proposals spearheaded by European and smaller states for a ban on AWS development or temporal suspension came out as a de facto response toward the pro-status-quo camp alongside the great powers and high-tech developers.

---

[297] "US Department of State, Political Declaration on Responsible Military Use of Artificial Intelligence and Autonomy", *Bureau of Arms Control, Deterrence, and Stability*, 2023, available at: https://www.state.gov/bureau-of-arms-control-deterrence-and-stability/political-declaration-on-responsible-military-use-of-artificial-intelligence-and-autonomy.

[298] Pasha Sharikov, "International Regulations of Lethal Autonomous Weapons Systems: Transatlantic Security Dialogue", *World Economy and International Relations*, Vol. 68, No. 12, 2024, pp. 38–48, available at: https://doi.org/10.20542/0131-2227-2024-68-12-38-48.

[299] "Document of the Russian Federation pursuant to UN GA Resolution 78/241 of 22 December 2023 on Lethal Autonomous Weapons Systems", *United Nations Office for Disarmament Affairs*, available at: https://docs-library.unoda.org/General_Assembly_First_Committee_-Seventy-Ninth_session_(2024)/78-241-Russian-Federation-EN.pdf.

[300] Ariel Conn, "European Parliament Passes Resolution Supporting a Ban on Killer Robots", *Future of Life Institute*, 14 September 2018, available at: https://futureoflife.org/ai/european-parliament-passes-resolution-supporting-a-ban-on-killer-robots/.

In contrast, European Union members and allied states have generally espoused a more restrictive approach grounded in humanitarian precepts at the stage of development. The European Parliament, for instance, passed a resolution in 2018 urging an international ban on lethal AWS and demanding that any weapon have "meaningful human control" during critical functions.[301] Several European countries along with countries like Brazil and numerous NGOs have pressed for a legally-binding treaty to prohibit fully autonomous weapons, reflecting a predominantly cautionary ethos in Europe. India diverges from this view as it does not endorse a blanket prohibition and is wary of overly stringent regulation, which could handicap its own security needs. Whereas a country like Germany has declared it will not acquire systems that lack human control, India has made no such unilateral pledge, preferring to keep options open while promising responsible use.[302] The Indian stance could be characterized as "regulated autonomy" as opposed to the European preference for "pre-emptive constraint." However, India does mirror Europe in at least acknowledging ethical concerns. Indian officials frequently invoke humanitarian language and India's long-standing support for disarmament to assure that they take the moral questions seriously, even if they come to different policy conclusions than Europe. This contrasts with Russia's often technocentric approach that downplays ethics. In international forums, India has also partnered at times with other Non-Aligned Movement (NAM) states, which tend to emphasize the importance of human control and equity in tech governance. Like many NAM members,[303] India supports ensuring that developing countries are not left behind in AI warfare capabilities, and it voices concerns about arms races. Yet, when it comes to concrete policy, India stops short of the ban advocacy that many NAM and EU countries advance, positioning itself more in line with the great power consensus.

Compared to the United States, India's capabilities and frameworks are still nascent, which introduces some doctrinal ambiguity. The U.S. has already deployed semi-autonomous systems, e.g., loitering munitions, defence systems like the Aegis and Patriot with autonomous modes, and has detailed directives governing autonomous weapons use and development.[304] India, still in earlier stages of AWS development, does not have publicly known directives at that level of specificity. This could be seen as a policy gap in the absence of a clear public doctrine on AWS, unlike the U.S., which at least publishes its policy principles. However, practically, India

---

[301] European Union External Action, "Autonomous Weapons Must Remain under Human Control, Mogherini says at European Parliament", *The Diplomatic Service of the European Union*, 14 September 2018, available at: https://www.eeas.europa.eu/eeas/autonomous-weapons-must-remain-under-human-control-mogherini-says-european-parliament_en.

[302] Ibid.

[303] "Ministry of External Affairs, Role of India in the Non-Aligned Movement, Question No 1168", *Ministry of External Affairs, India*, 28 November 2019, available at: https://www.mea.gov.in/rajyasabha.htm?dtl/32119/QUESTION+NO1168+ROLE+OF+INDIA+IN+NONALIGNED+MOVEMENT.

[304] Centre for Strategic and International Studies, "Patriot", *Missile Defense Project*, 23 August 2023, available at: https://missilethreat.csis.org/system/patriot/.

may be following a trajectory similar to the U.S. by incrementally increasing autonomy while keeping a human check in the loop. One area where India explicitly echoes U.S. and NATO doctrine is the insistence that humans will make the final strike decisions for the foreseeable future. Indian defence scientists have spoken of a "human in charge" principle, akin to the Western concept of meaningful human control, especially for targeting in populated areas. Where India might diverge from the U.S. in transparency, as it has begun to be relatively transparent about its AI principles and even its arsenal to build global norms and domestic trust, whereas India's military AI projects are largely secret until a public demonstration is staged. This difference highlights the transparency challenge, as India's democratic accountability mechanisms in defense are not as robust as in some Western countries, potentially limiting public debate on AWS compared to the vigorous discussions in European parliaments or the U.S. Congress.

Finally, regional factors influence India's approach in ways that differentiate it from Euro-Atlantic powers. China's rapid advances in autonomous drones and AI-backed weapons undoubtedly spur India to accelerate its programs, an imperative that European countries, which are not facing the Chinese border, don't experience. India is facing two nuclear-armed neighbours, i.e., China and Pakistan; it cannot ignore the possibility that refusing to develop AWS might leave it at a disadvantage if those rivals deploy such systems. This calculus is similar to Russia's rationale and even the U.S.'s concern vis-à-vis China, reinforcing the realpolitik aspect of India's stance. For example, Pakistan has been a vocal proponent of banning AWS at the UN, [305] but India views such calls hesitantly, noting Pakistan's simultaneous development of armed drones and even autonomous capabilities. India thus approaches the global debate with a certain strategic skepticism; it will not agree to any regime that it perceives as potentially constraining its security vis-à-vis adversaries who may not honour the same. In this sense, India's stance mirrors that of Russia, which frequently points out U.S. tech advantages as a reason to avoid bans that would "freeze" disparities. Yet, unlike Russia, India also seeks to be seen as a responsible international actor and tends to engage seriously with normative discussions. It often serves as a bridge between outright ban proponents and the resistant great powers by suggesting middle paths or limits on specific uses. This diplomatic positioning harks back to India's non-aligned strategy—trying to reconcile security and disarmament goals.

Conclusion

[305] "Permanent Mission of Pakistan to the United Nations Geneva, Remarks by Ambassador Zaman Mehdi, Deputy Permanent Representative of Pakistan at the Meeting of Group of Governmental Experts (GGE) on Lethal Autonomous Weapons Systems (LAWS)", *United Nations Office for Disarmament Affairs*, 06 March 2023, available at: https://docs-library.unoda.org/Convention_on_Certain_Conventional_Weapons_-Group_of_Governmental_Experts_on_Lethal_Autonomous_Weapons_Systems_(2023)/Statement_of_Pakistan_at_GGE_(06_March_2023).pdf.

India's approach to AWS is intermediate: it is neither an advocate of immediate prohibition nor an aggressive champion of unconstrained AI warfare. It diverges from the EU's largely prohibitionary, ethics-driven line and aligns more with the U.S./Russia emphasis on continued development with caution. However, India also injects its perspective, emphasizing the need for fairness so that major powers do not monopolize AWS technology and for gradual norm-building. The coming years will show whether India edges closer to the restrictive camp or doubles down with the developers' camp, but for now, it clearly believes that a regulated, responsible path to autonomous weapons is possible, a path that harnesses advanced technology for national defense while ostensibly upholding the law of war and ethical accountability. The effectiveness of this approach, especially in the unforgiving context of urban warfare, will be watched closely by allies and adversaries alike as autonomous weapons continue to test the bounds of international law and human control.

Guarantees of Non-Repetition as Reparations: Exploring a Developing Modality in the Context of the Extraordinary Chambers in the Courts of Cambodia

Nathaneal Thomas[*]

ABSTRACT

This article examines Guarantees of Non-Repetition (GNR) as a form of reparation at the Extraordinary Chambers in the Courts of Cambodia (ECCC), the first international criminal tribunal to issue a reparations order and endorse GNR. The ECCC's GNR measures, while limited, nonetheless marked an important step in expanding reparations in ICL beyond the confines of the duty-right relationship between the accused and victims through cooperation with the State and other actors. Considering its contribution to victims' right to reparation, the ECCC's GNR measures should be acknowledged as a distinct form of reparation and an emerging modality in international law.

Keywords: Guarantees of Non-Repetition (GNR), Reparations, Extraordinary Chambers in the Courts of Cambodia (ECCC), Khmer Rouge Tribunal, Transitional Justice, Satisfaction, International Criminal Law, Victim-Centered Justice, Institutional Reform, Residual Mechanisms

1. Introduction

The Extraordinary Chambers in the Courts of Cambodia (ECCC) has often been recognized as the first international criminal tribunal to issue a reparations order in 2010, but it also established another important precedent in 2012 as the first international criminal tribunal to link reparations to guarantees of non-repetition (GNR) in a judicial judgment.[306] While this marked an important development in

---

[*] Nathan is an LL.M. candidate at The Geneva Academy. Prior to this, Nathan was a Rotary Peace Fellow in Tokyo, Japan, where he served as a teaching assistant in international law and conducted research on transitional justice and international humanitarian law. As part of this fellowship, he worked as a legal intern in the Supreme Court Chamber of the Extraordinary Chambers in the Courts of Cambodia.

Nathan's professional background is in the U.S. Army, where he worked for five years as an infantry officer after commissioning from the United States Military Academy at West Point. His experience strengthened his commitment to international humanitarian law and upholding the rights of those affected by armed conflict. .

[306] In Case 001, the Supreme Court Chamber of the ECCC noted that the publication of statements of apology as a reparation was justified by "the widespread recognition of similar measures as reparations," citing Inter-American Court of Human Rights jurisprudence where apologies were

the field, reparations categorized as or relating to GNR at the ECCC and in International Criminal Law (ICL) more broadly remain underexamined. Scholarship on GNR remains largely confined to its application in international human rights law ("IHRL") and the laws of state responsibility, while literature on the ECCC has primarily focused on the implementation of "collective and moral" reparations more broadly.[307] Yet the inclusion of GNR reveals several tensions that warrant further study. These include its forward-looking orientation, which contrasts with the traditionally retrospective function of reparations, its grounding in broader systemic reform rather than individual responsibility, which sits uneasily within the "duty-right" relationship that has traditionally characterized reparations between the accused and victims, and the actual benefit to survivors in the case of Cambodia.[308]

This article seeks to address these tensions by addressing the question: Do the ECCC's GNR-related measures constitute a unique form of reparation for victims in the Cambodian context? In exploring this question, it analyzes four dimensions, namely, (1) the reparative nature of GNR, which, as opposed to restitution and compensation, which are traditionally retrospective in nature, is inherently forward-looking and preventative, so a reparative nature is not readily apparent, (2) its conceptual overlap with satisfaction, raising questions about the distinction between the two modalities, particularly within the context of Cambodia, (3) its normative suitability within the individual responsibility-focused framework of ICL, and (4) the extent to which the GNR reparations of the ECCC have contributed to the prevention of future violations, and if insignificant, whether this has negated their reparative function.

To answer this question, this article examines satisfaction and guarantees of non-repetition as forms of reparation under international treaty law, international customary law, and as a developing norm. It then examines how GNR has been implemented in other courts and tribunals to ground the analysis in practice and enable comparison between other legal mechanisms. Finally, it turns to the measures adopted by the ECCC related to GNR itself. This final section evaluates the strengths of measures related to GNR, whether endorsed by the Chambers or implemented through non-judicial measures, by assessing the extent to which they have contributed to non-recurrence, and considering whether, if not, this has negated their reparative function.

---

considered "a measure of satisfaction for the victims and a guarantee of non-repetition of the grave human rights violations that were committed." ECCC, *Prosecutor v. Kaing Guek Eav alias Duch*, Case File/Dossier No. 001/18-07-2007/ECCC/SC, Appeal Judgement (Supreme Court Chamber), 3 February 2012, fn. 1385 and para.675, citing Inter-American Court of Human Rights, *Ituango Massacres v. Colombia*, Judgment, (Preliminary Objections, Merits, Reparations and Costs), para. 406.

[307] ECCC, *Internal Rules (Original),* 12 June 2007, rule 23.

[308] Furuya, for example, notes that the "duty-right" relationship between accused and victims at the ECCC "has become almost meaningless" due to the existence of "solidarity-based reparations that are independent of liability-based reparations." (Translation by the author) Shuichi Furuya, 'Kambojia Tokubetsu Hotei ni okeru Higaisha Baisho no Igi – Ikoki Seigi o Ninau Shudanteki Baisho no Kozoteki Henka,' 2022, 97 Waseda Hogaku 179.

1.1. Brief Introduction to the ECCC and Its Reparative Measures

The fall of Phnom Penh in 1975 to the Khmer Rouge just over fifty years ago led to the death of approximately 1.7 million Cambodians and innumerable crimes against both the majority and minority civilian population groups.[309] The extensive suffering of nearly every Cambodian left behind an enduring legacy of suffering and loss that was witnessed in interviews and workshops with survivors during this research. The scale and duration of this conflict suggest the possible resonance that GNR could have for victims who potentially lived through violence and war under eight different governmental regimes.[310]

The ECCC was established in 2006 as a hybrid tribunal established by the United Nations and the Cambodian government to "contribute to the principles of justice and national reconciliation, stability, peace and security."[311] Although neither Cambodian law nor the UN Agreement explicitly mentioned reparations or Civil Parties, the ECCC law provided that victims could appeal trial decisions, implying they had legal standing.[312] This inclusion of Civil Parties, who could make reparatory claims, was framed as a means of promoting national reconciliation.[313] Civil Parties were victims, who, upon successful application, had *inter alia* the right to claim for "moral and collective reparations."[314]

The court faced substantial challenges in its first case, where the convicted person was found to be indigent, and the court held that any reparation awarded under the then-current internal rules was "unlikely to yield significant tangible results

---

[309] Ewa Tabeau, Khmer Rouge Victims in Cambodia, April 1975–January 1979: A Critical Assessment of Major Estimates: Expert Report for the ECCC, ECCC, Phnom Penh, 2009, p. 70.

[310] In the lifetime of King Sihanouk, for example, Cambodia experienced conflict under French Colonial Rule, Japanese occupation, the first modern independent Kingdom of Cambodia, the Khmer Republic under Lon Nol, the Khmer Rouge Regime, People's Republic of Kampuchea under Vietnam Occupation, the United Nations Transitional Authority in Cambodia, and the current Kingdom of Cambodia. For a historical overview of Cambodia, see: David Chandler, A History of Cambodia, 4th ed., Routledge, London 2008.

[311] *Agreement between the United Nations and the Royal Government of Cambodia Concerning the Prosecution under Cambodian Law of Crimes Committed During the Period of Democratic Kampuchea*, 2329 U.N.T.S. 117, 6 June 2003, (entered into force 29 April 2005), Preamble; *Internal Rules (original)*, above note 2, Preamble.

[312] ECCC, Law on the Establishment of the Extraordinary Chambers in the Courts of Cambodia, 27 October 2004, article 26.

[313] ECCC, *Prosecutor v. Nuon Chea*, Case File/Dossier No. 002/19-09-2007/ ECCC/TC, Decision on Civil Party Participation in Provisional Detention Appeals (Pre-Trial Chamber), 20 March 2008, para. 37; ECCC, *Prosecutor v. Nuon Chea*, Case File/Dossier No. 002/19-09-2007/ ECCC/TC, Decision on appeals against orders of the Co-Investigating Judges on the admissibility of Civil Party applications (Pre-Trial Chamber), 24 June 2011, paras 64-65.

[314] Internal Rules (Original), above note 2, Rule 23(1). ECCC, *Duch*, Case 001 Appeal Judgment, above note 1, para. 488.

for Civil Parties."[315] In response, the rules were amended to allow specific reparation measures to be recognized based on external resource mobilization, coordinated between the Victims Support Section and the Civil Party Lead Co-Lawyers by working with governmental and non-governmental organizations.[316] A second avenue for reparations was created independent of the chambers with the mandate of the VSS gaining the capability to develop and implement non-judicial programs and measures aimed at addressing the broader interests of victims.[317]

While pragmatic, these additional measures meant that as the remaining convicted individuals were found indigent, all subsequent reparations were not ordered against the accused, but rather recognized as a specific project that appropriately gives effect to the award sought by the Lead Co-Lawyers.[318] For Killean and Moffet, this new structure of externally funded and coordinated projects that are not ordered against the accused as 'reparations' stretches the principle of responsibility beyond dominant conceptualizations of reparations in the context of international trials."[319] Nonetheless, other scholars have advocated for broader approaches to reparations that move beyond the dominant conceptualizations of reparations. Noting the limitations of reparations offered by regional and national courts, Roht-Arriaza, for example, argues that "individual reparations fail to capture the collective element of the harm in situations of mass conflict or repression."[320] Relatedly, Mégret has argued that the divergence from traditional legal frameworks is justified since international crimes often differ ontologically from ordinary crimes, unlike domestic offenses, which focus on individual acts, international crimes often involve or even require a collective nature, and individual-focused approaches to responsibility and reparation are inherently insufficient.[321] The judicial reparations and broader reparative measures of the ECCC provide a case study for examining the implications of these tensions in practice.

Ultimately, 3,959 individuals were accepted as civil parties in Cases 001, 002/01, and 002/02, granting them the right to submit claims for reparations before the ECCC, resulting in the endorsement of 26 collective and moral reparations projects. Of the reparations endorsed, seven were explicitly submitted under the

---

[315] *Prosecutor v. Kaing Guek Eav alias Duch*, Case File/Dossier No. 001/18-07-2007/ECCC/TC, Case 001 Final Defense Written Submissions, 11 November 2009, para. 50.

[316] ECCC, *Internal Rules (Revision 6)*, rules 12 *bis* (2), 23(3), 23 *quinquies* (1), (2), (3).

[317] ECCC, Internal Rules (Current), rule 12 bis (4).

[318] Ibid., rule 23 quinquies (3)(b)

[319] Rachel Killean and Luke Moffett, "What's in a Name? 'Reparations' at the Extraordinary Chambers in the Courts of Cambodia", *Melbourne Journal of International Law*, Vol. 21, No. 1, 2020, p. 10.

[320] Naomi Roht-Arriaza, "Reparations Decisions and Dilemmas", *Hastings International and Comparative Law Review*, Vol. 27, No. 2, 2004, p. 169.

[321] Frédéric Mégret, "The Case for Collective Reparations before the International Criminal Court", in Jo-Anne M. Wemmers (ed.), *Reparations for Victims of Crimes against Humanity: The Healing Role of Reparation*, Routledge, New York, 2014.

category of GNR, all of which were affirmed.[322] Some of these reparations projects, such as the Legal Documentation Center, in addition to other non-judicial measures that ostensibly contribute to GNR, through education and raising awareness, continue alongside the Residual Functions of the Court, which have been extended to the end of 2027.[323]

2. International Legal Foundations for the Obligation of Reparations and the Modalities of Satisfaction and GNR

2.1. Obligations under Treaty Law

The Hague Convention IV of 1907 marked an early codification of reparations into treaty law.[324] Building on earlier precedents established in state arbitration cases, such as the Alabama Claims of 1872, the convention established that violations entailed an obligation to provide compensation.[325] Building on Hague Convention IV, the 1949 Geneva Conventions acknowledge "liability" for violations of IHL, which the Commentaries of 1952 and 2016 state include "war reparations" or "full restitution" respectively.[326] IHRL instruments were among the first international

---

[322] ECCC, *Prosecutor v. Nuon Chea and Khieu Samphan*, Case File/Dossier No. 002/19-09-2007/ECCC/TC, Case 002/02 Judgment, (Trial Chamber), 16 November 2018, paras 4454, 4457.

[323] Report of the Secretary-General on the Extraordinary Chambers in the Courts of Cambodia – Residual Functions, UN Doc A/79/827, 14 March 2025, para. 40; ECCC, Guide to the Extraordinary Chambers in the Courts of Cambodia: Volume 1, Establishment, Operations and Cases, ECCC, Phnom Penh, 2023, pp. 247, available at: https://www.eccc.gov.kh/sites/default/files/Guide_to_the_ECCC_Manuscript_EN.pdf; ECCC, Understanding the ECCC, Phnom Penh, 2023, p. 11, available at: https://www.eccc.gov.kh/sites/default/files/publications/Understanding%20the%20ECCC_EN.pdf.

[324] Convention Respecting the Laws and Customs of War on Land and its Annex: Regulations Concerning the Laws and Customs of War on Land, 187 CTS 227, 18 October 1907 (entered into force 26 January 1910), Art. 3.

[325] *Ibid.,* Alabama Claims Arbitration (United States v Great Britain) (1872) 29 RIAA 125.

[326] Geneva Convention (I) for the Amelioration of the Condition of the Wounded and Sick in Armed Forces in the Field of 12 August 1949, 75 UNTS 31, (entered into force 21 October 1950) Art. 51; Geneva Convention (II) for the Amelioration of the Condition of Wounded, Sick and Shipwrecked Members of Armed Forces at Sea of 12 August 1949 75 UNTS 85 (entered into force 21 October 1950), Art. 52; Geneva Convention (III) Relative to the Treatment of Prisoners of War of 12 August 1949 75 UNTS 135 (entered into force 21 October 1950), Art. 131; Geneva Convention (IV) Relative to the Protection of Civilian Persons in Time of War of 12 August 1949 75 UNTS 287 (entered into force 21 October 1950), Art. 148. Jean S Pictet (ed), *Commentary on the Geneva Conventions of 12 August 1949: Convention (I) for the Amelioration of the Condition of the Wounded and Sick in Armed Forces in the Field*, International Committee of the Red Cross, Geneva, 1952, p. 373; Knut Dörmann and others

treaties to explicitly include the right to reparation or remedy. The International Covenant on Civil and Political Rights recognizes the right to an effective remedy, a right which is shared with other core IHRL treaties such as the International Convention on the Elimination of All Forms of Racial Discrimination (which also mentions satisfaction, though not under a form of reparation), the International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families, and the International Convention for the Protection of All Persons from Enforced Disappearance (ICPED).[327] However, except for ICPED, remedies or reparations are described in broad terms with few specific modalities. Only ICPED, which was adopted in 2010 and has 93 signatories as of 2025, describes in detail what forms reparations can take, including satisfaction and guarantees of non-repetition, echoing resolutions by the UN General Assembly and the jurisprudence of national and regional courts.[328] In providing a short but valuable addition, satisfaction is said to include the "restoration of dignity and reputation."[329]

Reparations in ICL statutes are more notable for their absence than their presence. Neither the statutes nor subsequent internal rules of the International Military Tribunal, the International Military Tribunal for the Far East, the International Criminal Tribunal for the Former Yugoslavia, and the International Criminal Tribunal for Rwanda would permit the issuance of reparations orders.[330] The 1998 Rome Statute of the International Criminal Court (ICC) would be pioneering in this regard in allowing for the ordering of reparations in accordance with principles established by the court, including restitution, compensation, and rehabilitation."[331] While not mentioning either satisfaction or GNR, the non-exhaustive list permits reparations under other principles, a prerogative which the

---

(eds), *Commentary on the First Geneva Convention: Convention (I) for the Amelioration of the Condition of the Wounded and Sick in Armed Forces in the Field*, 2016, para. 3022.

See also Second Protocol to the Hague Convention for the Protection of Cultural Property in the Event of Armed Conflict, 26 March 1999, 2253 UNTS 172, entered into force 9 March 2004, Art. 38.

[327] International Covenant on Civil and Political Rights, 16 December 1966, 999 UNTS 171, (entered into force 23 March 1976), Art. 2; *International Convention on the Elimination of All Forms of Racial Discrimination*, 21 December 1965, 660 UNTS 195, (entered into force 4 January 1969), Art. 6; *International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families*, 18 December 1990, 2220 UNTS 3, (entered into force 1 July 2003), Art. 83; *International Convention for the Protection of All Persons from Enforced Disappearance*, 20 December 2006, 2716 UNTS 3, (entered into force 23 December 2010), Art. 24 (Hereinafter "ICPED").

[328] ICPED, above note 22, Art. 24 (4–5)

[329] *Ibid.,* Art. 5(c).

[330] Charter of the International Military Tribunal 82 UNTS 279, 8 August 1945; Charter of the International Military Tribunal for the Far East, 19 January 1946; Statute of the International Criminal Tribunal for the Former Yugoslavia UNSC Res 827, 25 May 1993; Statute of the International Criminal Tribunal for Rwanda, 8 November 1994, UNSC Res 955.

[331] Rome Statute of the International Criminal Court, UN Doc. A/CONF.183/9, 17 July 1998, (entered into force 1 July 2002), Art. 75.

court implemented for the first time concerning GNR in 2017, following and perhaps influenced by the jurisprudence of the ECCC in Cases 001 and 002/01.[332]

2.2. Obligations under Customary International Law

Twenty-one years after the Hague Convention IV of 1907, the PCIJ would hold that "it is a principle of international law, and even a general conception of the law, that any breach of an engagement involves an obligation to make reparation."[333] While nonbinding, in 1948, international community affirmed that a similar principle applied to individuals through the Universal Declaration of Human Rights, where it is written that "[e]veryone has the right to an effective remedy by the competent national tribunals for acts violating the fundamental rights granted him by the constitution or by law."[334] The codification of the state responsibility with regard to reparations is documented in the draft Articles on Responsibility of States for Internationally Wrongful Acts (Draft Articles), which, while not a treaty, has been in part recognized by the International Court of Justice as reflecting customary international law (CIL).[335] In the 2007 *Case Concerning Application of the Convention on the Prevention and Punishment of the Crime of Genocide*, the ICJ affirmed that certain Draft Article provisions, such as Articles 4, 8, and 16, reflect the "state of customary international law."[336] Furthermore, it has been recognized by many scholars as "the authoritative statement of the law on state responsibility."[337] While generally applying only to bilateral actions of states, the ICJ has noted that the outlawing of certain acts, namely "acts of aggression, and of genocide" and the upholding of "the principles and rules concerning the basic rights of the human person, including protection from slavery and racial discrimination" are *erga omnes* obligations.[338] On

[332] International Criminal Court, *Prosecutor v. Ahmad Al Faqi Al Mahdi,* No. ICC-01/12-01/15 Reparations Order (Trial Chamber VIII), (17 August 2017), para. 67.

[333] Permanent Court of International Justice, *Factory at Chorzów (Germany v. Poland)* (Merits) PCIJ Rep Series A No 17, 1928, p. 29.

[334] Universal Declaration of Human Rights, 1948 UNGA Res 217 A(III), 10 December, Art. 8. See also the UN Declaration of Basic Principles of Justice for Victims of Crime and Abuse of Power, UNGA Res. 40/34, 29 November 1985.

[335] International Law Commission, Draft Articles on Responsibility of States for Internationally Wrongful Acts, with Commentaries' in 'Report of the International Law Commission on the Work of Its Fifty-Third Session' (23 April–10 August 2001), UN Doc A/56/10, 2001.

[336] International Court of Justice, Case Concerning Application of the Convention on the Prevention and Punishment of the Crime of Genocide (Bosnia and Herzegovina v. Serbia and Montenegro), Judgement, ICJ Reports 2007, paras 398, 401, 420.

[337] Sotirios-Ioannis Lekkas, "Uses of the Work of International Law Commission on State Responsibility in International Investment Arbitration" in Panos Merkouris, Andreas Kulick, José Manuel Álvarez-Zarate and Maciej Żenkiewicz (eds), *Custom and its Interpretation in International Investment Law*, Cambridge University Press, Online 2024, p. 93.

[338] International Court of Justice, Barcelona Traction, Light and Power Company, Limited (Belgium v Spain) Judgement, ICJ Reports 1970, para. 33.

this basis, the commentary on the Draft Articles asserts that "international responsibility" is not limited to bilateral relations due to a legal interest in the protection of "certain basic rights and the fulfilment of certain obligations."[339]

In affirming that these certain obligations included the provision of reparations, in the 2024 Advisory Opinion on the *Legal Consequences Arising from the Policies and Practices of Israel in the Occupied Palestinian Territory*, the ICJ noted that the failure to protect rights guaranteed under IHL and IHRL constituted an internationally wrongful act which entailed an obligation to provide full reparation "to all natural or legal persons concerned."[340] The court further noted that reparation includes "restitution, compensation and/or satisfaction."[341] Yet, in outlining the precise obligations to natural persons for the violation under international law, the court only focused on the obligation for material damages. Restitution is the first obligation, and in "the event that such restitution should prove to be materially impossible," an "obligation to compensate, in accordance with the applicable rules of international law, all-natural or legal persons, and populations" exists.[342]

Despite its absence as a remedy in this Advisory Opinion, GNR does have a foundation within state responsibility. While the forms of reparations described in the Draft Articles are restitution, compensation, and satisfaction, the Draft Articles emphasize GNR as a general principle of international responsibility.[343] Affirming GNR as a remedy, in the ICJ Judgement of the 2001 *LaGrand Case (Germany v. USA)*, the court considered that an apology alone offered by the United States was insufficient, but that the actions undertaken by the United States "must be regarded as meeting Germany's request for a general assurance of non-repetition."[344] For Sullivan, this represented an inclusion of GNR and general assurances of non-repetition, which was an unwarranted expansion of remedial authority by the ICJ. He argued that this represents "a dramatic shift to a forward-looking remedial structure," which "lacks legal justification."[345]

Thus, while CIL includes the obligation to make reparation, the legal foundation of GNR remains considerably less established than the principles of

---

[339] Above note 30.

[340] International Court of Justice, Legal Consequences Arising from the Policies and Practices of Israel in the Occupied Palestinian Territory, including East Jerusalem, Advisory Opinion, 19 July 2024, para.149. See also: International Court of Justice, Legal Consequences of the Construction of a Wall, Advisory Opinion, 9 July 2004. See for comparison International Court of Justice, Jurisdictional Immunities of the State (Germany v Italy: Greece intervening), Judgement, ICJ Report 2012, para.140.

[341] Policies and Practices of Israel, above note 35, para. 149.

[342] *Ibid.,* para. 271.

[343] Draft Articles, above note 30, Arts 30, 35.

[344] International Court of Justice, LaGrand Case (Germany v. United States of America), Judgement, ICJ Reports 2001, para. 124.

[345] Scott M. Sullivan, "Changing the Premise of International Legal Remedies: The Unfounded Adoption of Assurances and Guarantees of Non-Repetition", *UCLA Journal of International Law and Foreign Affairs*, Vol. 7, No. 2, 2002, p. 298.

restitution, compensation, and satisfaction despite their inclusion in the Draft Articles and implicit acknowledgment in *LaGrand.* Nonetheless, the idea of GNR as a meaningful remedy has gained traction as an emerging norm despite continued debate over its inclusion as a reparation.

2.3. Satisfaction and GNR as Emerging Norms in Lex Ferenda

Reparations can be seen as taking a narrow and broad approach according to De Greiff.[346] Van Boven advocated for a broad interpretation of reparations, which included measures of satisfaction and GNR such as truth seeking, structural measures, and judicial sanctions during his tenure as the UN Special Rapporteur tasked to investigate victims' right to restitution, compensation, and rehabilitation.[347] While acknowledging Van Boven's broader understanding of reparation, De Greiff has argued for a narrower definition that takes into account only the direct material and symbolic benefits for the victims of specific crimes to ensure that reparations are both achievable and targeted. His narrower interpretation excludes as reparations measures of GNR, such as criminal justice or institutional reform.[348]

In the case of international crimes, where the chapeau elements almost necessitate the existence of collective harm, this broader approach has become increasingly accepted by the international community as demonstrated by the United Nations General Assembly adoption of the 2005 *Basic Principles and Guidelines on the Right to a Remedy and Reparation for Victims of Gross Violations of International Human Rights Law and Serious Violations of International Humanitarian Law* (Basic Principles). These principles, based on Van Boven's work, affirm the following five forms of reparations: rehabilitation, restitution, compensation, satisfaction, and GNR as modalities to address redressing serious violations of international law.[349] This marked the first time that GNR was affirmed by the General Assembly as a form of reparation.

This section will primarily draw on the Basic Principles and their preparatory reports, together with the Draft Articles and their commentary, to develop a deeper understanding of the principles of satisfaction and GNR and to assess their reparative value. It finally turns towards the issue of State Responsibility, and the extent to which these broad reparatory measures, which are often disconnected from individual responsibility, fit within the context of ICL.

2.3.1. Satisfaction

---

[346] Pablo De Greiff, "Justice and Reparations", in Pablo De Greiff (ed.), *The Handbook of Reparations*, Oxford University Press, Oxford, 2006, p. 452.

[347] Theo Van Boven, "Victims' Rights to a Remedy and Reparation: The United Nations Principles and Guidelines", in Carla Ferstman and Mariana Goetz (eds), *Reparations for Victims of Genocide, War Crimes and Crimes Against Humanity: Systems in Place and Systems in the Making*, 2nd ed., Brill | Nijhoff, Leiden, 2020, p. 36.

[348] P. De Greiff, above note 41, 453.

[349] UNGA Res 60/147 (16 December 2005) UN Doc A/RES/60/147 (Basic Principles), Principle 18.

Satisfaction is identified as the tertiary and final obligation under the Draft Articles, following restitution and compensation.[350] It is presented as an obligation only "insofar as [full reparation] cannot be made good by restitution or compensation."[351] This phrasing, as clarified by the commentary on the Draft Articles, underscores the exceptional character of satisfaction and its status as a non-standard form of reparation used only when the other forms of reparation are inadequate or inapplicable.[352] While no such implied hierarchy exists in the Basic Principles, satisfaction is listed fourth, after restitution, compensation, and rehabilitation (a modality not described in the Draft Articles), but before GNR.[353]

Neither the Draft Articles nor the Basic Principles provides a precise definition of satisfaction, with both texts instead providing a non-exhaustive list of examples of measures that may constitute satisfaction. The Commentary on the Draft Articles states that satisfaction is meant to address injuries that are not "financially assessable, which amount to an affront," further emphasizing that such redress is required "irrespective of its material consequences."[354] This non-material element is a reflection that the obligation to provide reparations extends to "any damage, whether material or *moral*, caused by the intentionally wrongful act."[355] In cases of moral damage, where harm may not be fully quantified or addressed through restitution or compensation, satisfaction is the only possible form of address provided by the Draft Articles. The non-exhaustive list of measures constituting satisfaction provided by the Draft Articles includes acknowledgement of the breach, an expression of regret, and a formal apology.[356] Additionally, the Commentary explicitly includes assurances or guarantees of non-repetition as potential forms of satisfaction. This suggests the overlap between satisfaction and GNR, which will be addressed further in this article as to whether GNR should be regarded as a form of satisfaction, a general obligation, a unique modality of reparation, or some combination of these classifications.

The five principles are not allocated to address specific differences between moral and material harms in the way described in the Commentary on the Draft Articles. Notably, the Basic Principles recognize that compensation can be provided for moral damage, suggesting both a degree of overlap and a more flexible approach to providing reparations to the victims of International Crimes. The Basic Principles, rather than defining Satisfaction, provide a non-exhaustive list of eight measures which should be included "where applicable", including public apologies, judicial

[350] Draft Articles, above note 30, Art. 30, 35–37.
[351] *Ibid.,* Art. 37(1).
[352] *Ibid.,* p. 105.
[353] Basic Principles, above note 44, Principle 18.
[354] Draft Articles, above note 30, p. 106.
[355] Italics added for emphasis, Draft Articles, above note 30, Art. 31.
[356] *Ibid.,* Art.37(2).

sanctions against persons found liable, and commemorations.[357] While the measures could be understood as primarily symbolic in nature, such as public apologies, official declarations, and commemorations, they nonetheless can restore the dignity of victims.[358] The list also includes more concrete measures such as judicial sanctions against violators, disclosures of truth, education in IHRL and IHL, and the search for disappeared persons.[359] While the cessation of continuing violations is included as a form of satisfaction, GNR is not because it is its own form of reparation according to the General Principle.[360] The forms of satisfaction listed in the Basic Principles clearly have substantial overlap with GNR in contributing to prevention.

In turning back to recent treaty law, arguably the most recent and comprehensive definition reflecting the international community's understanding of satisfaction is noted in ICPED as those measures aimed at the "restoration of dignity and reputation."[361]

2.3.2. Guarantees of Non-repetition

The Basic Principles identify GNR as those measures that "contribute to the prevention," highlighting eight specific actions, namely ensuring (1) civilian control of security forces and (2) abidance to due process, fairness, and impartiality, (3) strengthening judicial independence, (4) protecting *inter alia* human rights defenders, (5) providing IHRL and IHL training to all sectors of society, (6) promoting codes of conduct and ethical norms to public servants and (7) mechanisms for preventing conflicts and their resolution, and finally (8) reviewing and reforming laws contributing or allowing gross IHRL or IHL violations.[362] As noted earlier, the Draft Articles establish GNR not as a modality of reparations but as a general principle of international responsibility; however, the commentary on the Draft Articles notes that satisfaction can include GNR as a form of reparation.[363] However, an analysis of the work of the International Law Commission (ILC) reflects this not so much a divergence from the Basic Principles, but as a matter of emphasis.

In 1993, Van Boven proposed GNR as an independent modality of reparation in a report that would serve as the foundation for the 2005 Basic Principles.[364] In noting the ILC's work, Van Boven's approach mirrored the format

[357] Basic Principles, above note 44, Principle 22.

[358] *Ibid.,* Principle 22 (d), (e), (g).

[359] *Ibid.,* Principle 22 (b), (c), (f).

[360] *Ibid.*, Principle 22 (a), 23. Cessation is considered a General Obligation under the Draft Articles.

[361] ICPED, above note 22, Art. 5.

[362] Basic Principles, above note 44, Art. 23.

[363] Draft Articles, above note 30, Art. 30.

[364] Theo van Boven, "The United Nations Basic Principles and Guidelines on the Right to a Remedy and Reparation for Victims of Gross Violations of International Human Rights Law and Serious Violations of International Humanitarian Law", *United Nations Audiovisual Library of International Law*, 2012, p. 1, available at: https://legal.un.org/avl/pdf/ha/ga_60-147/ga_60-147_e.pdf.

of this early form of the Draft Articles with regard to satisfaction and GNR.[365] In 1989, Arangio-Ruiz, the then Special Commissioner on State Responsibility, had written that while most authors considered GNR to be a form of satisfaction, specific attributes distinguished GNR from other forms of satisfaction. These distinctions included GNR's applicability to wrongful acts with a high likelihood of recurrence and its function as "something additional to and different from mere reparation," particularly where re-establishing the pre-existing situation was deemed insufficient.[366] Consequently, early drafts of the *Draft Articles* included GNR and satisfaction as forms of reparations.[367] In these early drafts of both the UN Basic Principles and Draft Articles, GNR is listed following satisfaction in the same point rather than on its own, as the other principles, highlighting the GNR's continued relationship to satisfaction. This convergence was not by chance, with Van Boven noting in his 1993 report that the Draft Articles, which included GNR, were of particular relevance to his study.[368]

In 2000, under the new Special Rapporteur Crawford, the ILC considered that despite GNR being concerned with the "restoration of confidence", it was more appropriately classified as a general obligation under the framework of state responsibility rather than as a form of reparation.[369] Crawford later explained that while there had been debate over whether GNR was more akin to cessation or reparation, the ILC ultimately concluded that GNR's significance warranted its recognition as a general obligation of state responsibility, with equal status to reparation. [370] Accordingly, the ILC's exclusion of measures of GNR from reparations can be viewed not so much as a divergence from the Basic Principles which are concerned only with obligations towards victims, but as emphasizing its role as not only a potential measure related to reparation, but also its role in addressing broader obligations under international law. In fact, it can be seen that the origin of the inclusion of GNR in the Basic Principles is related to the early work of the ILC from which Van Boven took inspiration.

Both the Basic Principles and the commentary on Draft Articles highlight GNR as a reparatory measure in international law. While its exact classification remains unclear as a general obligation, a form of satisfaction, or a unique form of reparation, it is clearly recognized as a potential obligation in the case of the violation of international law. Furthermore, this article argues that while the reparatory benefit

---

[365] Theo van Boven, Study concerning the right to restitution, compensation and rehabilitation for victims of gross violations of human rights and fundamental freedoms, U.N. Doc. E/CN.4/ Sub.2/1993/8, 2 July 1993, para. 137 (11).

[366] Gaetano Arangio-Ruiz, *Second Report on State Responsibility*, A/CN.4/425 and Add.1 & Corr.1, 1989, para. 149

[367] *Ibid*., para. 191.

[368] Van Boven, above note 59, para. 47.

[369] James Crawford, *Third Report on State Responsibility*, A/CN.4/507 and Add.1–4, 2000, paras 57, 121.

[370] James Crawford, "Articles on Responsibility of States for Internationally Wrongful Acts", *United Nations Audiovisual Library of International Law*, 2012, p. 5, available at: https://legal.un.org/avl/pdf/ha/rsiwa/rsiwa_e.pdf.

of GNR focuses on a restoration of confidence in the rule of law, as opposed to satisfaction as defined as restoration of dignity and reputation, may have significant overlap in actual practice, where implementation will often contribute to both, they do represent distinct modalities of reparations for victims in international law. This demonstrates that, opposed to Sullivan's positioning of GNR as a forward-looking measure, there is also a restorative benefit.

2.3.3. Individual Responsibility and Collective Redress

Despite the growing acceptance of Van Boven's broader reparatory measures as remedies for IHL and IHRL violations, they nonetheless sit uneasily within the ICL paradigm, which is focused on individual criminal responsibility. As increasingly recognized in CIL and adopted by the General Assembly in the Basic Principles, a "state shall provide reparation to victims for acts or omissions which can be attributed to the State and constitute gross violations of international human rights law or serious violations of international humanitarian law."[371]

Despite this obligation, the question of state responsibility was avoided in the negotiations of the statutes for the first two international criminal tribunals with a reparative mandate, the ICC and ECCC. Scholars have noted that during the negotiations of both statutes, states deliberately focused on individual responsibility while sidestepping the politically sensitive issue of whether states themselves should bear direct reparations obligations.

In the negotiations for the Rome Statute, while the French delegation supported a form of subsidiary responsibility for states, the issue was ultimately dropped.[372] Muttukumaru, a senior member of the United Kingdom's delegation in Rome, argued that "a significant number of delegations would have opposed Article 75 in its entirety, had it included provisions on state responsibility."[373] Muttukumaru nonetheless stressed that the justification for this refusal was primarily grounded in the fact that the court was intended to deal with individual responsibility rather than to "diminish any responsibilities assumed by states."[374]

A similar logic shaped the creation of the ECCC. Although the 1998 UN Group of Experts recommended that any tribunal provide for the possibility of reparations, including through a trust fund, this recommendation was largely ignored in the final design.[375] Scheffer, who led the negotiations for the United Nations, would note that:

---

[371] Basic Principles, above note 44, Principle 15.

[372] Christopher Muttukumaru, "Reparations to Victims", in Roy S. K. Lee (ed.), *The International Criminal Court: The Making of the Rome Statute, Issues, Negotiations, Results*, Kluwer Law International, 1999, p. 265.

[373] *Ibid.,* 268.

[374] *Ibid.,* 267.

[375] Group of Experts, Report of the Group of Experts for Cambodia Established Pursuant to General Assembly Resolution 52/135, 18 February 1999, para. 212.

> [t]he ECCC was never conceived by those who negotiated its creation as an instrument of direct relief for the victims [. . .] The victims' numbers are simply too colossal and the mandate and resources of the ECCC far too limited to address the individual needs, including the award of reparations, for so many victims.[376]

Nonetheless, both the Chambers of the ICC and ECCC would ultimately endorse collective reparations as a way of addressing the harm to survivors. These collective reparations, according to Rosenfeld, are justified to "undo the collective harm that has been caused as a consequence of a violation of international law."[377] In allowing tribunals to address the collective nature of the crimes, the reparations break from the strict duty-right relationship between the accused and victims and may include broader responsibilities. In advocating for this broader conception of reparations, Moffett, for example, has argued that reparations "are intended to be victim-centred in responding to their harm, rather than being dependent on the identification, prosecution or conviction of an accused."[378] In highlighting the need for broader measures that address community harm, Sarkin explicitly calls for measures of GNR to be utilized in the ICL.[379] Collective reparations have allowed international criminal tribunals to address this by providing broader forms of reparations.

This tension is particularly visible in the ECCC. With the internal rules modified to permit either the order of reparations against the accused or the endorsement of reparations disconnected from the accused, the court moved beyond the duty-right concept. In navigating this delicate balance, the Supreme Court Chamber (SCC) noted that the reparations of the ECCC "ought to be considered as a contribution to the process of national reconciliation, possibly a starting point for the reparation scheme, and not the ultimate remedy for nation-wide consequences of the tragedies during the DK."[380] In this context, the court's endorsement of collective and moral reparations, including GNR, can be understood as a partial recognition of the actions of the government of Democratic Kampuchea.

While punitive measures in ICL are confined to individual responsibility, a constraint shaped by political compromises during the drafting of tribunal statutes,

---

[376] David Scheffer, "Abridged Book Chapter Entitled The Extraordinary Chambers in the Courts of Cambodia", in M. Cherif Bassiouni (ed.), *International Criminal Law*, 3rd ed., M. Nijhoff Publishers, 2008, pp. 17–18.

[377] Friedrich Rosenfeld, "Collective Reparation for Victims of Armed Conflict", *International Review of the Red Cross*, Vol. 92, No. 879, 2010, p. 733.

[378] Luke Moffett, "Reparations for Victims at the International Criminal Court: A New Way Forward?", *The International Journal of Human Rights*, Vol. 21, No. 9, 2017, p. 1207.

[379] Jeremy Julian Sarkin, "Why the International Criminal Court Should Apply Restorative Justice and Transitional Justice Principles to Improve the Impact of Its Criminal Trials on Societies around the World", *International Journal of Transitional Justice*, 2025, p. 16.

[380] DK stands for Democratic Kampuchea, the official name of the Khmer Rouge Regime. ECCC, *Duch,* Case 001 Appeal Judgment, above note 1, para. 655.

this should not limit the scope of reparative measures. Where states have permitted broader interpretive spaces, tribunals have justifiably expanded their engagement with collective forms of reparation, which often extend beyond the narrow remit of the duty-right obligations that are beyond the capabilities of the perpetrator to fulfill. The greater inconsistency lies not in the limited acceptance of collective reparations like the broad measures outlined by satisfaction and GNR, but in the persistent refusal of states to acknowledge broader responsibility in the fulfillment of survivors' right to reparation for crimes.

2.4. Jurisprudence of Other Judicial Mechanisms

This section provides a brief analysis of the jurisprudence of GNR in other mechanisms to explore actual jurisprudence beyond the aspirational norms endorsed in documents such as the Basic Principles and positions its measures within the broader jurisprudence. While the ECCC was the first international criminal court to issue a reparations order, other regional and transitional justice mechanisms had already utilized GNR as a modality of reparations. This section will look at the IACtHR, transitional justice bodies in Sierra Leone, and the ICC, which, in the wake of the ECCC decisions, have increasingly looked to broader principles such as GNR as a form of reparation.

2.4.1. Guarantees of Non-Repetition Inter-American Court of Human Rights

The IACtHR has the most extensive jurisprudence on GNR as a form of reparation of any regional or international court. 63 percent of cases at the IACtHR from 1998 until 2015 contained measures related to GNR to prevent the repetition of violations of human rights as a form of reparations.[381] The 1998 *Loayaza-Tamayo v. Peru* judgment marked the first ordering of a GNR-related measure where the state of Peru was ordered to "adopt all necessary domestic legal measures" to comply with the American Convention of Human Rights and prevent human rights abuses.[382] The IACtHR jurisprudence regarding GNR has increasingly grown to develop around four generic mandates: 1. repeal, 2. create, or 3. modify laws, practices, policies, or institutions of the state, or 4. educate public officials or the public to prevent recurrence. For example, in the 2023 *La Oroya Community v. Peru Judgement*, the IACtHR applied these mandates by recommending that Peru adopt mechanisms and apply existing mechanisms in domestic law to incorporate the affected community in decision-making (modification of laws) and provide training for judicial and

[381] Maria Carmelina Londoño Lázaro and Monica Hurtado, "Guarantees of Non-Repetition in Inter-American Judicial Practice and Their Potential Impact on the Creation of National Law", *Mexican Bulletin of Comparative Law*, Vol. 50, No. 149, 2017, p. 726, available at: https://www.scielo.org.mx/pdf/bmdc/v50n149/2448-4873-bmdc-50-149-725.pdf.

[382] Inter-American Court of Human Rights, *Case of Loayza-Tamayo v. Peru*, Judgement, (Reparations and Costs), 27 November 1998, para. 168, operative para. 6.

administrative authorities on environmental matters.[383] The IACtHR jurisprudence reflects that the court views the effects of the GNR as reparations that go beyond simply repairing past harm and providing satisfaction to victims, but also creating systematic changes to ensure long-term protection of human rights. The focus of these reparatory measures is primarily aimed at the state, rather than individual perpetrators, a difference that was noted by the SCC of the ECCC even as they utilized it as a basis for reparations related to satisfaction and GNR.[384]

2.4.2. Guarantees of Non-Repetition in Transitional Justice Mechanisms in Sierra Leone

Sierra Leone provides a uniquely rich case study for examining the breadth of measures that theoretically can be taken related to GNR in the aftermath of international crimes, as it employed two complementary transitional justice mechanisms, the Truth and Reconciliation Commission (TRC) and the Special Court for Sierra Leone (SCSL), each with distinct mandates and capacities. The TRC's mandate was explicitly focused on GNR, aiming "to address impunity, break the cycle of violence," and to "make recommendations concerning the reforms and other measures, whether legal, political, administrative or otherwise, needed to achieve the object of [. . .] preventing the repetition of the violations or abuses suffered." [385] Empowered to examine and propose recommendations to the government of Sierra Leone, the TRC played a substantial role in institutional reform. In response to recommendations from both the TRC and the country, it established human rights bodies and mechanisms, including the independent Human Rights Commission of Sierra Leone.[386] The TRC also promoted mechanisms to improve governance in Sierra Leone, including revisions to the Civil Service code to prevent breaches in ethics and increase transparency.[387] The TRC coordinated with the West African Peacebuilding Institute in Accra to implement a conflict prevention and early warning system.[388]

Meanwhile, the SCSL did not issue measures of GNR as reparations directly, as it lacked a reparative mandate like the ECCC or ICC; nonetheless, as with all ICL mechanisms, it can be said to have addressed GNR by prosecuting

---

[383] Inter-American Court of Human Rights, *Case of the Inhabitants of La Oroya v. Peru* Judgement, (Preliminary Objections, Merits, Reparations and Costs), 27 November 2023, para. 342.

[384] ECCC, *Prosecutor v. Kaing Guek Eav alias Duch*, Case File/Dossier No. 001/18-07-2007/ECCC/SC, Case 001 Appeal Judgment, 3 February 2012, fn. 1385 and para.675, citing Inter-American Court of Human Rights, *Ituango Massacres v. Colombia*, Judgment, (Preliminary Objections, Merits, Reparations and Costs), para. 406.

[385] Truth and Reconciliation Commission Act 2000 (Sierra Leone) paras 6, 15(2).

[386] UN Human Rights Council, *Compilation on Sierra Leone*, UN Doc A/HRC/WG.6/38/SLE/2 26 February 2021, para. 5.

[387] Sierra Leone Truth and Reconciliation Commission, Matrix on the Status of Implementation of the Truth and Reconciliation Commission Recommendations, Freetown, 2010, section 3.

[388] *Ibid.,* section 10.

potential offenders. While the Residual SCSL mission of protecting witnesses and victims and preserving the court's legacy through its archives can be seen as an important tool in education and the prevention of crimes, the connection is not explicit.[389] Subsidiary institutions such as the Peace Museum of the SCSL's mission statement are more closely aligned with GNR to "educate the present and future generations about the fight against impunity, the pursuit of accountability and the importance of sustainable peace."[390] Nonetheless, the contrast between the TLC and SCSL demonstrates the traditional restraint that tribunals have in providing or ordering substantive GNR measures.

2.4.3. Guarantees of Non-Repetition at the International Criminal Court

While the Rome Statute does not explicitly mention GNR, the non-exhaustive nature of "establishing principles related to reparations" allows the judges to include principles outside of the three explicitly mentioned decisions.[391] While not explicitly mentioning GNR, in the ICC's first decision related to the principles to be applied to reparations, the Trial Chamber noted that "reparations in the present case must [. . .] deter future violations."[392] In the 2017 *Prosecutor v. Ahmad Al Faqi Al Mahdi* Reparations Order, the judges used their discretion to explicitly issue an order under the principle of GNR, with the order reading "measures aimed at rehabilitating the Protected Sites with effective measures to guarantee non-repetition of the attacks directed against them."[393] While the implementation of this order has not been completed, the most recent report by the Trust Fund for Victims (TFV) noted the installation of lighting around ten protected buildings as a deterrence measures, the planting of trees to protect the sites from environmental degradation, and the hiring of guards/laborers to provide maintenance and security for the sites.[394] While the TFV's activities are being conducted in coordination with assistance from the state of Mali, the actual implementation of these measures is being conducted by UNESCO and the TFV.[395]

---

[389] The Residual Special Court for Sierra Leone Agreement, February 2011, Art. 1.

[390] Residual Special Court for Sierra Leone, *Sierra Leone Peace Museum*, available at: https://rscsl.org/peace-museum/.

[391] Rome Statute (n 25) Art. 75(1).

[392] International Criminal Court, *Prosecutor v Thomas Lubanga Dyilo*, No. ICC-01/04-01/06, Decision establishing the principles and procedures to be applied to reparations (Trial Chamber 1), 7 September 2012, para. 179.

[393] *Prosecutor v Ahmad Al Faqi Al Mahdi*, No. ICC-01/12-01/15, Reparations Order (Trial Chamber VIII),17 August 2017, para. 67.

[394] *Prosecutor v. Ahmad Al Faqi Al Mahdi*, No. ICC-01/12-01/15, Thirty-Fourth Update Report on the Updated Implementation Plan (Trial Chamber II), 29 January 2025, paras 51, 55, 58.

[395] Governor of the Timbuktu Region, Establishing a Regional Coordination and Monitoring Commission for the Collective Reparations Measures Related to the Maintenance and Rehabilitation of Protected Buildings in Timbuktu, Commemorative Ceremonies, and Local Economic

The 2024 *Prosecutor v. Dominic Ongwen* Reparations Order likewise mentioned the principle of non-repetition and discussed education as a means of accomplishing non-repetition. The order emphasized the "importance of rehabilitating all child victims and reintegrating them into society in order to end the successive cycles of violence that have formed an important part of past conflicts."[396] Specific projects included "a museum regarding the war that can be used as an educational and training center for peacebuilding."[397] While not a principle listed in the Rome Statute, it is clear that the ICC, through its orders and TFV in its actions, is increasingly focusing on GNR as a method of providing redress against harm. However, as opposed to the broad institutional reform orchestrated by the TRC of Sierra Leone, the measures of the ICC and Residual SCSL have been more modest, focusing on education and modest measures of prevention.

2.5. Summary

Across treaty law, CIL, and jurisprudence over the past three decades, GNR has increasingly emerged as a form of reparation despite its legal basis remaining significantly less settled than restitution, compensation, satisfaction, or even rehabilitation. While it arguably does have a restorative element, namely the restoration of confidence or trust in the rule of law, it also includes a forward-looking aspect. GNR typically manifests itself in two main ways: education and institutional reform.

3. Guarantees of Non-Repetition at the ECCC

Nineteen of the official judicially endorsed projects of the ECCC arguably contribute either primarily or secondarily to GNR, second only to projects related to satisfaction. Most of these efforts were initiatives focused on education in schools or the public more broadly, and seven were listed explicitly as being intended to contribute towards GNR during their submission to the court.[398] Several, including the establishment of the ECCC itself, can be considered examples of structural reform that could contribute to the prevention of future crimes. In addition, the reform of the rules following Case 001 allowed the Victim Support Section to independently pursue reparation projects. Today, the residual functions of the court include extensive focus on the dissemination of information, education, and

Revitalization, under the Fund for the Benefit of Victims, Decision No. 2022-0147/GRT-CAB, 5 July 2022.

[396] *Prosecutor v Dominic Ongwen*, No. ICC-02/04-01/15, Reparations Order (Trial Chamber IX), 28 February 2024, para. 85.

[397] *Ibid.,* 607.

[398] ECCC, *Nuon, Khieu*, Case 002/02 Judgment, above note 17, paras 4456, 4460

providing a voice to survivors, which serve as further GNR efforts.[399] While this analysis reveals achievements, this section also critically analyzes both the effects for survivors and, regarding structural reform, the significant limitations of these reparatory initiatives.

Most of the efforts of the ECCC's judicial and non-judicial reparations projects contributing to GNR reflect education and institutional mechanisms for preventing and resolving conflicts. Therefore this article will first analyze the judicial and non-judicial reparations projects education which align closely with Principle 7(d) of the Basic Principles or the provision of IHRL and IHL training before analyzing the limited mechanisms that the ECCC itself and reparations that have contributed to conflict resolution and Principles 7(c), (g), and (h) of the Basic Principles which could be considered to contribute towards the restoration of victims confidence in the rule of law as well as possibly a restoration of dignity and reputation.

3.1. Legal Framework and Chamber Interpretation related to Guarantees of Non-Repetition

While not directly noted in the Internal Rules, the SCC nonetheless highlighted that measures related to GNR were an adequate form of collective and moral reparation under the ECCC framework in Case 001.[400] Subsequently, in Case 002/01, the Trial Chamber welcomed any measure which "awakens public awareness to avoid repetition of acts such as those that occurred."[401] In completing this evolution in the final submissions by the Co-Civil Party Lawyers in Case 002/02, seven requests were categorized under GNR.[402] The Trial Chamber, in turn, returned its judgment with all seven of the endorsed reparations categorized expressly under GNR.[403] This highlights that the court found this modality to be an appropriate form of collective and moral reparation.[404] Nonetheless, with the SCC holding that it had no power to issue an order to the Royal Government of Cambodia or any other institution or individual that was not a party to the proceedings and unwilling to endorse any measure which could not be enforced measures related to GNR were limited to what limited powers the court itself had and cooperation with the government and other actors.[405]

---

[399] UNGA, Res. 75/257 B, 7 July 2021, Article 2(1). See also ECCC, *The Court Report 2023*, ECCC, 2024, available at: https://eccc.gov.kh/sites/default/files/publications/THE%20COURT%20REPORT%202023_EN.pdf

[400] ECCC, *Duch,* Case 001 Appeal Judgment, above note 1, para. 675.

[401] ECCC, *Prosecutor v. Nuon Chea and Khieu Samphan*, Case File/Dossier No. 002/19-09-2007/ECCC/TC, Judgment (Trial Chamber), 7 August 2014, para.1164.

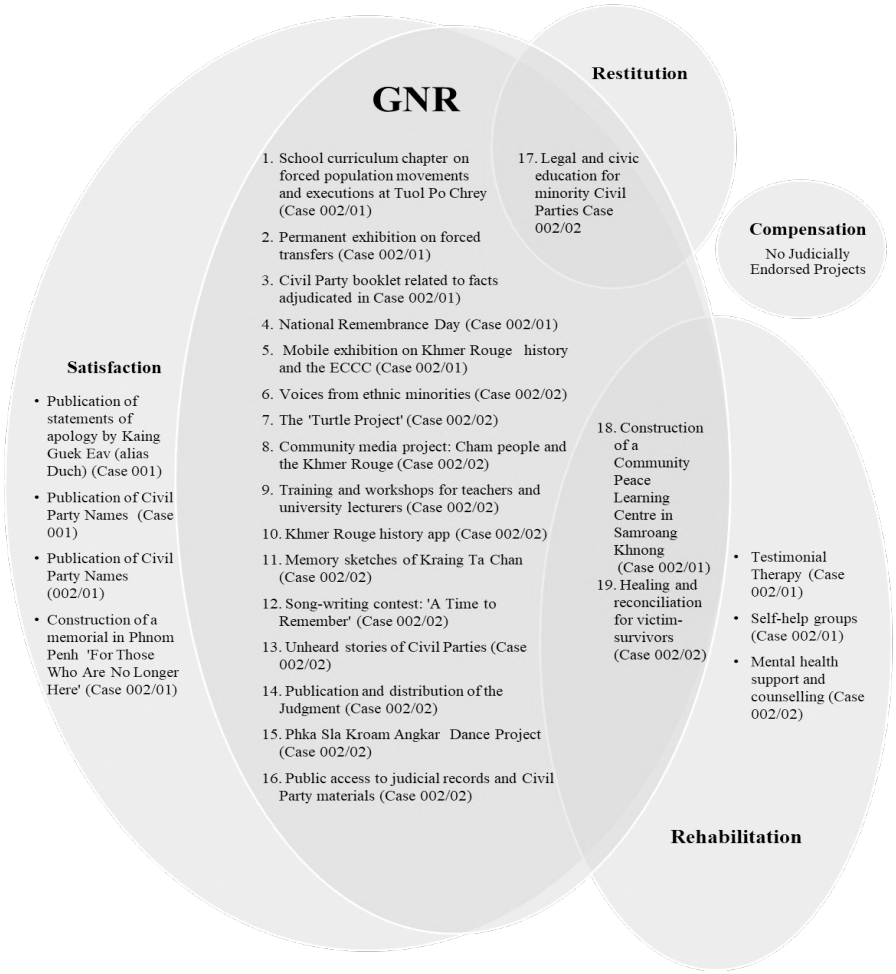
[402] *Prosecutor v Nuon Chea and Khieu Samphan,* Case No 002/19-09-2007-ECCC/TC, Civil Party Lead Co-Lawyers' Final Claim for Reparation in Case 002/02 (Trial Chamber), 30 May 2017, para. 26.

[403] ECCC, *Nuon, Khieu*, Case 002/02 Judgment, above note 17, paras 454, 457.

[404] *Internal Rules (Revision 6),* above not 11, Rule 23 quinquies (1)(a).

[405] ECCC, *Duch,* Case 001 Appeal Judgment, above note 1, paras 653, 666.

Table One: GNR in the 26 Judicially Endorsed Reparations Projects of the ECCC406



3.2. Education

3.2.1. Judicially Endorsed Reparations

Arguably, all nineteen of these GNR-related reparations projects, including the seven which were officially endorsed, were aimed at public education, employing both traditional and innovative methods. Teacher education programs and the creation of additional educational materials have been instrumental in incorporating the

[406] Figure 1 created by the author. For a consolidated list of all reparations, implementing partners, and a brief description, see: *Guide to the ECCC*, above note 18, pp. 247–254.

history of the Khmer Rouge into the school curricula.[407] This ensures that younger generations are exposed to lessons on justice and accountability. Furthermore, museums and memorials serve as physical reminders of the regime's crimes, encouraging public dialogue, awareness, and a narrative of reconciliation. [408] Notably, the ECCC has embraced technology and the arts through initiatives such as the development of a multilingual mobile application and interactive plays performed across Cambodia.[409] Film, dance, music, theatre, and storytelling were all judicially endorsed mediums providing a forum for GNR initiatives. These efforts extend the reach of education, ensuring accessibility to diverse audiences and promoting messages of non-repetition.

One judicially endorsed reparation that the author had the opportunity to witness firsthand was "The Courageous Turtle." [410] The court endorsed this reparation, stating that the Turtle Project, along with two other awards:

> Concern forms of education aimed at guaranteeing non-repetition, comply with the requirements of Internal Rule 23quinquies, and are of a collective and moral nature. As this Chamber held previously [in case 002/01], public education regarding the suffering of victims and the nature of the DK regime is likely to advance the goals of acknowledgment, remembrance, awareness of the crimes committed and the suffering resulting therefrom.[411]

Notably, the Court did not require a direct connection between the reparation project and the individual accused, nor even a necessary link to the specific crimes for which they were convicted. Instead, the emphasis was placed on broader educational efforts regarding the Democratic Kampuchea regime as a whole. Arguably, these measures of GNR seemed to be more connected with the responsibility of the Democratic Kampuchea regime than the individual liability of the convicted individual.

Over the endorsed period from 2016 to 2017, the actors performing this reparations project travelled to all 25 Cambodian provinces, delivering 129 performances at 37 schools and universities. During this period, the initiative reached 9,619 students and engaged 189 Civil Parties who shared their lived experiences in intergenerational dialogues following the performances.[412] The play was submitted to the ECCC as a reparation falling under GNR, which was "promoting historical awareness and civil courage in Cambodia." [413] Participating in one such

---

[407] See Table 1 Reparations one, seven, and nine.

[408] See Table 1 Reparations two, five, and eighteen.

[409] See Table 1 Reparations seven, ten, and fifteen.

[410] ECCC, *Nuon, Khieu*, Case 002/02 Judgment, above note 17, para. 4423.

[411] *Ibid.*, para. 4454.

[412] Cambodian German Cultural Association (KDKG e.V.), *The Turtle Report: Community Theatre and Peace Dialogues Cambodia 2016–2018*, KDKG eV, 2018, p. iv.

[413] ECCC, *Nuon, Khieu,* Final Claim for Reparation in Case 002/02 above note 97, para.15–35.

intergenerational dialogue, Civil Party Ek Vireak reflected, "I am very happy to share my story and my life under the Pol Pot regime with the young generation as I want them to know the sufferings during this regime and I want to tell them what happened and why, so it doesn't happen again in Cambodia."[414]

3.2.2. Non-Judicial Projects

The modification of the Internal Rules after Case 001 allowed the Victim Support Section to independently pursue additional reparations projects for victims regardless of a conviction or participants' status as Civil Parties. In all, the Victim Support Section implemented four additional projects under the revised rules, two of which were related to GNR, namely the construction of a Community Peace Learning Center and raising awareness for victims of gender-based violence (GBV) under the Khmer Rouge Regime. [415] Despite some critiques that this measure was underutilized, this alternative pathway achieved some notable success.[416] The GBV project ultimately reached 3,235 survivors of gender based violence under the Khmer Rouge, including 795 non-civil parties, and 31,395 secondary beneficiaries, including uniformed personnel, legal officers, and health professionals.[417]

In conducting its residual functions, education is one of the primary functions of the ECCC through its dissemination mandate. The ECCC Mobile Resource Center stands as one such example, which the court has described as a tool to promote "education, healing and reconciliation" and "raise awareness among Cambodians about their recent history."[418] The Mobile Resource Center is a bus intended to bring the message of the court beyond the capital of Phnom Penh. Through intergenerational dialogue with survivors and the dissemination of the court's work by ECCC outreach officers, participants are exposed to the history of the court and the Khmer Rouge and presented a message of reconciliation. The

---

[414] *The Turtle Report*, above note 106, p. 31.

[415] *Guide to the ECCC*, above note 18, p. 108.

[416] Christoph Sperfeldt, *Practices of Reparations in International Criminal Justice*, Cambridge University Press, Cambridge, 2022, p. 267.

[417] Julian Poluda, Sineth Siv, and Sothary Yim, Final Evaluation Report: Promoting Gender Equality and Improving Access to Justice for Female Survivors and Victims of Gender-Based Violence under the Khmer Rouge Regime: Final Evaluation of the ECCC Non-Judicial Gender Project (Phase 2), United Nations Trust Fund to End Violence against Women, Victims Support Section of the Extraordinary Chambers in the Courts of Cambodia, Transcultural Psychosocial Organization Cambodia. Cambodia, September 2019, pp. 85–86.

[418] Extraordinary Chambers in the Courts of Cambodia, *The Court Report 2024,* ECCC, 2025, p. 32, available at https://backend.eccc.gov.kh/uploads/WEB_THE_COURT_REPORT_2024_EN_d64e54525e.pdf. See also: Nathan Thomas and Patrick Thorne, "The Extraordinary Bus: Shifting Gears in International Criminal Law", *ECCC*, 11 November 2024, available at: https://eccc.gov.kh/en/resources/news-and-outreach/driving-change-the-eccc-mobile-resource-centres-journey-to-connect-cambodias-past-and-present.

Resource Center's work is enhanced by cooperation with local organizations such as Youth for Peace, an organization dedicated to "social justice, reconciliation, and peace."[419] Furthermore, the Public Affairs team has leveraged a range of social media platforms, including Telegram, YouTube, and TikTok, as well as a state-of-the-art legacy website, to enhance public awareness and engagement.[420] As of January 2025, the ECCC's TikTok page had approximately 297,000 followers, surpassing the International Court of Justice's following on X (approximately 246,000), but falling short of the International Criminal Court's following on the same platform (approximately 831,000).[421] Messages on Telegram, for example, frequently feature GNR-related tags such as #NeverAgain, #RememberThePastBuildingTheFuture, and #Awareness.[422] While it is impossible to quantify the direct impact of such engagement on GNR objectives, the ECCC's active presence on these platforms represents an innovative approach to expanding the reach of transitional justice initiatives and amplifying the voices of victims in a digital age.

Judicially endorsed projects like "The Courageous Turtle," official non-judicial reparations projects, and residual functions such as the Mobile Outreach Center are models of innovative reparative projects that contribute to GNR. Yet an inherent tension remains where "civic courage" against the Khmer Rouge is encouraged, while, simultaneously, political dissidents are reportedly silenced.[423] Some historical narratives are privileged over others simply due to the jurisdiction of the court. While the author never witnessed any curbing of speech during these projects, the mandate of the court to "senior leaders of Democratic Kampuchea and those who were most responsible for the crimes [. . .] committed during the period from 17 April 1975 to 6 January 1979" implicitly limits GNR initiatives of the court to non-repetition of the crimes of the Khmer Rouge rather than ending a culture of

---

[419] Youth For Peace Organization, *Samroung Knong Security Center 1975–1979: The Khmer Rouge Prison*, Education Justice and Memory Network, Phnom Penh, 2023, p. 91.

[420] See also Andre Kwok, "Vlogging International Criminal Justice? Digital Optics at the Khmer Rouge Tribunal", Just Security, 10 September 2024, available at: https://www.justsecurity.org/99047/khmer-rouge-tribunal-tiktok/.

[421] Extraordinary Chambers in the Courts of Cambodia, TikTok, available at: https://www.tiktok.com/@eccckh accessed 24 January 2025; International Court of Justice, X (formerly Twitter), available at: https://x.com/cij_icj?lang=en, accessed 24 January 2025; International Criminal Court, X (formerly Twitter), available at: https://x.com/IntlCrimCourt?ref_src=twsrc%5Egoogle%7Ctwcamp%5Eserp%7Ctwgr%5Eauthor, accessed 24 January 2025.

[422] Extraordinary Chambers in the Courts of Cambodia Telegram, available at: https://T.Me/ECCCKH, 07, 09, and 30 January.

[423] For example, see: Reuters, "Cambodia Opposition Politician Jailed For 2 Years for Incitement", *VOA News*, 26 December 2024, available at: https://www.voanews.com/a/cambodia-opposition-politician-jailed-for-2-years-for-incitement/7914466.html; Jonathan Head, "A Politician Was Shot Dead in Bangkok. Did Another Country Do It?" BBC News, 9 January 2025, available at: https://www.bbc.com/news/articles/cdr0rx307p3o.

impunity more broadly.[424] Discussions of crimes committed after this period by forces other than the Khmer Rouge are discussed only in hushed tones.

3.3. Institutional Reform

First and foremost, it must be recognized that the establishment of the court itself is an example of institutional reform that has contributed to GNR. Yet, as noted by Perez-Leon, this and its related reparations programs are arguably the only transitional justice mechanisms backed by the Cambodian government.[425] Holding that it had no competence to order reparations or even make recommendations to the government, efforts at institutional GNR were limited. Institutional GNR inherently requires substantial coordination and support from the government.[426] Nonetheless, the court did endorse two reparations, which can be seen as contributing to GNR. First, the Legal Documentation Center (LDC) and the creation of a National Day of Remembrance demonstrate some institutional change. However, the primary focus of both projects is primarily retrospective rather than forward-looking, like the reforms focused on by the IACtHR. Unlike the IACtHR, which often mandates legal and institutional reforms, or the Sierra Leone TRC, which recommended the establishment of human rights commissions, the ECCC has not been able to contribute to systemic change. Strengthening judicial independence, promoting accountability, and safeguarding civil liberties remain critical gaps in the ECCC's approach.

With a mission to bring about "national reconciliation, stability, peace and security," one of the main goals of the ECCC's establishment can be seen as contributing to GNR.[427] As one of the main purposes of ICL more broadly, the court serves the expressivist purpose of demonstrating that the crimes committed by the Khmer Rouge will not be tolerated. By prosecuting the Khmer Rouge, a message is given that states that crimes like these will not be tolerated in the state of Cambodia, potentially discouraging the future commission of these crimes. The prosecution of senior leaders, including the former head of state, Khieu Samphan, demonstrates that no one is immune from the law. Some historians and Cambodians suggest that the government's opposition to the cases against Meas Muth and Sou Met (who died before indictment) stemmed more from Hun Sen's discretion and their roles as government advisors than from a genuine commitment to justice.[428] The narrative of no one being above the law is undermined by the perception that immunity from

---

[424] ECCC, Law on the Establishment of the ECCC, above note 7, Art.1.

[425] Juan-Pablo Perez-Leon-Acevedo, "Reparation Modalities at the Extraordinary Chambers in the Courts of Cambodia (ECCC)", *Law & Practice of International Courts and Tribunals*, Vol. 19, No. 3, 2020, p. 457.

[426] ECCC, *Duch,* Case 001 Appeal Judgment, above note 1, paras 653, 666.

[427] UN-Cambodia Agreement, above note 7, Preamble.

[428] Reuters, "Khmer Rouge Genocide: Justice Delayed May Be Justice Denied", *VOA News*, 10 January 2012, available at https://khmer.voanews.com/a/khmer-rouge-genocide-justice-delayed-denied-trial-reuters/1619178.html.

crimes is, in fact, possible if one is aligned with the current government. However, the broad dissemination of all the crimes investigated, regardless of whether they resulted in a conviction, through the ECCC Legacy Website and Outreach Projects, which focus not only on the convictions but also on the existence of clear and consistent evidence of crimes in Cases 003 and 004, may have a mitigating effect on this issue.[429]

The endorsement of a National Remembrance Day, along with the Public Memorials Initiative, marked the first direct cooperation with the Royal Government of Cambodia in the implementation of reparations projects. The provision of a national holiday was seen by the court as a measure which would appropriately give effect through the acknowledgement to victims and "promote a culture of peace and to contribute to national reconciliation."[430] In considering that the implementing partner, the Cambodian Government, had expressed its willingness to declare an annual day of remembrance, the Court found that no additional funding was required and therefore endorsed the measure as a reparation.[431] Despite the positive cooperation between the ECCC and the state, the fact that the day was removed as a public holiday in 2019 demonstrates the fragility of the non-binding reparations of the ECCC.[432]

Proposed by the Council of Ministers of Cambodia and funded through the Cambodian national government, the LDC is a judicially endorsed reparation project that has some of the hallmarks of institutional reform that continues today.[433] While its primary functions of outreach projects, funding genocide research, and academic exchanges fall more under educational GNR initiatives, it is a department within the Council of Ministers.[434] As a department within the government, it, along with the ECCC, has firsthand access to the Counsel for Ministers and the Prime Minister to serve as a voice for the victims of the Khmer Rouge. However, with the narrow focus of the LDC and the court, broader and more substantial GNR efforts face significant challenges. As opposed to many of the other reparations projects, the work of the LDC continues today through coordination with the Residual Functions of the ECCC.[435]

While some forms of GNR, namely related to education, punishment of the perpetrator, and symbolic acknowledgment, are implementable within the scope of international criminal law, it is clear that even limited structural reform requires

---

[429] *The Court Report 2024*, above note 113, pp. 19, 35.

[430] *Prosecutor v Nuon Chea and Khieu Samphan*, Case File/Dossier No. 002/19-09-2007/ECCC/TC Judgement (Trial Chamber), 7 August 2014, para. 1152.

[431] *Ibid.,* para. 1153.

[432] Nhim Sokhorn, "Observers See Politics in Removal of Holidays", *VOD English*, 7 August 2019, available at https://vodenglish.news/observers-see-politics-in-removal-of-holidays/.

[433] ECCC, *Nuon, Khieu*, Case 002/01 Judgement, above note 125, para. 4429.

[434] Interview with Seang Sopheak, Deputy Director of the Legal Documentation Center, Phnom Penh, 8 November 2024 (on file with author).

[435] *Residual Functions,* above note 18, para. 26.

cooperation from the state. Nonetheless, the limited cooperation by the Cambodian state demonstrates an important precedent in ICL.

3.4. Victims' Priorities

A 2013 preliminary study of Civil Party victims in Case 002 revealed that only 6 percent of respondents were motivated to participate in the ECCC process to prevent the return of the Khmer Rouge, indicating that GNR was not the primary concern for most victims.[436] A 2018 study similarly found that only 7 percent of Civil Parties were motivated by prevention.[437] In the 2022 Victims Workshop in preparation for the Residual Functions of the court, none of the proposals by victims related directly to prevention, but rather victims submitted proposals more closely related to the modalities of satisfaction and rehabilitation such as the construction of stupas, provision of health care, the creation of survivor associations, and commemoration.[438] However, the top three motivations of survivors in the 2018 study were a desire to have their suffering acknowledged (42.8 percent), to obtain justice for relatives (36.9 percent), and to tell their stories (33.8 percent).[439] This emphasis on storytelling underscores the need for dignity restoration and recognition. Mechanisms tied to GNR, such as intergenerational dialogues and educational programs, fulfill this need by creating platforms for victims to narrate their experiences, ensuring that their suffering is acknowledged and memorialized. These measures provide victims with a chance to be heard, acknowledged, and to provide value, contributing to their moral and psychological restoration. Even if GNR's preventive goals may not align directly with the victims' expressed priorities, its implementation often facilitates a broader reparative effect that still may achieve the victims' desires.

With 92.5 percent of Civil Parties believing that the ECCC was rebuilding trust prior to Case 002, and 90 percent trusting the court, a Cambodian institution, it seems that the Court was contributing to a restoration of confidence.[440] Furthermore, in the survey following the trials, 60 percent of Civil Parties expressed that they completely trusted the ECCC, and another 30 percent expressed some trust, demonstrating that whether a primary reason that people chose to participate as Civil

[436] Nadine Kirchenbauer et al., Victims Participation Before the Extraordinary Chambers in the Courts of Cambodia: Baseline Study of the Cambodian Human Rights and Development Association's Civil Party Scheme for Case 002, ADHOC and Harvard Humanitarian Initiative, Phnom Penh, January 2013, p. 34.

[437] Timothy Williams et al., Justice and Reconciliation for the Victims of the Khmer Rouge? Victim Participation in Cambodia's Transitional Justice Process, Swiss Peace Foundation, November 2018, p. 71.

[438] David Cohen, Daniel Mattes, and Sangeetha Yogendran, Workshop Report on Victim-Related Activities During the Implementation of the ECCC's Residual Mandate, ECCC, 15 July 2022, p. 127.

[439] T. Williams, above note 132, p. 71.

[440] Nadine, above note 131, pp. 32.

Parties, it may have been a positive secondary effect.[441] Yet the extent to which the GNR-related reparations have directly contributed to this is undermined to an extent by the same study finding that 81.4 percent of Civil Party respondents, including 60 percent of Civil Parties who had participated in a reparation project, could not name a single reparations.[442]

4. Conclusion

4.1.A Restoration of Dignity and Trust and Value to Victims

In considering whether the ECCC's GNR measures constitute a distinct form of reparation for the victims in the Cambodian context, the answer is a qualified yes. While GNR has a forward-looking element in the prevention of future crimes, its restorative benefit can be viewed as a restoration of confidence in the rule of law. As noted in the survey of Civil Parties, the broader practices of the court appear to have had a positive effect in restoring confidence in the rule of law, yet the extent to which GNR-related judicial reparations are the primary cause seems limited, given the large proportion of Civil Parties' lack of awareness.

Regarding the extent to which the GNR has contributed to the actual prevention of the recurrence of crimes, the answer is much less clear. Although seven projects were officially endorsed as GNR, their preventative impact was minimal, as they concentrated almost exclusively on the Khmer Rouge, a group that no longer presented a genuine threat, while leaving broader political challenges unaddressed. The reparations projects were constrained by the willingness of the Cambodian government to work with the ECCC. Therefore, the measures primarily focused on education about the Khmer Rouge rather than the institutional reform that could have led to the prevention of violations of human rights more generally. In some cases, the court and its initiatives may have served more as state legitimization than genuine prevention. The frequent invocations of the Khmer Rouge by Hun Sen, the former prime minister, to discredit political opposition underscore the potential for GNR rhetoric to be co-opted, thereby rendering it, in some cases, counterproductive to the aim of GNR.[443] Still, this does not mean the ECCC's GNR measures are meaningless as they still maintain a restorative value in providing a restoration of dignity and a limited restoration of confidence in the government.

---

[441] T. Williams, above note 132, 64.

[442] Ibid., 116.

[443] Kevin Doyle, "Marking the End of Pol Pot's Rule in Cambodia", *Al Jazeera*, 7 January 2015, available at: https://www.aljazeera.com/features/2015/1/7/marking-the-end-of-pol-pots-rule-in-cambodia; Lauren Crothers, 'Cambodia PM Warns Muslims of Danger of Return to Past', *Anadolu Agency*, Phnom Penh, 16 October 2015, available at: https://www.aa.com.tr/en/world/cambodia-pm-warns-muslims-of-danger-of-return-to-past/445610; Kuch Naren, 'Hun Sen Warns Of Civil War If ECCC Goes Beyond "Limit"', *The Cambodia Daily*, 27 February 2015, <https://english.cambodiadaily.com/news/hun-sen-warns-of-civil-war-if-eccc-goes-beyond-limit-78757/> accessed 28 April 2025.

4.2. GNR's Uneasy Position within ICL

The connection between GNR-related reparations and individual criminal responsibility may often be indirect, yet collective reparations nonetheless retain important normative value. The purpose of the ECCC was not only to punish those most responsible but to promote reconciliation in Cambodia, and collective and moral reparations were the approach adopted by the Chambers to accomplish this.

Regardless of whether Khieu Samphan, the former head of state of Democratic Kampuchea, can provide redress to a victim, that does not diminish the right of victims under international law to reparations not only against the convicted, but against other perpetrators and, arguably, the state, a tension that international criminal tribunals have been structurally constrained from addressing.[444] The distinction between GNR in the laws of state responsibility and in international criminal reparations should not be overstated. In ICL, IHRL, and state responsibility alike, the right of the individual victim to reparation remains central. What differs is the mechanism of enforcement. Under IHRL and state responsibility, the state, as a duty bearer, is legally bound to implement measures such as education or institutional reform to prevent further violations. In ICL, by contrast, collective reparations, including GNR, depend on cooperation from states and implementing partners because the convicted perpetrators often lack the means to provide these forms of reparations. In the limited legal and political space afforded by hybrid tribunals such as the ECCC and ICC, the use of GNR and other broad forms of reparation to address collective harm should not only be permitted but actively encouraged, even when this diverges from the traditional duty–right constructs of criminal law.

Though constrained compared to the IACtHR or the TRC of Sierra Leone, even modest state cooperation, such as the establishment of the LDC at the ECCC and the declaration of a national holiday, has normative and practical value. The LDC, for example, is one of the few reparations projects still in operation even following the conclusion of Japanese support for the project.

The endorsement of GNR as a distinct reparative category by the ECCC and the Chambers' cooperation with the state of Cambodia to achieve limited measures establishes an important precedent that should be followed in ICL. International criminal tribunals can utilize GNR as a method of recognizing the rights of victims

[444] While not defining what this right was, the SCC suggested that the reparations of the ECCC regime were unable to fulfil the victims right in saying "that the limited reparations available from the ECCC do not affect the right of the victims to seek and obtain reparations capable of fully addressing their harm in any such proceedings that could be made available for this purpose in the future," the ECCC was able to defer responsibility from itself while nominally recognizing survivor's right to more substantial reparations." Furthermore, with regard to state responsibility, the SCC held that "As a criminal tribunal, albeit of an internationalised character, the ECCC is not vested with the authority to assess Cambodia's compliance with these international obligations." ECCC, *Duch*, Case 001 Appeal Judgment, above note 1, paras 654, 668.

under international law, even, or perhaps especially, when the harm is collective in nature and the prospect of direct compensation is unfeasible. Where measures of GNR may fail to truly provide a genuine preventative function, they may contribute to a measure of the closely related modality of satisfaction.

The ECCC's endorsement of GNR as a collective and moral reparation, while certainly facing limitations, represents an advancement in victim-centric justice that is continuing under the residual functions of the ECCC. It has contributed to both the restoration of dignity and trust, as reflected in victims' testimonies and surveys, while simultaneously contributing to broader goals of international law, namely the cessation and non-repetition of crimes. Through its jurisprudence, the ECCC has advanced GNR as an additional tool both to meet victims' needs and to foster accountability and deterrence of future crimes. As such, the ECCC's approach to GNR should serve as a model for other courts and tribunals, offering a means to restore victims' confidence in the rule of law and, as noted in the 2024 *Ongwen* reparations order, to "end the successive cycles of violence that have formed an important part of past conflicts."[445]

[445] ICC, *Ongwen* (Reparations Order), above note 91, para.85.

Environmental Obligations of Outer Space in Armed Conflicts: The Source, Interpretation and Compliance

Xinyi PAN[*]
Xidi CHEN[**]

ABSTRACT

Outer space's environment is fragile and difficult to restore. The academia should conduct a comprehensive review of the environmental protection obligations of belligerents during armed conflicts in this domain. Although outer space is different from terrestrial environments, it falls within the general scope of "environment" in international law. International Humanitarian Law and International Law in peacetime constitute a system of rules to mitigate damage to the space environment during armed conflicts. The interpretation of the corresponding obligations must be adapted to the characteristics of both outer space and armed conflicts. This process faces numerous challenges. A practical and feasible approach to guarantee State compliance is to complete the normative framework, ensure flexible interpretation, and provide clearer guidelines for belligerents.

Keywords: outer space, environmental obligations, non-state armed groups, International Humanitarian Law, nature-centrism.

I. Introduction

While there are ongoing appeals for international collaboration to uphold peace and security in outer space, the possibility of an arms race in space remains a threat to global security.[446] The threat of militarization in outer space has lingered since the

[*] Xinyi PAN is a PhD candidate at the School of Law, Tsinghua University. She specializes in public international law research. She was a visiting scholar at the US-Asia Law Institute (USALI), School of Law, New York University, in 2024. Email: panxy22@mails.tsinghua.edu.cn.

[**] Xidi CHEN is an assistant professor at the China Institute for Marine Affairs. He holds a PhD Degree from Tsinghua University. He has been engaged in international law research and international negotiations, including agendas under the BBNJ Agreement and the Intergovernmental Oceanographic Commission.

The authors would like to thank the editorial team of APJIHL and the two anonymous reviewers for their insightful comments. Special thanks to Prof. Bingbing Jia (Tsinghua University), Prof. Katherine Wilhelm (New York University), as well as the faculty of USALI for providing valuable feedback. The authors are also grateful to Mr. Kangle Chua, Mr. Timothy Christopher Wong, and Dr. Igor Shenderski for their suggestions and edits. The views and remaining errors are the authors' own.

[446] UNGA A/RES/76/231, 30 December 2021, p. 2; Report of the Secretary-General on Reducing Space Threats through Norms, Rules and Principles of Responsible Behaviours, UN Doc. A/76/77, 13 July 2021.

Cold War[447] Satellites launched by the United States and the Soviet Union were predominantly for military purposes.[448] Entering the twenty-first century, the significance of space capabilities for establishing military advantages has been repeatedly confirmed in past and ongoing armed conflicts. Outer Space facilities, such as reconnaissance satellites, provide essential communications and intelligence support to belligerents.[449] Targeting assets in outer space is viewed as a feasible strategy to undermine the space capabilities of adversary states during wartime.[450] Further, an increasing number of countries use outer space for non-offensive purposes to enhance their military capabilities and bolster national security.[451]

Armed conflicts in outer space have the potential to generate diverse forms of contamination, encompassing space debris (a growing concern), chemical effluents, and radioactive waste. These pollutants can inflict damage on deployed space assets and pose significant impediments to the prospect of continued exploration and utilization of outer space.[452] Furthermore, the special environment of "high vacuum and micro-gravity"[453] and the limited ability to restore the space environment means that the damage is likely to be irreversible or even permanent,

---

[447] The process of militarization of outer space is thought to have begun in 1959, when the United States launched its first military satellite. *See* Matthew Mowthorpe, *The Militarization and Weaponization of Space*, Lexington Books, Oxford, 2004, pp. 11–18; Paul B. Stares, *The Militarization of Space: US Policy, 1945–1984*, available at: https://www.osti.gov/biblio/5642072. (All Internet reference was accessed in August 2025). Joan Johnson-Freese and David Burbach, "The Outer Space Treaty and the Weaponization of Space", *Bulletin of the Atomic Scientists*, Vol. 75, No. 4, 2019, pp. 137–141.

[448] Wawrzyniec Muszynski-Sulima, "Cold War in Space: Reconnaissance Satellites and US-Soviet Security Competition", *European Journal of American Studies*, 2023.

[449] Ricky Lee and Sarah Steele, "Military Use of Satellite Communications, Remote Sensing, and Global Positioning Systems in the War on Terror", *The Journal of Air Law and Commerce*, Vol. 79, Issue 1, 2014, pp. 111–112; Yun Zhao and Shengli Jiang, "Armed Conflict in Outer Space: Legal Concept, Practice and Future Regulatory Regime", *Space Policy*, Vol. 48, 2019, pp. 51–52.

[450] Clayton Swope, "The Future of Military Power Is Space Power", *Center for Strategic & International Studies*, 9 April 2025, available at: https://www.csis.org/analysis/future-military-power-space-power.

[451] Secure World Foundation, *Global Counterspace Capabilities Report (2025)*, pp. 6–7, available at: https://swfound.org/counterspace/; John R. Hoehn, *Intelligence, Surveillance, and Reconnaissance Design for Great Power Competition*, available at: https://crsreports.congress.gov/product/pdf/R/R46389/1.

[452] ICRC, Constraints under International Law on Military Operations in, or in Relation to, Outer Space during Armed Conflicts, 3 May 2022; ICRC, The Potential Human Cost of the Use of Weapons in Outer Space and the Protection Afforded by International Humanitarian Law, 08 April 2021, p. 2.

[453] Robert Thirsk, Andre Kuipers, Chiaki Mukai, and David Williams, "The Space-flight Environment: The International Space Station and beyond," *Canadian Medical Association Journal*, Vol. 180, No. 12, 2009, pp. 1216–1220.

seriously impairing "the collective interests in the environment."[454] In modern society, the economic and cultural life of people is unsustainable without the use of Earth's orbit, or the patch of space adjacent to Earth. It is necessary to clarify and develop the legal framework to control the environmental risks posed by possible armed conflicts in outer space, to prevent potential catastrophic consequences.

For decades, scholars have been initiating efforts to elucidate the related concepts and standards and explore methods to control outer space pollution.[455] Nowadays, there is a global push to address space debris and other forms of space pollution. International organizations and states are devoted to developing technical assessments and legal documents in this area.[456] Nevertheless, a comprehensive exploration of environmental protection during armed conflicts in outer space through international legal mechanisms appears to be lacking.[457] The following issues are of particular concern: are there intersections between environmental obligations and International Humanitarian Law (IHL) in outer space? Do environmental protections under IHL apply in outer space? How can they be enforced?

In addressing these issues, this paper focuses on the legal framework of environmental damage to outer space resulting from armed conflicts. It puts forth practical strategies for overseeing the military activities of warring parties to prevent catastrophic consequences before they unfold. Part II first analyses the applicability of IHL rules in outer space armed conflicts and explains the logic to support the inclusion of the unique space environment in the concept of the "environment" in IHL. Part III then examines how the unique characteristics of the outer space environment should influence the interpretation of the parties' obligations under IHL and relevant peacetime international laws. It is observed that there are gaps between the legal regime and state practice, the nature-centric pursuance, and realistic requirements, influencing the effectiveness of regulation. As a response, Part IV further analyses the difficulties in reaching a global consensus on interpreting existing obligations and formulating new ones, as well as the challenges of ensuring

---

[454] 1967 Outer Space Treaty, Preamble; Cymie R. Payne, "Defining the Environment: Environmental Integrity", in Carten Stahn, Jens Iverson, and Jennifer S. Easterday (eds.), *Environmental Protection and Transitions from Conflict to Peace*, Cambridge University Press, Cambridge, 2017, p. 55.

[455] Stephen Gorove, "Pollution and Outer Space: A Legal Analysis and Appraisal", *New York University Journal of International Law and Politics*, Vol. 5, No. 1, 1972, pp. 53–66.

[456] Vishakha Gupta, "Critique of the International Law on Protection of the Outer Space Environment", *Astropolitics*, Vol. 14, No. 1, 2016, pp. 20–43; Steven Freeland, "Up, Up and... Back: The Emergence of Space Tourism and Its Impact on the International Law of Outer Space", *Chinese Journal of International Law*, Vol. 6, 2005, pp. 20–21; Mark Williamson, "Space Ethics and Protection of the Space Environment", *Space Policy*, Vol. 19, No. 1, 2003, pp. 47–52.

[457] Dake Stephens and Cassandra Steer, "Conflicts in Space: International Humanitarian Law and Its Application to Space Warfare", *Annals of Air and Space Law*, Vol. 40, 2015, pp. 1–32; Dieter Fleck (ed.), *The Handbook of International Humanitarian Law*, Oxford University Press, New York, 2021, pp. 64–68; Frans G Von Der Dunk, "Armed Conflicts in Outer Space: Which Law Applies?", *International Law Studies*, Vol. 97, 2021, pp. 188–231.

compliance. The paper concludes by proposing a balanced approach aimed at strengthening State protection of the space environment in situations of armed conflict.

II. IHL and Outer Space

This section explores situations involving the utilization of outer space for armed conflict and assesses the applicability of IHL in such scenarios. It is crucial to emphasize that although outer space is distinct from the traditional definition of environment in IHL,[458] this paper argues that outer space can be interpreted as part of the environment and be protected under IHL, as will be established below.

2.1. General Applicability of IHL in Outer Space

We start by illustrating the rationale for applying IHL in outer space. The International Court of Justice (ICJ), in its decision *Legality of the Threat or Use of Nuclear Weapons*, observed that the core of IHL is the "humanitarian character," and has evolved to meet contemporary circumstances, it should therefore apply "to all forms of warfare and to all kinds of weapons, those of the past, the present and the future."[459] The advisory opinion of the ICJ is not legally binding, but is recognized internationally and carries significant influence on the interpretation of international law. It reaffirms the resilience of IHL and its elasticity in scope. There are no international documents or practices that negate the overall applicability of IHL in outer space.[460] At the same time, the consensus on the peaceful use of outer space does not preclude all potential attacks in outer space. The "peaceful purposes" of Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies (1967 Outer Space Treaty) is generally understood as "non-aggressive" or "non-hostile" but not "non-military," which means it does not prohibit the legal form of use of force in international law, for example, for self-defense or with the sanction by the United Nations Security Council.[461] In its position paper to the United Nations (UN) in April 2021, the International Committee of the Red Cross(ICRC) stated that military

---

[458] ICRC, Constraints under International Law on Military Operations in Outer Space during Armed Conflicts, 5 May 2022, p. 4, available at: https://www.icrc.org/en/document/constraints-under-international-law-military-space-operations.

[459] International Court of Justice, Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion of 8 July 1996, para. 86.

[460] Michael N. Schmitt, "International Law and Military Operations in Space", *Max Planck Yearbook of United Nations Law Online*, Vol. 10, No. 1, 2006, p. 115.

[461] Haldor Mercado, "'Using the Force' Against 'Rebel Scum': The Application of International Humanitarian Law in Outer Space Against Non-State Actors", *Harvard Law School National Security Journal* (online), March 2025, available at: https://harvardnsj.org/2025/03/24/using-the-force-against-rebel-scum-the-application-of-international-humanitarian-law-in-outer-space-against-non-state-actors/.

operations conducted in or related to outer space are controlled by existing rules of IHL just as those within the atmosphere.[462]

According to Article 2, paragraph 1, common to the four Geneva Conventions, IHL applies in declared war and armed conflict. Because the declared war is a formal requirement and may limit the application of IHL,[463] ICRC then introduced a fact-based assessment of armed conflicts in its commentary to the Geneva Conventions.[464] This is the substantial precondition of the applicability of IHL. The Tadić case of the International Criminal Tribunal for the former Yugoslavia (ICTY) then established a two-pronged test for the existence of armed conflicts, which is the intensity of violence and the organization of the belligerents. Where there is an armed conflict involving outer space, IHL is logically extended to apply. In this situation, two considerations draw our attention, which are the existence of armed conflicts and the interpretation of related articles.

In most situations, satellites and other space assets are utilized in existing armed conflicts and do not inherently determine the nature of the conflict. But if the nature of the tension and crisis is vague, the existence of an armed conflict and its nature can be determined by firstly assessing the parties involved and then comparing the circumstances of the conflict with the provisions of IHL regarding international armed conflict (IAC) and non-international armed conflicts (NIAC) separately. Compared to IACs, NIACs are governed by a limited set of treaty provisions of IHL, with parties primarily bound by customary international law.[465] The obligations of the belligerent to the environment in armed conflicts have evolved into customary

[462] ICRC, The Potential Human Cost of the Use of Weapons in Outer Space and the Protection Afforded by International Humanitarian Law, January 2022, para. 9, available at: https://international-review.icrc.org/articles/the-potential-human-cost-weapons-in-outer-space-and-protection-afforded-by-ihl-icrc-position-paper-915.

[463] ICRC, Commentary on the First Geneva Convention: Convention (I) for the Amelioration of the Condition of the Wounded and Sick in Armed Forces in the Field, para. 207, available at: https://ihl-databases.icrc.org/ihl/full/GCI-commentary.

[464] *Ibid*., para. 209.

[465] To confirm the nationality of a space asset, according to Article 8 of the 1967 Outer Space Treaty, A State Party to the Treaty on whose registry an object launched into outer space is carried shall retain jurisdiction and control over such object. In the 1974 Convention on Registration of Objects Launched into Outer Space, "Launching state" refers to a state which launches or procures the launching of a space object or a state whose territory or facility a space object is launched (Art. 1). The term "State of registry" means a launching State on whose registry a space object is registered. If there is more than one launching State, they should determine which one of them to register the object (Art. 2).

international law[466] while the application of particular provisions is arguable. When the status of customary law is uncertain, parties could form *ad hoc commitments.*[467]

In recent years, two issues have attracted attention with regard to the applicability of IHL in outer space. One concerns the actions conducted by foreign private actors. Military operations in outer space exhibit a clear sovereign character. At the domestic level, the major outer space powers usually have dedicated agencies for the management of outer space activities.[468] In addition, states that permit commercial space activities have enacted specific regulatory legislation.[469] At the international level, the 1967 Outer Space Treaty stipulates that states bear international responsibility for all national activities, no matter if such activities are carried out by governmental agencies or by non-governmental entities.[470] Based on this, the involvement of private actors in armed conflicts in outer space brings two legal effects. Firstly, if they are used for military purposes, they may be legitimate military objectives in IHL. Civilian facilities provide services such as satellite communications, positioning, navigation and timing, intelligence, surveillance, and reconnaissance, and Earth observation.[471] During the Russo-Ukrainian conflict, Ukraine lacks independent space capabilities but still takes advantage of commercial providers such as SpaceX's Starlink satellite internet to maintain wartime communications, drone operations, and intelligence transmission. It also obtains high-resolution imagery from commercial firms.[472] A Russian official thus warned that commercial satellites from the US and Western allies could become legitimate targets if they were used in the war in Ukraine.[473]

Secondly, the launching State has an obligation to prevent the misuse of private actors. If there are two or more States jointly launching a space object, they

---

[466] 2005 Customary International Humanitarian Law, International Committee of the Red Cross (ICRC), Rules 43, available at: https://ihl-databases.icrc.org/en/customary-ihl/v1/rule43.

[467] The *ad hoc commitments* can be special agreements under the Art. 3 common to the four Geneva Conventions or be unilateral declarations, including those provided under Article 96(3) of AP I. Thibaud de La Bourdonnaye, "Greener Insurgencies? Engaging non-State Armed Groups for the Protection of the Natural Environment during Non-international Armed Conflicts", *International Review of the Red Cross,* IRRC No.914, December 2020, pp. 579–605.

[468] E.g., the China National Space Administration and the Office of Commercial Space Transportation in the United States.

[469] E.g., the Commercial Space Launch Act of the US; Commercial Space Launch Amendments Act of 2004, available at: https://www.congress.gov/bill/108th-congress/house-bill/5382.

[470] 1967 Outer Space Treaty, Art. 6.

[471] European Defence Agency, "SPACE", 21 September 2018, available at: https://eda.europa.eu/docs/default-source/documents/eda-information-sheet-on-space.pdf.

[472] David T. Burbach, "Early Lessons from the Russia-Ukraine War as a Space Conflict", *Atlantic Council*, 30 August 2022, available at: https://www.atlanticcouncil.org/content-series/airpower-after-ukraine/early-lessons-from-the-russia-ukraine-war-as-a-space-conflict/.

[473] Kari A. Bingen, Kaitlyn Johnson and Zhanna Malekos Smith, "Russia Threatens to Target Commercial Satellites", *Center for Strategic & International Studies*, 10 November 2022, available at: https://www.csis.org/analysis/russia-threatens-target-commercial-satellites.

are jointly and severally liable for any damage caused.[474] States must conduct activities in outer space with due regard to the corresponding interests of all other States.[475] If one private actor is recognized as being under governmental control, its conduct may be attributable to their launching State, thereby giving rise to State responsibility.[476] Launching States bear absolute liability for the damage caused by their space objects on the surface of the earth or to aircraft flight and the fault liability for damage caused elsewhere.[477] Even if one state may not be characterized as a party in armed conflicts,[478] it will still incur State responsibility if it knowingly aids or assists another in committing a serious violation of IHL, according to Article 16 of the 2001 Articles on Responsibility of States for Internationally Wrongful Acts (ARSIWA).

The other is the applicability of the IHL to outer space attacks by new or non-conventional weapons. In addition to traditional kinetic strikes, the methods of warfare involving outer space infrastructure have become increasingly diverse.[479] The confrontation involving outer space facilities usually employs more technological factors, such as cyber-attacks on satellites.[480] IHL requires contracting parties "to respect and to ensure respect for the present Convention in all circumstances."[481] This reflects the contracting parties' intention to broadly apply the Conventions, which gives it the capability of including all forms of armed conflicts

[474] 1972 Liability Convention, Art. 5.

[475] 1967 Outer Space Treaty, Art. 9.

[476] Draft Articles on Responsibility of States for Internationally Wrongful Acts (ARSIWA), 2001, Art. 8.

[477] 1972 Convention on International Liability for Damage Caused by Space Objects (1972 Liability Convention), Art. 2 and 3.

[478] In IHL, when referring to subjects of war, the terms "belligerent" and "party" are commonly used. "Party to the conflict" is the neutral and prevalent expression. For example, Article 2 Common to the Four Geneva Conventions provides: "the present Convention shall apply to all cases of declared war or of any other armed conflict which may arise between two or more of the High Contracting Parties, even if the state of war is not recognized by one of them." By contrast, "belligerent" originated from the Hague Conventions, referring to States formally in a declared state of war, such as the expression In Convention (V) respecting the Rights and Duties of Neutral Powers and Persons in Case of War on Land. The Hague, 18 October 1907.

[479] The U.S. Air Force classified attacks related to outer space into three categories: kinetic attacks (e.g., direct physical destruction), non-kinetic attacks (e.g., cyber interference), and the development of space-based weapons. This classification can be found in the Air Force Doctrine Publication 3–14, Space Support, U.S. Air Force, 1 April 2025, "Attack operations can be used to destroy, disrupt, or degrade adversary terrestrial segments and may be accomplished through kinetic or non-kinetic actions."

[480] Walter Peeters, "Cyberattacks on Satellites An Underestimated Political Threat", *London School of Economics and Political Science*, available at: https://www.lse.ac.uk/ideas/projects/space-policy/publications/Cyberattacks-on-Satellites.

[481] Art. 1 Common to the four Geneva Conventions.

that have and have not arisen, anticipated or unanticipated.[482] The provisions on new weapons in the Protocol Additional to the Geneva Conventions of 12 August 1949 and relating to the Protection of Victims of International Armed Conflicts (AP I) reflects precisely this inclusiveness.[483] The rules for precaution and limitation of methods and means of warfare have obtained the force of customary international law and therefore would apply in NIAC. The broad scope of application of IHL is also determined by its fundamental purpose, which is to mitigate the dangers of armed conflicts. It reflects human society's commitment to upholding the sanctity of human life and dignity. Therefore, IHL applies to all attacks in armed conflicts, no matter the techniques or tools of the attacks, as long as they pose significant risks to the near-earth environment or may cause damage to space's environment.

2.2. The Legal Nature of Outer Space in IHL

When discussing environmental protection, people instinctively think of terrestrial landscapes—plains, mountains, rivers, and oceans—where human populations and other living organisms exist. Compared with them, outer space presents a unique environment characterized by high vacuum, microgravity, extreme temperatures, space debris, ionospheric plasma, and exposure to ultraviolet and ionizing radiation. Its condition is vastly different from that of the Earth, making it uninhabitable. What constitutes outer space is yet to be settled. At present, the international community lacks a unified standard for outer space, and states rarely define it in official documents. The Woomera Manual of the international law of military space activities and operations, which is a summary of professional opinions like the Tallinn Manual on the International Law Applicable to Cyber Warfare in cyberspace,[484] mentioned the uncertainty regarding the definition of outer space. Its main focus is to delimit the airspace and outer space.[485] Based on the efforts for a universal consensus of the legal Sub-Committee of the UN Committee on the peaceful uses of Outer Space (UNCOPUS) of 1967, this manual points out the specialist approach and functional approach. Each approach connotes different criteria. One representative conclusion under the specialist approach is the Karman line, which is located between 83 or 84 kilometres (km) and 100 km.[486] The functional approach distinguishes based on the aeronautical and astronautical activities instead of making a physical demarcation. The paper takes the delimitation

---

[482] Dale Stephens and Cassandra Steer, "Conflicts in Space: International Humanitarian Law and Its Application to Space Warfare", *Annals of Air and Space Law*, Vol. 40, 2015, p. 10.

[483] E.g., AP I, Art. 49.3.

[484] Michael N. Schmitt (ed.), *Tallinn Manual on the International Law Applicable to Cyber Warfare*, Cambridge University Press, Cambridge, 2013.

[485] Jack Beard and Dale Stephens, *The Woomera Manual on the International Law of Military Space Operations* (Woomera Manual), Oxford University Press, 2024, p. 28.

[486] Committee on the Peaceful Uses of Outer Space Legal Subcommittee Sixty-first session, Vienna, 28 March–8 April 2022, Definition and delimitation of outer space Additional contributions received from States members of the Committee A/AC.105/C.2/2022/CRP.24.

of the Karman line and acknowledges the developing nature of the concept of outer space to retain the flexible extension of it.

The next question is whether outer space falls within the scope of the "environment" according to existing laws. The significance of this issue lies in the fact that if outer space does not fall within the "environment," then the general norm for environmental protection in IHL and customary international law will not be applied. Only the outer space law system, or any future specialized treaties concluded in this regard, can be applied. The geographic area in contemporary IHL usually refers to atmospheres such as the land, sea, or air, while outer space is not expressly included. The AP I merely introduces the term "natural environment" in Articles 35.3 and 55 without a clear definition. The Rome Statute does not specifically define the term as well.[487] However, Article 2 of the Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques (ENMOD) defines the natural environment as "the dynamics, composition or structure of the Earth, including its biota, lithosphere, hydrosphere and atmosphere, or of outer space."[488] Such express recognition indicates that a significant number of countries placed outer space within the scope of "environment" under IHL nearly fifty years ago.

Basically, outer space is part of the environment in international law. Although the concept of environment is subtly different in other branches of law,[489] it is generally recognized as a complex system of interconnections between human civilization and the natural world.[490] Through outer space, we enjoy global communication and navigation services, develop scientific research, monitor solar and meteorological, and conduct earth sensing for agriculture, the economy, and disaster relief, which are all crucial to human development. In the future, outer space may become a potential place for human settlement. Out of the apparent existence of "interconnections" between human living and outer space, protecting the space environment reflects "the common interest of all mankind,"[491] just like the natural environment within the atmosphere does. In most disciplines, outer space has been explicitly considered as part of the natural environment due to its close connection to human society. Article 3 of the 1967 Outer Space Treaty specifically obliges states to conduct space activities "in accordance with international law…in the interest of

---

[487] Rome Statute, Art. 8.2(b)(iv): Other Serious Violations of the laws and customs applicable in international armed conflicts, "Intentionally launching an attack in the knowledge that such attack will cause incidental loss of life or injury to civilians or damage to civilian objects or widespread, long-term and severe damage to the natural environment which would be clearly excessive in relation to the concrete and direct overall military advantage anticipated."

[488] ENMOD, Art. 2.

[489] ILC, "Second Report on Protection of the Environment in Relation to Armed Conflicts by Special Rapporteur Marja Lehto", 27 March 2019, A/CN.4/728, pp. 82–86.

[490] *Ibid*., para. 196.

[491] 1967 Outer Space Treaty, Preamble.

maintaining international peace and security and promoting international cooperation and understanding."[492]

More specifically, outer space belongs to the environment in IHL. According to the Vienna Convention on the Law of Treaties (VCLT), provisions shall be interpreted "in accordance with the ordinary meaning," in consideration of the context as well as the object and purpose.[493] There is sometimes a blurred but always non-negligible boundary between the interpretation and development of international law. Generally, in determining whether an understanding of a legal text crosses the boundaries of legal interpretation, it should be examined whether it is contrary to the purpose of the contracting parties in making the provision or exceeds its maximum extension possible. For example, if an international legal rule aims to protect all plants in the oceans, an emerging species of maritime plant, although undiscovered by all contracting parties by the time of its making, could be interpreted into the scope of the treaty. Conversely, protecting a new species of maritime animal will be rejected.[494]

Moreover, the ICRC Commentary to the Additional Geneva Protocols (1977) observes that "the concept of the natural environment should be understood in the widest sense to cover the biological environment in which a population is living."[495] The ILC also noted that the concept of the natural environment is inherently malleable due to the growing awareness of human society and the changing nature of the environment *per se*.[496] In this case, there appears to be no basis for arguing that the IHL's environment deviates from the ordinary understanding of international law and specifically excludes outer space.

In general, the "environment" in IHL is considered to be expandable for the sustainable development of human society. The meaning given to the term "natural environment" in the context of IHL should be understood as broadly as possible.[497] The ICRC guidelines share this systemic interpretation and further argue that the concept of "natural environment" in IHL includes everything that exists naturally

---

[492] 1967 Outer Space Treaty, Art. 4.

[493] VCLT, Art. 31.

[494] Xidi Chen and Qi Xu, "Mitigating Effects of Sea-level Rise on Maritime Features through the International Law-making Process in the Law of the Sea", *Frontiers in Marine Science*, Vol. 9, 2022.

[495] Commentary on the Additional Protocols of 8 June 1977, p. 662.

[496] Andrew S. Goudie, *The Nature of the Environment,* 4th ed., Wiley-Blackwell, Oxford, 2001, p. 503.

[497] Yves Sandoz, Christophe Swinarski and Bruno Zimmermann (eds.), Commentary on the Additional Protocols of 8 June 1977 to the Geneva Conventions of 12 August 1949, ICRC (1986), 20 May 2016, para. 2126, p. 662, available at: https://www.legal-tools.org/doc/6d222c/; Jean-Marie Henckaerts, Dana Constantin "Protection of the Natural Environment", in Andrew Clapham and Paola Gaeta (eds.), *The Oxford Handbook of International Law in Armed Conflict,* Oxford University Press, Oxford, 2014, p. 471; Cordula Droege and Marie-Louise Tougas, "The Protection of the Natural Environment in Armed Conflict: Existing Rules and Need for Further Legal Protection", *Nordic Journal of International Law*, 01 January 2013, p. 25.

and rejects the setting of an unnecessarily strict threshold.[498] To minimize collateral damage in armed conflicts, the functional approach to identifying the "environment" has gained acceptance.[499] These comments again prove that it is the interactions with human life and the benefits provided that are important for the outer space being regarded as a part of the environment, not the presence of a particular "element."

2.3. The Factors Influencing Interpretation

The focus of our discussion is not on creating new Outer Space responsibilities for States, but on interpreting existing international law to fit the characteristics of the outer space environment. We address this question in two parts: first, by analysing the characteristics of outer space, and second, by explaining how these characteristics influence the interpretation of international obligations.

2.3.1. The Characteristics of Space Environment

The outer space environment is particularly fragile. Human activities and unrestrained military activities may lead to significant and long-term damage to it. For example, the use of destructive weapons against one particular space facility would result in space debris. This creates a risk to other space facilities and will take up a number of available orbits for prolonged periods of time. Consequences of space warfare present potential damage on Earth, leading to a risk of damage on the ground or in the air for all nations below the trajectories of both damaged satellites and the debris. The Kessler syndrome, which is a theoretical scenario that a sufficient mass of space debris can launch a self-sustaining, harmful cycle of further and further impacts against space objects, damaging the environment even more.[500]

Therefore, the same technique or tool for attack will have different effects when used in outer space and on Earth. A missile attack of a certain yield, for instance, which happens within the atmosphere, may not cause much damage to the surrounding environment, but the consequences of the explosion it triggers may be significant if it occurred in outer space. Such differences can systematically affect the legal obligations and liabilities of belligerents in multiple aspects. Because of the

---

[498] ICRC, Guidelines on Protection of Natural Environment in Armed Conflict, Rules and Recommendations relating to the Protection of the Natural Environment under International Humanitarian Law, with commentary, 2020, paras.15–17, available at: 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.

[499] Michael N. Schmitt, "Green War: An Assessment of the Environmental Law of International Armed Conflict", *Yale Journal of International Law*, Vol. 22, 1997, p. 5.

[500] Mike Wall, Kessler, "Syndrome and the Space Cebris", *Space*, 15 July 2022, available at: https://www.space.com/kessler-syndrome-space-debris.

potential damage, academia has emphasized the role of IHL in mitigating direct and collateral damage from possible armed conflicts in outer space.[501]

For the outer space environment, protection is more important than governance. The space orbits, especially at specific distances, are limited and are a scarce resource.[502] At present, the lack of effective methods of recovery and removal means that debris, chemical substances, and radiation will continue to have a long-standing impact on the availability of outer space orbits. Further, uncontrolled outer space debris could cause damage to satellites and astronauts or even trigger a chain reaction that could lead to more debris, especially with the increasingly dense deployment of outer space facilities. Finally, outer space facilities, such as communications satellites, often operate as multi-unit systems. Damage to individual facilities can constitute a significant impediment to the entire system, affecting its function of supporting people's lives and production. This requirement of protecting the space environment is in accordance with the function of IHL. This connection explains why IHL is at the centre of outer space protection.

2.3.2 . The Influence on Interpretation

Over the past 50 years, international law regarding environmental protection in armed conflicts has been increasingly developed, and specific rules were successively incorporated into three major legal documents in this field, i.e., ENMOD, AP I, and the Rome Statute. Among them, the AP I prohibits States from employing methods or means of warfare "to cause widespread, long-term and severe damage to the natural environment", and it was widely accepted as a core provision for the environmental obligations under IHL after its adoption.[503] The Rome Statute adopts a similar rule, but incorporates the subjective element and proportionality requirements.[504] ENMOD is intended to prohibit States from using environmental modification techniques that can have widespread, long-lasting, or severe effects as the means of destruction, damage, injury, or "assist, encourage, or induce" such activities.[505]

Despite divergences about the meaning of similar terminologies, "widespread, long-term and severe damage" and "widespread, long-lasting or

---

[501] Steven Freeland, "In Heaven as on Earth? The International Legal Regulation of the Military Use of Outer Space", *US-China Law Review*, Vol. 8, 2011, pp. 272–287; Caitlyn Georgeson and Matthew Stubbs, "Targeting in Outer Space: An Exploration of Regime Interactions in the Final Frontier", *The Journal of Air Law and Commerce*, Vol. 85, 2020, pp. 623–628.

[502] World Economic Forum, Global Risks Report 2022, Chapter 5, available at: https://www.weforum.org/reports/global-risks-report-2022/in-full/chapter-5-crowding-and-competition-in-space.

[503] AP I, Art. 35.3.

[504] Rome Statute, Art. 8.2(b)(iv).

[505] ENMOD, Art. 1.

severe" since their negotiations,[506] some basic consensus can be found in this regard.[507] In terms of "widespread," a potential impact of several hundred square kilometres is considered sufficient under the two norms. And a duration of more than ten years is satisfactory to most commentators, both for "long-term" and "long-lasting."[508] The terms "serious" and "severe" are sometimes ambiguous, but normally cover the disruption or damage to the natural environment on a large scale.[509] Although the three legal instruments mentioned above may differ in their purposes, armed conflicts in and about outer space are likely to cross the "most lenient standard" set by IHL, taking into account the characteristics of the space environment and human activities there.

Due to the lack of air resistance and gravity, the debris from any type of attack can be expected to cause unpredictable damage, including the immediate risk to other facilities and astronauts, as well as the indirect impact of orbital occupation on future uses of outer space, on a scale well beyond "a few hundred square kilometres."[510] For example, the generation of very large clouds of orbital debris could easily satisfy the requirement of time and severity. In the absence of special circumstances, the debris will remain in outer space for decades or even permanently, causing environmental damage.[511] In outer space, a single small-yield missile attack could cause "widespread, long-term, and severe" environmental damage, thereby exposing the attacking party to state responsibility for violations of paragraph 1, Article 55 of AP I, and the use of most kinetic energy weapons, as the means and methods of warfare, are in the legal risk.[512] In fact, even if a non-kinetic attack is used to cause other belligerents to lose control of their outer space facilities, it could lead to collisions with other objects and ultimately cause similar collateral damage to the natural environment.

The unique nature of the outer space environment makes activities in outer space more likely to constitute violations of IHL rules on environmental protection as compared to those of similar intensity conducted in the traditional environment and expose States to potential breaches of obligations. It means that some environmental obligations of States are to some extent "enhanced" in conducting

---

[506] Jean-Marie Henckaerts and Louise Doswald-Beck (eds.), *ICRC Study on Customary International Humanitarian Law*, Cambridge University Press, New York, Vol. I, 2009, pp. 151–158.

[507] Countries have incorporated this criterion into their military operation manuals. Federal Ministry of Defence of Germany, the Joint Service Regulation on Law of Armed Conflict, para. 436, available at: https://www.bmvg.de/resource/blob/93610/ae27428ce99dfa6bbd8897c269e7d214/b-02-02-10-download-manual-law-of-armed-conflict-data.pdf.

[508] Official Records of the Diplomatic Conference of Geneva of 1974–1977, Vol. XV, CDDH/215/Rev. I, para. 27.

[509] UNEP, Protecting the Environment during Armed Conflict: An Inventory and Analysis of International Law, p. 52. *See*, Federal Ministry of Defence of Germany, above note 62, para. 403.

[510] Nickolay N. Smirnov, Space Debris: Hazard Evaluation and Debris. CRC Press, London, 2001, pp. 1–16.

[511] Shenyan Chen, "The Space Debris Problem", *Asian Perspective*, Vol. 35, No. 4, 2011, pp. 537–558.

[512] AP I, Art. 35.3 and 55.1.

military activities in outer space as compared with regular military activities. Belligerents must be cognisant of their international legal obligations before conducting operations in or related to outer space.[513] In this sense, the potential environmental and legal consequences of warfare normally considered "conventional" must be more closely scrutinized.

III. State Obligations in Outer Space

This section examines applicable provisions in the context of outer space in relation to existing environmental obligations. They include specific norms dedicated to the protection of the environment in armed conflict, as well as more general norms from a broader scope, which can be used to directly control or indirectly implicate damage to the space environment from armed conflicts. In the available system of provisions, IHL is the main force to realize the aim of environmental protection.

3.1. Specific Environmental Obligations in IHL

States hold divergent views as to whether the specific environmental obligations in IHL reflect customary international law, with some States having explicitly denied that these articles embody customary international law.[514] The view of the ICRC is that this obligation of API still is customary international law, while rejections and reservations of some states could be evidence of "persistent dissenters."[515] Same as the ENMOD, it cannot be assumed that the signature of the majority of countries automatically confers on the obligations the force of customary international law to be applied to the entire international community. The three specific environmental obligations in IHL in this part mainly apply to states that are party to the respondent treaty. For NIACs or non-party States, these obligations (subject to their recognition as customary international law) serve primarily as guidance for conduct and rely on the voluntary compliance of the belligerents.

Prohibition on widespread, long-term, and severe damage. Articles 35.3 and 55.1 of AP I provide for this prohibition. It means that once the belligerent causes "widespread, long-term, and severe damage," they will not be able to invoke considerations of military necessity or proportionality to argue that their conduct does not constitute an international wrongful act.[516] These three conditions are conjunctive. Only in the circumstance that all of them are met is one hostile activity

[513] It does not mean that all environmental obligations are automatically applicable to armed conflicts in outer space.

[514] Related practices include the United States, which has not accepted the provisions due to their broad scope, and France and the United Kingdom, which are disputing the application of the rule to the use of nuclear weapons. *See* ICRC, Guidelines on the Protection of the Natural Environment in Armed Conflicts (2020) and the Woomera Manual pp. 373–375.

[515] *Ibid*., Woomera Manual, p. 374.

[516] ICRC, Guidelines on protection of natural environment in armed conflict, para. 49.

conducted by a belligerent regarded as violating this norm.[517] Some countries have sought to read down this regulation. For example, Germany claimed that only damage to the natural environment that "significantly" exceeds what any kind of normal combat can cause will be determined as a violation of the prohibition.[518] Because of this, some voices note that this threshold may be set too high to exempt belligerents from state responsibility most of the time, except for those most extreme and reckless actions.[519]

Prohibition on environmental modification techniques is widespread, long-lasting, and has severe effects. [520] The term "environmental modification techniques" specifically refers to techniques for deliberately manipulating natural processes.[521] Compared with the prohibition on widespread, long-term, and severe damage under AP I or the Rome Statute, this norm in ENMOD is intended to identify accountability by methods and means of actions.[522] A state's use of environmental modification techniques, which satisfy all three conditions, i.e., widespread. long-lasting and severe, in an armed conflict, would lead to state responsibility. For example, the U.S. Air Force's Project Popeye aimed to disrupt North Vietnamese supply lines by extending the monsoon season over specific areas of the Ho Chi Minh Trail from 1967 to 1972, during the Vietnam War. This project was conducted before the ENMOD took effect in 1977 and was regarded as promoting the conclusion of the treaty.[523]

In the modern sense, ENMOD only applies to the State Parties but is not customary international law. However, its advantage is that the scope of the ENMOD Convention is not limited to the conduct of armed conflicts but extends to militarized actions, including space capability tests and effects experiments. At present, the weaponization of the space environment, such as exploiting natural phenomena or modifying asteroid orbits for offensive purposes, remains theoretical but demands scrutiny.[524] If a state to the Convention conducts outer space satellite experiments that violate its provisions, it should bear legal consequences.

---

[517] ICTY, Final Report to the Prosecutor by the Committee Established to Review the NATO Bombing Campaign Against the Federal Republic of Yugoslavia, paras. 16–17.

[518] Federal Ministry of Defense of Germany, the Joint Service Regulation on Law of Armed Conflict, para. 453.

[519] Karen Hulme, *War-torn Environment*: *Interpreting the Legal Threshold*, Brill, Leiden, 2004, pp. 292–293.

[520] This rule also shows in the 1967 Outer Space Treaty, Art. 4 and 9: 1979 Moon Agreement, Art. 7.

[521] ENMOD, Art. 2.

[522] Vincze, Viola, "The Role of Customary Principles of International Humanitarian Law in Environmental Protection", *Pecs Journal of International and European Law*, No. 2, 2017, p. 35.

[523] Pamela McElwee, "The Origins of Ecocide: Revisiting the Ho Chi Minh Trail in the Vietnam War", *Environment & Society Portal*, 2020, available at: https://www.environmentandsociety.org/arcadia/origins-ecocide-revisiting-ho-chi-minh-trail-vietnam-war.

[524] For example, the deflection technology of the small solar system body (SSSB) and the "Ivan's Hammer" projects. Related research proved that SSSBs are not an operationally useful class of

Prohibition of using the destruction of the natural environment as a weapon. This prohibition from Article 55.2 of AP I states that attacks against the natural environment by way of reprisals are prohibited. In addition to the obligation under ENMOD to avoid the use of environmental modification techniques that have serious effects, States are prohibited from using the destruction of the natural environment as a tactic or method of warfare under customary international law.[525] This prohibition prohibits the belligerent from specifically aiming to destroy the natural environment. The difference between this obligation and the ENMOD obligation is that it prohibits the destruction of the environment as a consequence, as opposed to being a tool. The term "destruction" is also understood as serious environmental damage. Whether a state violates the rule is also subject to discussion under other rules, including the principles of proportionality or distinction. If States were to sabotage outer space orbits with large amounts of debris or radioactive materials to impede the enemy's deployment of its facilities in outer space, such an operation may fall under the scope of the prohibition on environmental modification techniques.

3.2. General Environmental Obligations in IHL

Besides specific norms that are geared toward environmental damage control, general norms with a wider scope of application can contribute to the protection of the environment during armed conflicts in outer space, through direct application or interpretation, or as "references" for the development of relevant legal rules. Those provisions highlight the precautions and the limitations of means and methods of warfare in and before attacks. They are generally accepted as customary international law.[526] Given the vast number of general norms that may be applicable, this paper only delves into those that are significant at the current stage.

Prohibition on indiscriminate attacks. Article 51.4 of AP I prohibits indiscriminate attacks, which do not distinguish between military targets and civilians, and encompass three specific patterns: "a) those which are not directed at a specific military objective; b) those which employ a method or means of combat which cannot be directed at a specific military objective; or c) those which employ a method or means of combat the effects of which cannot be limited as required by this Protocol." Outer space, like other kinds of environment, is a civilian object, making indiscriminate attacks on this area a violation of the prohibition.[527] This means that belligerents shall not strike military objectives blindly, uncontrollably, or

---

weapons. *See* Christian Ruhl, "Why We Don't Worry About Asteroid Weapons: Assessing the Risks of Dual-Use SSSB Deflections", *Founders Pledge*, 5 December 2024, available at: https://www.founderspledge.com/research/why-we-don-t-worry-about-asteroid-weapons?utm_source.

[525] Jean-Marie Henckaerts and Louise Doswald-Beck (eds.), above note 61, p. 439.

[526] The Woomera Manual, Sections 3 and 4.

[527] Jean-Marie Henckaerts and Louise Doswald Beck (eds.), above note 61, pp. 144–146.

indiscriminately, with no regard to the potential damage to the outer space environment.[528]

At the same time, paragraph 2 and paragraph 3 of this Article restrict the method or means of combat, in particular by prohibiting weapons that are deemed incapable of being directed at specific military targets or whose consequences cannot be effectively limited as prescribed. In conventional warfare, the objects prohibited by this provision are relatively clear, mainly including chemical weapons, biological weapons, or cluster bombs. The question of what means or methods should be prohibited in the context of hostilities in outer space seems more difficult because of the lack of experimentation and valid assessments, but weapons that potentially cause large amounts of uncontrollable outer space debris or other space junk are likely to be relevant to the prohibition.

Principle of distinction. The rule of distinction between civilian and military objectives, as well as between civilians and combatants, is one of the oldest and most fundamental norms of customary international law in IHL. The principle of distinction can complement the normative gaps beyond the "absolute prohibitions." Before deciding on a military operation in outer space, the parties should identify the legal status of the objects involved and confirm that it has been or will be used for military purposes.[529] This not only contributes to avoiding attacks on civilian objects but also reduces collateral damage to the environment. Just as an entire forest cannot be considered a military target because a small force is stationed in it, so an orbit cannot be considered a military target because one or several military installations exist. Given the length of the outer space orbit, it is difficult to imagine any orbit being so fully used militarily as to be considered a military target. Thus, the preliminary observation is that all military actions aimed at destroying the availability of an orbit are likely to violate this rule.[530]

Principle of proportionality. Article 51 of AP I prohibits indiscriminate attacks and protects the civilian population. It is prohibited to launch an attack against a military objective if the expected incidental damage to the environment, including the natural environment, would be excessive in relation to the concrete and direct military advantage anticipated.[531] Belligerents shall, as a matter of priority, consider whether alternative means exist to achieve the military advantage obtained through kinetic strikes against space objects in armed conflict. When seeking to interfere with satellite communications, if the same objective can be achieved by targeting ground-based infrastructure, then direct attacks on space assets should not be conducted. This rule can be seen as complementary to other principles, like the military necessity principle, when applied in outer space, and is also frequently used in the application of other principles, like the precaution principle in Article 57 AP I. There is no established approach in assessing whether the potential environmental damage is

[528] *Ibid*., p. 143.

[529] *Ibid*., pp. 29–32.

[530] AP I, Art. 52.2.

[531] ICRC, Guidelines on Protection of Natural Environment in Armed Conflict, Rule 7.

excessive in outer space armed conflict, and the answer may still be a case-by-case approach and rely on the accumulation of precedents.[532]

Principle of precaution. The attacking party is required to take all possible precautions to avoid or minimize damage to the natural environment as a civilian object.[533] Specifically, belligerents should assess the potential damage to the outer space environment before conducting military activities and consider whether it is excessive in relation to the anticipated military advantage and, if so, cancel or suspend the attack; take all possible measures to avoid or minimize collateral damage when selecting means and methods of attack; and take into account the respective potential environmental impacts when selecting alternative military targets with the similar military advantage.[534]

Secondly, belligerents are required to take all feasible precautions to protect the environment "under their control against the dangers resulting from military operations."[535] The application of this principle in outer space can be difficult because of the difficulty of identifying which areas of outer space are under the control of belligerents. Of particular note, the expression "take all feasible precautions" in the rule implies that effective warning of attacks that may affect the natural environment should be given, unless circumstances do not permit, so that measures can be taken in a timely manner to protect the natural environment. Although this is not explicitly established as an obligation, it may be of significant value in the outer space environment, especially given that other outer space facilities require sufficient time to take evasive action to avoid further expansion of collateral damage.

Martens clause. The Martens Clause stipulates that a belligerent must be guided by the "laws of humanity" and "the dictates of public conscience" in cases where there are no established or applicable rules to follow.[536] Despite the fact that a range of international laws govern armed conflicts and so encompass armed conflicts in or related to outer space, the potential for environmental devastation resulting

---

[532] ICTY, Final Report to the Prosecutor by the Committee Established to Review the NATO Bombing Campaign Against the Federal Republic of Yugoslavia, paras. 19–20; Laurent Gisel (ed.), *The Principle of Proportionality in the Rules Governing the Conduct of Hostilities under International Humanitarian Law: International Expert Meeting 22–23 June 2016*, ICRC, 2018, pp. 52–65; Vincze Viola, "The Role of Customary Principles of International Humanitarian Law in Environmental Protection", *Pécs Journal of International and European Law - 2017/II,* No. 2, 2017, p. 26.

[533] Jean-Marie Henckaerts and Louise Doswald Beck (eds.), *Customary International Humanitarian Law*, Vol. I, Rule 15 and commentary, p. 51, available at: https://ihl-databases.icrc.org/customary-ihl/eng/docs/v1_rul_rule15 and related practice.

[534] Cordula Droege and Marie-Louise Touges, "The Protection of the Natural Environment in Armed Conflict: Existing Rules and Need for Further Legal Protection", *Nordic Journal of International Law,* 2013, 82(1), p. 34.

[535] AP I, Art. 58.1(c).

[536] AP II, Preamble. *See* the commentary to Art. 18 of the Articles on the Law of Transboundary Aquifers, *Yearbook of the International Law Commission 2008*, Vol. II, Part Two, paras. 53–54.

from future conflicts in outer space is unpredictable. Given the vital importance of outer space to the current and future development of humanity, States and other entities must recognize the significance of preserving and protecting the space environment and must act accordingly by refraining from any military activity that could undermine the exploration and utilization of outer space.

Due regard. In various branches of international law, such as the law of the sea and international environmental law(IEL), the term "due regard" is often used to describe a general obligation to include certain factors in the application of legislation, policy—making, or enforcement, and it is often connected with due diligence in the process of legal interpretation.[537] Under IHL, States are also required to give due regard to the natural environment in armed conflicts, which specifically includes "constant care" for the environment as well as preventing or reducing the damage with all measures.[538] In the advisory opinion on *the legality of the threat or Use of Nuclear Weapons*, the ICJ confirmed that states shall take environmental considerations into account when assessing what is necessary and proportionate in the pursuit of legitimate military objectives.[539]

In the context of armed conflict in outer space, when determining whether States have given "due regard" to the environment, we must consider whether they have acted in conformity with the specific norms described above, as well as general norms, including the principles of distinction, proportionality, and precaution in good faith. Simultaneously, the implementation of measures geared toward environmental protection and conservation above and beyond legal requirements can also be regarded as a demonstration of its compliance with the due regard rule, for example, taking measures to recycle space junk from attacks.[540]

3.3. Obligations of International Law in Peacetime

International law in peacetime is not terminated or suspended during an armed conflict, even though its application ultimately depends on a variety of factors.[541] The ILC 2011 draft states that the applicability of a treaty during an armed conflict depends on the provisions of the relevant articles of the treaty, as well as the nature of the normative content.[542] Given that most treaties do not explicitly negate the applicability in armed conflicts, their provisions may be applied among contracting parties as long as they are relevant to a particular armed conflict.[543] As for customary

---

[537] Bernard H. Oxman, "The Principle of Due Regard", In the Contribution of the International Tribunal for the Law of the Sea to the Rule of Law: 1996–2016, Brill Nijhoff, Leiden, 2018, pp. 108–117.

[538] ICRC, Guidelines on Protection of Natural Environment in Armed Conflict, Rule 8.

[539] ICJ, Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion of 8 July 1996, para. 30.

[540] ICRC, Guidelines on Protection of Natural Environment in Armed Conflict, paras. 44–45.

[541] *Ibid*., para. 26.

[542] ILC, Draft Articles on the Effects of Armed Conflicts on Treaties, Art. 3–6.

[543] Dale Stephens, "The International Legal Implications of Military Space Operations: Examining the Interplay between International Humanitarian Law and the Outer Space Legal Regime", *International Law Studies*, Vol. 94, p. 75.

rules, their applicability depends on the existence of relevant state practice and whether they are generally accepted as legal obligations.

In particular, obligations of international law in peacetime function in times of tension and crisis. Space now is increasingly congested, and as States' diverse interests in the use and exploration of space continue to expand, the likelihood of disputes arising correspondingly grows. In the situations of tension and crisis, a response must begin with an accurate legal characterization of the unfriendly act of another party, followed by an assessment of the appropriate and legally available measures. [544] How to define the severity of environmental damage is still conventional, since the traditional assessment is based on the environmental damage's impacts on human survival, health, or the ecosystem, and the form of damage. The excessive uncertainty about the legal risks of relevant military operations thereby detracts from the effectiveness of IHL. Obligations of international law in peacetime can make up this gap.

3.3.1 International Environmental Law

IEL can still contribute to the protection of the space environment in armed conflicts. IEL can provide materials for the proper interpretation of the rules of wartime environmental protection. Although the rules of environmental protection in armed conflict were separated from IEL and have been developed over the past few decades, they still rely heavily on the established rules of IEL, particularly the related concepts or norms. For example, AP I prescribes the prohibition of inflicting "widespread," "long-term," and "severe" damage[545] to the natural environment, without further clarifying the language used. IEL provides the "ordinary meaning" or constitutes the "context" for the interpretation of wartime environmental damage, as VCLT puts it. More specifically, its contents appear to naturally serve as a persuasive explanation, only to be considered for deviation when more persuasive reasoning arises. In such scenarios, IEL can supply or elaborate, in the process of legal interpretation, on the protection of the space environment under IHL.[546]

IEL can also be used as a guide for the development of rules on protecting the space environment in armed conflicts. IEL is developing into a comprehensive and increasingly meticulous branch of international law. It has established criteria and procedural rules for evaluating and determining the extent of environmental damage through various legal documents, the accumulation of state practice, and international adjudications. According to IEL, States are obligated to prevent, reduce, and control contamination, conduct regional or international cooperation, and take the precautionary approach. These rules have important implications for the further development of an environmental protection regime for outer space in IHL. Furthermore, from an interdisciplinary perspective, the provisions of environmental

[544] Woomera Manual, pp.153–226.

[545] AP I, Art. 35.3.

[546] ILC, "Second Report on Protection of the Environment in Relation to Armed Conflicts by Special Rapporteur Marja Lehto", 27 March 2019, A/CN.4/728, paras. 182–183.

protection lie at the intersection of IHL and IEL, influenced by both. Regarding control of the environmental damage in outer space, the appropriate introduction of the "stringent" requirements and standards of IEL could balance the vulnerability caused by the secondary status of the environment in the IHL mechanism, which will be further discussed below.

3.3.2 Outer Space Law

If only seen from the sources of international law in Article 38 of the ICJ Statute, the global regulations for outer space are still the five treaties of the UN done in the 1970s, including the 1967 Outer Space Treaty, 1968 Rescue Agreement, the Convention on International Liability for Damage Caused by Space Objects (1972 Liability Convention), Convention on Registration of Objects Launched into Outer Space (1975 Registration Convention), and the Agreement Governing the Activities of States on the Moon and Other Celestial Bodies (1979 Moon Agreement).[547] In addition, regional legislation and soft-law documents have played an important role in outer space regulation. These documents may not be completely concluded for community interests, but for the convenience of regulation or satisfying the requirements of the most affected countries, like the United States-led Artemis Accords.[548] Our discussion is grounded in the five core UN space treaties, as they represent the most inclusive multilateral consensus to date, ensuring broad participation and negotiation among member states.

Article 1 of the 1967 Outer Space Treaty mandates state parties to act "for the benefit and in the interests of all countries," and that outer space "shall be the province of all mankind."[549] Article 9 stipulates that contracting states to "pursue studies of outer space, including the Moon and other celestial bodies, and conduct exploration of them to avoid their harmful contamination."[550] This article also established the principle of due regard to control the adverse changes to the near earth environment. Because the debris resulting from weapon tests and actual use in combat constitutes a similar danger, China brought up that they can be seen as a phenomenon "which could constitute a danger to the life or health of astronauts.[551] The 1967 Outer Space Treaty, as a product of the 1960s and the era of

[547] The traditional source of international law refers to which in Article 38 of the ICJ Statute. The year mentioned here is the year that the treaty opened for signature. More information about the five treaties and related principles, please refer to the United Nations Office for Outer Space Affairs, Space Law Treaties, and Principles, available at: https://www.unoosa.org/oosa/en/ourwork/spacelaw/treaties.html.

[548] Artemis Accords, available at: https://www.state.gov/bureau-of-oceans-and-international-environmental-and-scientific-affairs/artemis-accords/.

[549] 1967 Outer Space Treaty, Art. 1.

[550] 1967 Outer Space Treaty, Art. 9.

[551] A/AC.105/1262 – Note verbale dated 3 December 2021 from the Permanent Mission of China to the United Nations (Vienna) addressed to the Secretary-General, available at: https://www.unoosa.org/oosa/oosadoc/data/documents/2021/aac.105/aac.1051262_0.html.

decolonization, places a clear value on equal access to space resources, without discrimination on any basis. It specifically includes the denial of the "first-come-first-served" principle, which could allow the developed states to enjoy the clear, pristine environment of the original space, and leave a much contaminated, damaged environment to the developing countries.

Although a limited number of States signed the 1979 Moon Agreement, it is a legal document with influence as the only treaty particularly for one extraterrestrial body.[552] In Article 3, the Moon shall be used by all States Parties exclusively for peaceful purposes. Any threat, use of force, hostile act, or threat on the moon is prohibited. Article 7 requests States to avoid harmful effects to the moon and inform the Secretary-General of the United Nations of potential harmful operations like placing radioactive material on the moon.[553] In particular, the 1979 Moon Agreement defines the meaning of harmful contamination on the moon. It reads as "prevent the disruption of the existing balance of its environment."[554] This definition can be applied to similar situations in other parts of Outer Space, including Earth orbits, before a unified definition is settled down.

The 1972 Liability Convention elaborates on rules and procedures concerning liability for damage and remedy.[555] The convention establishes a framework for addressing liability issues arising from space activities and the potential damage caused by space objects. Under the convention, launching States bear absolute liability for any damage caused by their space objects to other States or their space objects. This liability extends to both governmental and non-governmental entities. The convention provides a mechanism for resolving disputes through consultation and negotiation, emphasizing the peaceful resolution of conflicts related to space activities. With the continued growth of space exploration and utilization, the Convention on International Liability for Damage Caused by Space Objects remains a cornerstone in shaping the legal landscape governing international space activities and ensuring accountability for potential damages.

In summary, IHL is considered of essential importance to control potential environmental damage to outer space. States and international organizations should work together to adapt IHL to the characteristics of outer space and further develop the legal regime. In practice, belligerents may reject IHL for being too vague or unsuitable for armed conflicts in outer space. In this case, it is significant to see the interaction between IHL and legal norms in peacetime. The IEL and the outer space law could provide a reference for interpreting and applying IHL rules.

IV. State Compliance with Environmental Obligations

---

[552] There are 11 signatories of 2025, available at: https://treaties.un.org/Pages/ViewDetails.aspx?src=IND&mtdsg_no=XXIV-2&chapter=24&clang=_en.

[553] 1979 Moon Agreement, available at: https://www.unoosa.org/pdf/gares/ARES_34_68E.pdf.

[554] 1979 Moon Agreement, Art. 7.

[555] 1972 Liability Convention, Preamble.

Having analysed provisions on environmental protection and examined how the unique characteristics of the outer space environment may affect their application, we proceed to consider methods to encourage States to accept and comply with these obligations. State engagement and coordination are crucial for ensuring the sustainability of outer space. Meanwhile, scholarship in IEL is undergoing a shift toward critiquing anthropocentrism, a perspective that stands in contrast to nature-centrism (eco-centrism).[556] The existing framework of outer space protection is largely human-oriented, primarily aimed at ensuring exploration and use of outer space rather than its protection. This part explores the possible approach to balance nature-centrism with national interests.[557]

Within the United Nations system, the International Telecommunication Union (ITU) coordinates global radio frequencies, satellite orbits, and communication standards. In accordance with the 1975 Registration Convention, launching States report their launch plans and activities to the United Nations Office for Outer Space Affairs (UNOOSA). Although not all UN member States have acceded to the unified regulatory framework for outer space, they often engage in mutual cooperation driven by pressing security considerations.

4.1. Difficulties of Compliance

Parties in specific armed conflicts tend to prioritize immediate military advantage over environmental considerations. Attempts to damage the environment and natural resources as a strategy of war against a formal enemy or as a means of instilling terror have been quite common throughout history. For example, the deliberate burning of Kuwaiti oil wells as a tactic caused catastrophic marine damage during the 1991 Gulf War.[558] The allocation of resources to military capabilities in outer space still constitutes a significant portion of the budgets of major powers.[559] Although these actions are taken to increase defensive ability, they have increased

---

[556] Vito de Lucia, "Beyond Anthropocentrism and Ecocentrism: A Biopolitical Reading of Environmental Law", *Journal of Human Rights and the Environment*, Vol. 8, No. 2, September 2017, pp.181–202.

[557] Yannick Radi, "ESIL Reflection – Clearing up the Space Junk – On the Flaws and Potential of International Space Law to Tackle the Space Debris Problem", *European Society of International Law*, Vol. 12, Issue 2, available at: https://esil-sedi.eu/esil-reflection-clearing-up-the-space-junk-on-the-flaws-and-potential-of-international-space-law-to-tackle-the-space-debris-problem/.

[558] Olof Linden, Arne Jernelov and Johanna Egerup, "The Environmental Impacts of the Gulf War 1991", *International Institute for Applied Systems Analysis*, pp. 8–9, available at https://pure.iiasa.ac.at/id/eprint/7427/1/IR-04-019.pdf.

[559] Take an example, in the published 2025 defence budget of the Department of Defence of the United States, their budget for Space Force reaches up to 29.6 billion US dollars to integrate multiple subjects and capabilities to form a joint force. To realize this target, 3.1 billion dollars was added to develop space domain awareness, space data network, missile warning and tracking, and space control. *See* more Under Secretary of Defense, available at: https://comptroller.defense.gov/Budget-Materials/.

the risk of militarization of the outer space environment. Despite the existence of normative frameworks, the outer space environment is still vulnerable.

Moreover, the international community lacks scientific conclusions and a basic consensus to interpret environmental obligations in outer space. This is primarily because States differ in their space capabilities and potential impact on their near-Earth environment from outer space activities. Most of the essential communications meteorological satellites are in geostationary orbits directly above the equator.[560] The orbital mechanics render the equatorial region disproportionately vulnerable to space-based environmental hazards. The equatorial orbital resonance phenomenon, driven by complex interactions between terrestrial rotation and gravitational forces, creates persistent debris accumulation zones—most prominently the geosynchronous orbital debris belt.[561] Compounding these physical vulnerabilities, the equatorial ionosphere exhibits particular susceptibility to electromagnetic interference due to the unique atmospheric and magnetospheric conditions.[562] This creates additional difficulties for space situational awareness and collision avoidance. However, the equatorial States, which are the most exposed to space environmental hazards, typically possess limited space capabilities.[563] The number of military satellites of the US exceeds that of the tenth-ranked space power by an order of magnitude.[564] This technological asymmetry comes with profound implications for obligation attribution. This capacity gap severely impedes timely debris detection and mitigation, creating unacceptable risks to near-Earth environmental security.

Besides, the interpretation of articles shall guide subsequent agreements, relevant rules of international law and practice between the parties regarding the obligations under various treaties and instruments.[565] However, the proper approach toward balancing the direct military advantage that may be derived from attacking targets in outer space vis-à-vis the harm that may be occasioned to the outer space environment has not been clarified by international adjudications or other persuasive sources. Similar questions will also be raised again in the context of the prohibition on indiscriminate attacks, the proportionality principle, the precaution principle, and due regard, etc. It would be difficult, and even myopic, to entirely rely on experience

---

[560] E.g., Strategic assets like Starlink constellations and the international space stations, which occupy low inclination and low Earth orbit (LEO).

[561] Tabaré Gallardo, "Resonances in the Asteroid and Trans–Neptunian Belts: A Brief Review", *Planetary and Space Science*, 2018.

[562] M. A. Abdu, "Equatorial Ionosphere Thermosphere System: Electrodynamics and Irregularities", *Advances in Space Research*, Vol. 35, Issue 5, 2005, pp. 771–787.

[563] Most Farjana Sharmin and Yug Desai, "Barriers to Space Cooperation in South Asia: Africa as an Inspiration", *The Defence Horizon Journal*, 13 December 2023, available at: https://tdhj.org/blog/post/barriers-space-cooperation-south-asia/.

[564] "Military Satellites by Countries 2025-World Population Review", *World Population Review*, available at: https://worldpopulationreview.com/country-rankings/military-satellite-by-country.

[565] VCLT, Art. 31.

and knowledge established from situations within the atmosphere to answer these questions.

4.2. Proposal for Improvement

The efforts of the international community to form a common understanding of State obligations encounter numerous difficulties. The lack of uniformity in practice may result from the tension between nature-centrism and anthropocentrism. These two approaches are the classic dichotomy in environmental protection: "the value of ecosystems independent of human needs" versus "nature's worth is determined by its utility to humanity." Historically, anthropocentrism has long been the dominant framework in international legal study, while today this tradition is increasingly incorporating nature-centric perspectives. As the international community evolves, the framework undergoes systemic reconstruction from merely focusing on anthropocentric demands to include global environmental concerns, such as space debris and planetary contamination. The concept of "sustainable development" is also being developed, reflecting shifting societal priorities toward more holistic ecological considerations.[566] This trend suggests that future international law will also move beyond a purely anthropocentric regime and integrate more environmental obligations to ensure the long-term preservation of outer space. Based on this balanced approach, we put forward the following proposals to strengthen the norms of protecting the outer space environment.

Common But Differentiated Responsibility

The principle of common but differentiated responsibilities established in IEL[567] can also be applied to the protection of the outer space environment, particularly the removal and mitigation of space debris after armed conflicts. There is a view that the atmosphere and orbit are similar, and the regulation of greenhouse gas and space debris can be an analogy.[568] Based on this, States share a common responsibility for the sustainability of outer space as well as specific responsibilities commensurate with their financial and technological capacities. This principle operates independently from the attribution of international wrongful acts of States in armed conflicts. Its primary purpose is to mobilize international resources to increase efficiency and quality, thereby better mobilizing diverse stakeholders to actively

[566] Karl Johan Bonnedahl, Pasi Heikkurinen and Jouni Paavola, "Strongly Sustainable Development Goals: Overcoming Distances Constraining Responsible Action", *Environmental Science & Policy*, Vol. 129, 2022, pp. 150–158.

[567] 1992 UN Framework Convention on Climate Change, The Preamble and Art. 3, available at: https://unfccc.int/resource/docs/convkp/conveng.pdf.

[568] Yongliang Yan, "Application of the Principle of Common but Differentiated Responsibility and Respective Capabilities to the Passive Mitigation and Active Removal of Space Debris", *Acta Astronautica*, Vol. 209, August 2023, pp. 117.

contribute to mitigating the damage caused by armed conflicts to the outer space environment.[569]

Under this principle, scientific definitions may help to clarify the protective responsibilities. For example, they may contribute to clarifying the boundary between outer space and the Earth's atmosphere. Although the Woomera Manual pointed out that the lack of international agreement on the delimitation between aerospace and outer space has not impeded international cooperation,[570] the vague boundary of outer space may impact the distribution of environmental responsibility. This is particularly pertinent given the need to prioritize the protection of the low Earth orbit (LEO) region. According to the International Telecommunication Union, the LEO is between 200 and 2,000 km above Earth's surface.[571] The location where the attack occurs directly affects the severity of the damage. Over 80 percent of satellites are deployed in low Earth orbits, and the impact of disrupting orbits at different altitudes is different. Establishing a consensus on the scope and classified discussion is required. That is why the ICRC and the International Law Commission (ILC) have notably recommended that such an agreement designate "areas of major environmental importance" as "demilitarized zones or non-defended localities."[572]

Special Regulation for Non-State Armed Group (NSAG)

The definition of NSAG in IHL is associated with that of NIAC. NIACs are armed confrontations occurring between governmental armed forces and the forces of one or more armed groups, or between such groups, arising on the territory of a State (party to the Geneva Conventions). Armed confrontation must reach a minimum level of intensity, and the parties involved in the conflict must show a minimum of organization.[573] The NSAG is a form of belligerence that may contribute to the degradation or destruction of the environment.[574]

In the debate over whether the AP I and the ENMOD Convention are customary international law, States and the ICRC have conflicting views: States, guided by considerations of their national interests, worry that the relevant provisions could lead to an abuse of international adjudication while ICRC, by contrast, is to apply the relevant provisions to NIAC for more comprehensive

---

[569] *Ibid.*, pp.117–131.

[570] Woomera Manual, p. 29.

[571] "WRS-22: Regulation of Satellites in Earth's Orbit", *International Telecommunication Union*, available at: https://www.itu.int/hub/2023/01/satellite-regulation-leo-geo-wrs/.

[572] ICRC, Guidelines on the Protection of the Natural Environment in Armed Conflict, Geneva, 2020, pp. 82–83; ILC, Draft Principles on the Protection of the Environment in Relation to Armed Conflicts, UN Doc. A/CN.4/L.937, 6 June 2019, Principle 4.

[573] ICRC, How Is the Term 'Armed Conflict' Defined in International Humanitarian Law, 2024, pp.13–14, available at: https://www.icrc.org/sites/default/files/document_new/file_list/armed_conflict_defined_in_ihl.pdf.

[574] Thibaud de La Bourdonnaye, above note 22, pp. 580–581.

obligations under IHL. Even if the rules have a universal effect under customary law, it is more applicable to States than to NSAGs. The unsettled question is whether the obligations in customary international law, like those from IEL discussed in this paper, which are binding upon NSAGs, remain unexplored. In NIACs, there is only one minimum and ambiguous provision, which is Article 14, to prohibit damage to objects indispensable to the survival of the civilian population in AP II.[575] Besides, there is the general regulation of Common Article 3, the Geneva Convention. Beyond the applicability of customary international law, regulations for NIACs and NSAG are insufficient.

The current academic debate and discussions within international organizations lean toward the view that customary international law obligations apply to NSAGs. Instruments such as the World Charter for Nature are frequently invoked in this regard.[576] The legal theories conclude that the NSAGs with a state-like behaviour pattern ought to acquire the required international legal personality.[577] The IEL obligations could be bound by customary IEL. Considering this situation, the ICRC has encouraged parties to NIACs to apply the full IHL regulation for environmental protection, even those under international armed conflicts. [578] Nonetheless, as these instruments lack legally binding force, such application in practice constitutes an expansive interpretation rather than a settled legal obligation. Some commentators also suggest that "while NSAGs do not have obligations under IEL as a matter of law, the need to enhance environmental protection in NIACs means that NSAGs should have certain responsibilities under IEL as a matter of policy." [579] Encouraging the NSAGs to comply with all the environmental obligations is only a temporary solution. The NSAG is distinct from a state in international law. To respond to those problems, specialized norms will still be needed in the future. The concept of NSAG should be carefully reviewed, and its responsibility system, which is now under the Rome Statute and International Criminal Law, should include more content about environmental protection.

4.3. Guideline for Belligerents

[575] Particularly, not all NIAC can apply the Protocol Additional to the Geneva Conventions of 12 August 1949 and relating to the Protection of Victims of Non-International Armed Conflicts (AP II).

[576] UN General Assembly, World Charter for Nature, UN Doc. A/RES/37/7, 28 October 1982, para. 21(c).

[577] Jann K. Kleffner, "The Applicability of International Humanitarian Law to Organized Armed Groups", *International Review of the Red Cross*, Vol. 93, No. 882, 2011, pp. 445–454.

[578] *See* ICRC, Guidelines on the Protection of the Natural Environment in Armed Conflicts (Rules and recommendations relating to the protection of the natural environment under IHL with commentary), p. 84, available at: 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.

[579] Thibaud de La Bourdonnaye, above note 22, pp. 596–697.

When outer space faces environmental risks, we find that the applicability of the established IHL regime may not be much in doubt, but its effective implementation in such a novel context raises controversy. Looking back on the history of development of wartime environmental damage provisions, it is difficult to properly implement peacetime international law in the context of armed conflict. [580] Therefore, adaptations to the established rules are necessary for avoiding and reducing damage to the outer space environment from armed conflicts. The last part of this article reviews all the obligations discussed above and proposes a Guideline with specific measures in different phases of armed conflicts for belligerents to strengthen the protection of the outer space environment in armed conflicts.

Firstly, conducting proper assessments before military operations is a common requirement under a range of environmental protection norms in IHL. Although the ICRC appears to consider that environmental impact assessments (EIAs) prior to armed conflicts are not mandatory as a general rule, [581] the particularities of the space environment should be further taken into account on this issue. The EIA is indispensable to comply with the relevant obligations, including the prohibition of significant environmental harm, the principle of distinction, the principle of proportionality, and the principle of precaution.[582] Skipping EIAs in favour of military activities in outer space would lead to States being unable to perform their environmental obligations.[583]

The EIA emphasizes prevention, compared with many other mechanisms for environmental protection.[584] Regarding military operations in outer space, the focus of the EIA should be on determining the potential impacts on current and

---

[580] To coordinate the application of IHL and international law in peacetime, the ILC was approved to work on a special program to settle this problem. ILC, Effects of Armed Conflicts on Treaties, UN Doc. A/CN.4/L.727/Rev.1, 6 June 2008; M. Bothe, C. Bruch, J. Diamond and D. Jensen, "International Law Protecting the Environment during Armed Conflict: Gaps and Opportunities", *International Review of the Red Cross*, Vol. 92, No. 879, September 2020, pp. 579–580.

[581] ICRC, Guidelines on Protection of Natural Environment in Armed Conflict, para. 14.

[582] The potential environmental effects of various types of weapons, even traditional kinetic weapons, are not yet clear in outer space. Therefore, it would be irresponsible to rush into military activities without a case-by-case assessment in a preventive manner. Karl Hebert, "Regulation of Space Weapons: Ensuring Stability and Continued Use of Outer Space", *Astropolitics*, Vol. 12, No. 1, 2014, pp. 1–26; Erin Pobjie, "Space Weapons and the Use of Force in Outer Space: Russia Tests Kinetic DA-ASAT Weapon", *Blog of the Essex Law Research*, 2 December 2021, available at: https://essexlawresearch.blog/2021/12/02/space-weapons-and-the-use-of-force-in-outer-space-russia-tests-kinetic-da-asat-weapon/.

[583] Considering the history of the development of IHL, the norms of IEL on the EIA and the transboundary EIA should be applied according to specific situations in armed conflicts. Michael Bothe, "The Protection of the Environment in Times of Armed Conflict", *German Yearbook of International Law*, Vol. 34, 1991, pp. 57–58.

[584] John Glasson and Riki Therivel, *An Introduction to Environmental Impact Assessment*, Routledge, New York, 2012, p. 5.

future exploration and use of outer space. It is important to take into account both the direct damage that may result from the operations and the chain reaction it may trigger. In terms of procedural requirements, States should be required to establish due processes for EIAs, and well-established procedures in IEL and the law of the sea can be used as a reference.[585] In addition, they should be encouraged to ensure the transparency of these EIA procedures and to provide information on the results of the assessment.[586]

Secondly, after fully assessing the possible environmental impacts and evaluating the legal risks of military operations, belligerents are obligated to conduct these operations in strict compliance with international law. The actual damage of the military operation might be very different from the findings of the EIA, and the environmental consequences in outer space can be long-lasting and ever-changing. Belligerents have a continuing obligation to prevent and reduce environmental damage, even after the conduct of the military operation. It is important to closely monitor the impact of a particular military operation.

Thirdly, there is a need to improve accountability mechanisms. The parties involved in military operations that breach environmental obligations ought to make full reparation, in the form of restitution, compensation, and satisfaction for the environmental damage.[587] The restoration or recovery of the space environment should be prioritized, given the legal status of outer space as an area beyond the jurisdiction of States. In principle, the party should take all necessary measures, including performing restorative operations in outer space and providing sufficient funding, to return the environment to its previous status. Any remnants of war, such as debris and unexploded ordnance, must be completely removed by the responsible party to prevent harm to future space activities for all States. However, it may not always be possible to restore the environment to its previous status with current technology. In such cases, alternative methods may be allowed to ensure full reparation, including the establishment of compensation funds to serve the exploration and use of outer space by all of humanity in the future. Parties to an armed conflict should incorporate the restoration of environmental damage into post-war procedures and reach an enforceable agreement for this purpose.[588]

Finally, international cooperation is essential for the prevention and recovery of the outer space environment. Regional and global collaborations should be encouraged to strictly monitor and control attempts to militarize outer space, including the deployment of weapons prohibited by international law, as well as the assembly of weapons that could be used for combat in outer space. In addition to bilateral and multilateral agreements among States, UN specialized mechanisms, such as the Committee on the Peaceful Uses of Outer Space and the UN Institute for

---

[585] UNCLOS, Part XII (Especially the rules on preliminary assessment); ICJ, *Pulp Mills on the River Uruguay* (*Argentina v. Uruguay*), Judgment of 20 April 2010, para. 204.

[586] ICRC, Guidelines on Protection of Natural Environment in Armed Conflict, para.14.

[587] ARSIWA, Art. 34.

[588] ILC, Draft Principles on Protection of the Environment in Relation to Armed Conflicts, Principles 14 and 16.

Disarmament Research, can contribute to global cooperation. Within the framework of the UN, processes have been initiated to restrict the testing of outer space weapons and to promote cooperative efforts in space debris removal.[589] At present, States gradually recognize the seriousness of space environmental risks and take cooperative measures under the UN framework to establish a mechanism with the necessary adaptability and flexibility.

V. Conclusion

Examining the rules of international law, environmental damage to outer space in armed conflict is not left uncontrolled under our legal regime. Rather, a series of specific and general norms can be applied to bind the actions of belligerents to prevent or mitigate potential direct or collateral damage, even though not all rules on environmental protection under IHL may be applicable. Nevertheless, given the paucity of scientific findings and State practice at the current stage, it is to be expected that States, international organizations, and international lawyers may encounter some thorny problems in the future when they set out to actually apply and interpret these rules to address relevant situations. Outer space, because of its special characteristics compared to the environment within the atmosphere, may pose far greater challenges to the application of the rules of environmental protection.

Discussing the applicability of IHL in outer space does not equate to allowing outer space to become a new battlefield. On the contrary, the aim is to do our utmost to limit space activities to peaceful use and prevent irreversible damage to the fragile space environment from geopolitical risks. All contemporary military applications of space technology, whether occurring during an armed conflict or merely in the research phase, must rigorously comply with the proposed obligations. On the one hand, substantive rules should be adapted to the space environment through legal interpretation. On the other hand, a series of procedural requirements and rules concerning enforcement under international law should not only be emphasized but also completed through the interpretation and development of rules.

As mentioned above, environmental damage caused by armed conflicts in outer space is unpredictable, and the cost may be unaffordable for humankind. Shifting the protection to the outer space environment from *ex post facto liability* to *ex ante obligation* requires a more robust normative framework for responsible space conduct. Establishing a general criterion applicable to all States is a complex endeavor. A strict system is difficult to acquire wide recognition and compliance. When interpreting obligations, a careful balance between regulatory objectives and fully respecting state sovereignty may represent a pragmatic means of strengthening its application.

---

[589] E.g., The Prevention of an Arms Race in Outer Space (PAROS) and Transparency and Confidence-Building Measures (TCBMs) of the General Assembly.

ASIA-PACIFIC JOURNAL OF INTERNATIONAL HUMANITARIAN LAW

PART II
TRAILBLAZING WOMEN IN IHL FROM THE ASIA-PACIFIC REGION

Interview with APJIHL Board of Experts Members Prof. Deepika Udagama, Dr. Ai Kihara-Hunt, and Dr. He Tiantian

Asia Pacific Journal of International Humanitarian Law
Editorial Team

Prof. Deepika Udagama
Chair Professor of Department of Law, University of Peradeniya, Sri Lanka

Prof. Nelum Deepika Udagama is the recently retired Chair Professor of Law at the University of Peradeniya, Sri Lanka. She is an academic specialized in International Human Rights. She received her legal education at the Faculty of Law, University of Colombo (LL.B. (Hons.) and LL.M. Degrees) and School of Law, University of California at Berkeley, USA (LL.M. and Doctor of Juridical Science (JSD) Degrees) in international human rights law. In 1991 she founded the Centre for the Study of Human Rights (CSHR) at the University of Colombo and served as its Founding Director (1991-97). She also played a key role in the establishment of the Department of Law at the University of Peradeniya (2009) and in the formulation of a unique inter-disciplinary curriculum for its LL.B. Degree Program with a focus on social justice. She served as the Chairperson of the Human Rights Commission of Sri Lanka (October, 2015 – August, 2020). Under her stewardship the Human Rights Commission of Sri Lanka was promoted to 'A' status accreditation by the Global Alliance of National Human Rights Institutions (GANHRI) in 2018. She was elected by the UN Sub-Commission as Co-Special Rapporteur (with Prof. Joe Oloka-Onyango of Uganda) on the theme 'Globalization and its Impact on the Full Enjoyment of Human Rights', resulting in an often-cited pioneering study on the theme (1999-2001). She is the recipient of several academic awards including a Senior Fulbright Scholar Award with a placement at the Harvard Human Rights Center (1997-98). She has taught at the UN University in Tokyo, Faculty of Law, Hong Kong University and the National Law University Delhi. She has also served on editorial boards of international and national academic law journals including the Netherlands Quarterly on Human Rights.

Dr. Ai Kihara-Hunt
Professor, the University of Tokyo

Dr. Ai Kihara-Hunt is Professor at the Graduate Program on Human Security, the University of Tokyo. At the University, she is also Director of the International Law Training and Research Hub, and Director of the Research Center for Sustainable Peace. She previously served as Secretary at the Academic Council on the United Nations System (ACUNS). Her main areas of research and publications are human rights, International Humanitarian Law (IHL), United Nations (UN) Peace Operations, in particular UN Police, the rule of law, and accountability. She coaches student teams on IHL and human rights. Her publications include Holding UNPOL to Account: Individual Criminal Accountability of United Nations Police Personnel (Brill, 2017). She currently serves as an expert member of the Study Group on Future of Peacekeeping for the United Nations Peacekeeping Ministerial 2025. Prior to

working at the University of Tokyo, she worked as Human Rights Officer for the UN Office of the High Commissioner for Human Rights (OHCHR) in Nepal and at the headquarters, Assistant to the Executive Director of the Independent Special Commission of Inquiry for Timor-Leste, Associate Protection Officer at the UN High Commissioner for Refugees (UNHCR) in Sri Lanka, Public Information and Community Outreach Officer at the Commission for Reception, Truth and Reconciliation in East Timor, and Human Rights Officer in the UN Transitional Administration in East Timor (UNTAET).

Dr. He Tiantian
Associate Professor, Institute of International Law Chinese Academy of Social Science

Dr. HE Tiantian completed her Ph.D. in International Law from Renmin University of China in 2015. Presently, she serves as an associate research fellow at the Institute of International Law, Chinese Academy of Social Sciences. Additionally, she is an associate professor at the University of Chinese Academy of Social Sciences and works as an editor for Chinese Review of International Law. She is now a council Member of Chinese Society of International Law and a member of Asian Society of International Law. Dr. HE Tiantian's research focuses on international humanitarian law, international criminal law and international dispute settlement. She published a book titled "The War Crime of Child Recruitment: Analysis of the First Judgment of the International Criminal Court" in 2018. Her publications have appeared in journals both in English and Chinese, such as Chinese Journal of International Law, Law Sciences, and Chinese Review of International Law, among others

Prof. Deepika Udagama, Dr. Ai Kihara-Hunt, and Dr. He Tiantian, who are currently members of APJIHL's Board of Experts, sat down with the Editorial Team of APJIHL to discuss their careers as academics and practitioner of IHL, explore the relevance and emerging issues of IHL in the region, and reflections on the importance of scholarship and discourse encouraged by journals such the APJIHL for the Asia-Pacific.

TRANSCRIPT

I. Career Experience in International Humanitarian Law

Question: *A lot of our readers are scholars and practitioners from the Asia-Pacific region, and there is great interest in how experts like yourself started your career. Could you tell us how you discovered International Humanitarian Law work?*

Prof. Udagama: *Well, it's interesting because I'm really a student of human rights law. I would say that I'm a specialist in human rights law – a practitioner, not in a legal practitioner sense, but as an academic and as an advocate. It was through human rights law that I discovered IHL.*

For me, there was a practical and a very existential dimension to both areas because my country Sri Lanka had a very violent civil war that lasted for nearly three decades. It gained international attention because of the intensity of violence and brutality. For us, there was a

conundrum while our Constitution guaranteed human rights, International Humanitarian Law was not yet part of Sri Lanka's legal system. You have what we call a dualist legal system where international law does not automatically become law of the land, so in the meantime, Human Rights Law came into the picture to provide protection for victims and survivors of the armed conflict. At that time, the discourse had a very clear division between Human Rights Law and International Humanitarian Law, which was a debate I was also exposed to during my postgraduate studies in the United States and internship at the International Committee of the Red Cross (ICRC) in Geneva. Upon my return to Sri Lanka, and with the realities brought on by the conflict happening in my country, I was struck by the fact that IHL and Human Rights Law have much more in common than the discourse delineates. That's how my interest in IHL really came about. I'm glad that today, we do recognize that the two are absolutely complementary, and that the interface between the Human Rights Law and IHL is very strong.

Dr. Kihara-Hunt: *I discovered IHL through my previous work with the United Nations Human Rights Office. I was then working in post-conflict areas such as Timor-Leste (then known as East Timor) and Sri Lanka, as well as Nepal which was then grappling with conflict. The language that we used then was of human rights, which I realised did not mean much unless we understood the context within which these conflicts were happening. In understanding said context, we really need to have IHL be part of the approach. When we talk about the right to life from a purely Human Rights Law perspective, we can say, "Okay, everybody has the right to life, and nobody should be deprived of life." But that discussion becomes very different in the context of conflict, especially in these countries my work had exposed me to. In all three countries, conflict was relatively small-scale in the sense that while the consequences of the conflict were massive, the weapons used, and the number of soldiers or fighters involved were relatively less so. They were very different from other conflicts that have happened since or are currently happening, which involve air bombardment, terrorist activities, or transnational organized crimes. The scale, nature, and even culture was different. So, I thought it was very important to know and use IHL in approaching and understanding the situation in these countries, which eventually led to my commitment to IHL as well.*

Dr. He: *I had the opportunity to study and conduct research on IHL during my postgraduate studies. My IHL professor in particular was not only engaging and very generous in sharing stories and examples to illustrate the concepts, but he also stressed the fundamental importance of protecting civilians and children during armed conflict. This sparked my interest in IHL, which led to my doctoral dissertation on the protection of children in armed conflict, using the case of Prosecutor v Lubanga. As you know, this was a monumental case for the International Criminal Court as it was the first such case to cover war crimes related to the recruitment of children under 15 years of age.*

Aside from that, I also think that IHL is important for countries in the Asia-Pacific region. The countries in our region have historically experienced numerous armed conflicts, and due to the large populations that are often involved, the consequences to the civilian population are just as massive. But in the same vein, the countries in Asia-Pacific also have a long history of valuing compassion, empathy, and humanity. For example, China's cultural traditions share many values with international humanitarian law. These are fundamental in times of armed conflict.

Question: *Could you share with us some of your most memorable experiences as an IHL practitioner and academic from the region?*

Prof. Udagama: *I don't know whether there was one key moment as such. I mean some of the key moments in many ways have been the victories in the Supreme Court of Sri Lanka. While I'm not a practicing litigator, many brilliant human rights lawyers had really brought about a major change in jurisprudence in Sri Lanka, whereby the Supreme Court has held in a string of judgments that even during conflict, even during periods of exception i.e. periods of public emergency, there is a core minimum of human rights that must be protected. Interestingly, these core minimum of freedom from torture, right to religion, anti-slavery, and many other things, are common between IHL and Human Rights Law. The Supreme Court of Sri Lanka went even further by holding that due process cannot be compromised extensively during periods of emergency. At that time, when we were celebrating those victories, we did not think of the convergence between IHL and Human Rights Law. We thought those were just human rights victories. but that makes it more poignant in the sense that what we celebrated were, in reality, also victories for IHL. I experienced one moment with someone who had previously been very rigid about the division between IHL and Human Rights but amidst all these developments, realised, "Oh, my! I see the connectivity!" And that moment of revelation was, in a sense, a victory. We are finally going beyond the silos, because humanity cannot be protected by putting these categories into silos.*

Aside from these victories secured in my country, the gripping moments included victories that came about through the International Criminal Tribunals for the former Yugoslavia and Rwanda. They were cutting edge judgments, clarifying core principles and values even during the high intensity of armed conflict. Whether the conflict is international or non-international in nature for example, command responsibility is a core principle. The weaponisation of sexual violence during armed conflict, genocide, and other violence that had to be accounted for. We knew that already, but the decisions brought it into sharper focus. We see the law progressively evolving, and those developments impact survivors on the ground. So those are key moments.

Dr. Kihara-Hunt: *This is an interesting one. I think the first sort of shocking but most impressive experience for me was meeting people who are living in the aftermath of a conflict. I met people who were deprived of everything – no house, no food, and their family members killed. They had nowhere to go back to. That was a deprivation in all fronts. Most of them came to us [the United Nations], reclaiming their dignity as they sought information about their families as well as justice and accountability. I was shocked to learn that they did not come to ask for food, clothes or housing, but came for justice and accountability. Something about that experience changed my view of what is important for human lives. IHL is a key tool and key language in addressing these experiences in a way that can bring back, in some form, what they have lost. That was really the starting point of my deep appreciation for IHL.*

Dr. He: *Having been inspired by professors I learned from, as a teacher, I always hope that my classes can inspire my students in the same way. To me, it is the experience of teaching and participating in my country's IHL-related activities, such as national moot court competitions,*

that I find most memorable. For several years, I have served as a judge for domestic moot court competitions, and in 2024, I was able to serve for the first time as a judge in a regional moot court. Meeting other judges and having the opportunity to see students and future advocates from different regions was a great experience. The different styles of presenting arguments and different ways of addressing humanitarian issues were enlightening, and it was exciting to see students being passionate about international issues and international law.

II. Relevance of International Humanitarian Law in Asia-Pacific

Question: *The Asia-Pacific region is often characterized by plurality. With the norm of humanity underpinning IHL, based on your experience working in the region, what do you think are the most pressing challenges IHL faces in the Asia-Pacific, particularly in promoting and strengthening IHL compliance? How can states in the region participate meaningfully in IHL law-making, particularly in developing informed and nuanced approaches to understanding IHL?*

Prof. Udagama: *I would like to think that when it comes to Human Rights Law and IHL, the Asia-Pacific region has opened up dramatically. Let's first talk about the positives. In previous decades, countries from the region were quite reluctant to delve into Human Rights Law, with the justification that as developing countries the focus was more on economic and social rights rather than civil and political rights. However, we have seen this evolve, and the Asia-Pacific region is now very active in the human rights protection discourse, participating in the deepening of international standards in this space. I see IHL as being somewhat in its infancy in the discourse in the region compared to Human Rights Law, and there seems to be a bit of reluctance to go the whole nine yards, so to speak. I think this may in part be due to the insularity as well as a sense of insecurity that in the face of conflict, having international obligations and being scrutinized under that lens is nerve-wracking for many countries. Hence, the use of arguments against based on national sovereignty. We also have to acknowledge that there is a huge democratic deficit in our region, and this impacts the reception of laws such as IHL. One main factor that worked in developing Human Rights Law in the region is the active presence of civil society who have truly risen to the occasion, taking on various challenges facing state ratification of international human rights instruments, raising public awareness and advocating incorporation of international HR norms through courts and by national legislation. As of now, we do not see much of civil society working on IHL, though I think human rights practitioners and civil society groups do see the interconnectedness and the interfacing of the two. But strengthening this is definitely a challenge. However, as clarity on ground realities grows, it's bound to get stronger.*

Globally, the rules-based international order is in serious crisis. We need to push for adherence to law, among them IHL. We have to work globally, and of course, regionally and locally to ensure that we preserve this rules-based system. In my view, course-correction is not just the task of well-meaning states, but one of international civil society's too. Historically, states have responded to civil society pressure, and there is an opportunity here for IHL, but we need to amplify the discourse on this. I think this is the role of the Journal and the role of scholars and practitioners – to explain the interconnectedness of these bodies of law.

Dr. Kihara-Hunt: *I think the diversity in Asia-Pacific is quite rich – different religions, different cultural backgrounds, different educational systems, and different legal systems. Some countries have a stronger legal culture than others, meaning laws decide everything in some places while cultural norms, such as preserving the peace in the community in pursuit of public good, are valued elsewhere.*

This is all evolving within an even bigger challenge in the global context. I think we are now facing a bit of resistance against multilateral humanitarian actions. This is potentially exacerbated by the diversity I had previously mentioned. There may be figures who take advantage of this diversity to discourage the pursuit of IHL, and these could be the same actors benefiting from wars or divisions of people. The diversity facilitates an almost automatic rejection of something that could be viewed as being imposed from the outside. However, focusing on those differences makes us miss the common part, which is shared principle of humanity that applies to everyone. So, while the diversity could create pockets of challenges, humanity provides possibilities and opportunities.

I think IHL, at the very core of it, is about caring for people. We have to understand what is important to the people affected and have that understanding be rooted in culture. For example, what are the culturally acceptable way of protecting women in a conflict situation? And what protective role does the State play in that given context? Unpacking these questions require engaging civil society groups, academics, minorities, and of course the people who are directly affected themselves. This makes implementation a contextualised one – we have to remember that even in IHL, we do not just apply the rules as if we were robots. We must have a cultural, human perspective here, and that can be started through training, education, and consultation. IHL is a tool for participation.

Dr. He: *I think the most pressing challenge IHL faces at present is ensuring that IHL is followed by different parties. We do face a serious compliance issue, though admittedly this is not unique to IHL. However, I think scholars and practitioners can take the lead in addressing this problem. For example, soft law initiatives to promote IHL could be explored at a country-level.*

We have seen this done in September 2024, when Brazil, China, Jordan, Kazakhstan, South Africa, and the International Committee of the Red Cross jointly launched an initiative on international humanitarian law, which is to promote compliance with international humanitarian law by various countries. The involvement of press in raising awareness should also be leveraged, as they have the platform to reach a wider audience. Aside from this, I think for the Asia-Pacific region in particular, there is an opportunity for us to deepen the discourse on context-informed and nuanced approaches to IHL. This not only includes our active participation in the negotiation of treaties but also the amplification of scholarship by international humanitarian law scholars from various countries in the region through journals such as APJIHL.

In your experience, have you found that the Asia-Pacific experiences have contributed to the overall development of IHL rules? Despite these challenges discussed previously, have you found that Asia-Pacific's experiences have contributed to the development of IHL overall.

Dr. Kihara-Hunt: *Yes, I think the participation of Asia-Pacific in the development of IHL is quite impressive. There are a few things that we can see visibly. For example, a number of lawyers and legal practitioners who are at the frontlines of developing and promoting IHL are from the region. Many countries from the region are also active in peacekeeping, and the peacekeepers they send of course require extensive training and knowledge in IHL before they could even be considered for deployment. This means that at the domestic level, IHL is already part of their education, which reflects well on the awareness of IHL in our region.*

The diversity I spoke of earlier is also a starting point for discourse towards highlighting the common humanity that underpins all these supposed differences. We have managed to highlight this in our previous editions.

Question: *Could you highlight a couple of emerging areas, themes, or issues that are relevant to IHL and why it would be important for Asia-Pacific states to actively contribute to?*

Prof. Udagama: *There are very many emerging issues I think, among them environmental protection in the context of armed conflict and the relevance of the concept of ecocide. These are typically discussed in relation to international armed conflict, but they apply just as much to non-international armed conflict, which in the Asia-Pacific is much more prevalent. Another major issue is the rising frequency of using the anti-terrorism rhetoric to sideline what should be discussed through the human rights and IHL lens. As the discourse evolves, we have to work to ensure that IHL does not get sidelined especially when it is applicable. I also think that while there are emerging technologies that potentially redraw technicalities in IHL, we should also not lose sight of the underlying principles of IHL*

These are areas where we are going to find common ground amidst the diversity present in our region and elsewhere. APJIHL is a good example of this. At least in the last couple of issues, we have seen various traditions in the Asia-Pacific, e.g., based on Hinduism and Islam highlighted as fundamentally similar to the modern IHL norms we follow. These are worth exploring because whatever type of challenge we face, the underlying fundamental values of these traditions come forward to provide solutions. While it is important to teach the technical dimensions of IHL, as we look for solutions to new challenges, especially in the Asia-Pacific region, we have to ground our approach on fundamental principles. We have to unpack the issues both from the lenses of legal and moral obligations. It is not enough that we recognize the legal dimensions. We have to understand the issues and applicable principles within the context of culture and tradition to meaningfully and effectively follow the law. Innovative approaches do not come about just through technicalities of the law.

Dr. Kihara-Hunt: *I think there are some obvious ones, such as technology, particularly autonomous weapons and AI. Those are already on the table. Other emerging issues involve the environment and climate, outer space, and information. Private military companies are also worth exploring. But I am also thinking of certain vulnerable people. I think the categorization of vulnerable people has changed a little bit overtime. For example, elderly persons do not show up very much in a need for protection in the way women, children, refugees, or displaced persons show up. There are other types of vulnerabilities, and those result in differences in experiencing war.*

There is also not as much discussion about the applicability and actual implementation of peacekeeping by peacekeepers. I am currently doing extensive research on this, and while there is clarity that when States go out and do peacekeeping, they are bound by IHL, but the direct application of IHL becomes less certain when a regional organization, the United Nations, or a coalition of States are involved. This is an area that should be clarified.

Another area that could benefit from clarification is detention. This is already highlighted in the discourse of late as there is a lot of interest here, but there are still a lot that could be clarified. For example, when the United Nations or regional organizations employ armed police, what are the rules exactly? This extends to transitions in post-conflict contexts.

Dr. He: *I think there are many emerging issues in IHL these days. What immediately comes to mind is understanding, applying, and further developing IHL rules. This requires recognising that different systems may have different understanding, application, and interpretation of rules, which is a core problem in the effective compliance of IHL and international law more broadly. While seemingly basic, this requires great attention.*

Other issues that should be included in what we are monitoring are the involvement of private military companies in armed conflicts, environmental protection during armed conflict, outer space, and new methods of warfare. I know ICRC has done extensive work in these areas, but there are still opportunities for scholarly contributions to these developments and challenges.

III. Role of Asia Pacific Journal of International Humanitarian Law

Question: *APJIHL publishes articles written by scholars from the Asia-Pacific region, and IHL issues in the Asia-Pacific Region. What do you think the APJIHL brings to the academic landscape? What is its unique value?*

Prof. Udagama: *First of all, in the past few issues we have seen an exploration of the foundational principles of IHL and traditions in the region relating to rules applicable in armed conflict. There you see the commonalities and the differences, but there appears to be much more in common, and I think that research offers a very rich tapestry. I think that is what we are uniquely offering to the world.*

IHL is a very secular form of law, but if we revisit our traditions, many regions have been grappling with the same issues IHL grapple with, and for centuries have been finding ways to address these issues. Recognizing this creates an opportunity to look at modern challenges from an organic, grounded perspective. In many ways, I think "unique issues" of conflict are really global in nature in the sense that while the geographical location is different, the end result of conflict is essentially the same everywhere. The human condition everywhere is virtually the same. The APJIHL has brought this into sharper focus. Instead of making local experiences appear exotic, revisiting traditions shows us that the values are virtually similar and shared. We could use this to move forward in enriching universal norms, while still preserving the relevance and value of our diversity.

Dr. Kihara-Hunt: *I see two big things. One is the national implementation of IHL, and we see more of these articles in our recent editions. Articles on Islam and IHL, for example, or how*

IHL is applied in one country facing unprecedented environmental problems. These are often not covered in regional situations, so amplifying these perspectives has been a strength of the Journal. The other thing is that APJIHL provides a massive space for all discourses related to IHL. It does not just cover cases, it also provides space for discussions on law, culture and society. It invites fresh, innovative scholarship from free- and young-minded writers. Of course, we ensure that the law is discussed correctly, but we also allow new takes and new ideas to flourish. We provide the space for out-of-the-box thinking.

Dr. He: *I think our Journal has truly brought regional perspectives to the development and current issues in IHL. It is, after all, a voice for the region, by the region. While we are dealing with universal standards, each country's perspective is key to progressing our understanding of how IHL is experienced in real life. I believe APJIHL plays a very important role in that regard. We serve as a bridge between the global framework and the regional and national points of view.*

IV. Advice for Scholars and Practitioners from the Region

Question: *What are you most proud of as a practitioner of IHL from the Asia-Pacific region?*

Prof. Udagama: *It's hard to speak of oneself, really. I think the most endearing experience in my life is that of being a teacher. As a teacher, one can influence young minds, and that builds into being able to contribute to the shaping of societies through knowledge and experiences gathered over the years, even decades. Education is such a powerful change agent.*

I also served as the chairperson of the Human Rights Commission of Sri Lanka for a while. In that work, you really see the interfacing of IHL and Human Rights Law. My experience in the field of education gave me strength in navigating that space, because in education, we not only explore concepts, but we also look to lived human experiences when we analyse the relevance of the law and its application to real life situations.

We learn a lot from young people. They constantly give you new insights. It's a very ennobling experience being able to take part in the process of sharing thoughts, ideas and exploring as you come to your own understanding of how human rights protection has progressed. At the end of the day, it is about observing and learning from experiences. That is how theoretical concepts too are enriched. I think I am very lucky to be in the field of education.

Dr. Kihara-Hunt*: It is a bit difficult to talk about oneself especially highlighting good things, but I will try.*

I know that IHL is really necessary, and I want to learn it because I care about humanity. To me, that is the starting point. I teach IHL, too, but when I do, what I always have in mind is that there are people IHL seeks to protect. And when students and researchers gather around to discuss, it becomes very inspiring. It is enjoyable for us because we know that we are doing this not for money or career, but because we believe that we can do something for humanity. I am happy and very proud to be surrounded by great individuals.

Dr. He: *I think, as a scholar and as a teacher of IHL, it makes me very happy when I see my students develop an interest in international law and IHL. It reminds me of my experience as*

a student, inspired to move towards the direction of IHL scholarship. This has led me to the publication of my doctoral thesis as a book, which as I mentioned earlier is on the war crime of conscripting and enlisting children under the age of 15. It is the first such book in my home country that discusses this issue.

I am also very happy whenever my students participate in moot court competitions. It makes me feel like what I am embarking on is worthwhile.

Question: *What are the key points on IHL that the next generation of students and international lawyers from the region interested in doing IHL work should be aware of?*

Prof. Udagama: *I always tell my students that we must never look at IHL, or any body of law, in isolation. It is important to forge the linkages from inception. You need to see the relationship between IHL, International Human Rights Law, International Environmental Law, and others. The underlying principles, e.g., on humanism, are very much the same. The concepts are quite often the same, the struggles are the same. It is just that in order to deal with specific situations and specific subjects, sometimes there are certain specialized norms and practices to focus on, but one must always see the larger picture. It is the linkages and the synergies among the various areas of law that animate growth of law as a whole.*

Laws can be successful in resolving issues only if they capture our imagination as being fair and just. To me, that is the test of a law's legitimacy. So, at the end of the day, our work too becomes relevant and effective only if we develop a passion for it, not develop a calculating technical approach Any area of the law we wish to focus on, especially a deeply sensitive area of the law like IHL, comes alive and becomes worthy of our attention only if we can relate to the human experiences that necessitated that body of law. So, we need to see visuals; we need to hear stories. They engage you, and then you develop empathy. So my advice to emerging scholars is not to get into this area of the law with the goal of having a successful career, but only because we relate to its relevance and value. At the end of the day, we have to value humanism. Explore, discover, recognize the underlying values, develop empathy, and the rest will fall into place.

Dr. Kihara-Hunt*: I have two pieces of advice. One is to always have people to whom IHL applies in mind, not only the victims but also soldiers. Do not view things only in black and white, good and bad. There are many interesting conversations to be had in grey areas, and you can really learn from many, different kinds of people. So always think about the people to whom the law applies.*

Secondly, always be free to explore. Think about why you are doing what you are doing, and who will benefit from it. Instead of thinking in terms of rules and violations, consider what they mean to people and their actual realities. What do they mean to society? The environment? The earth? Have a mindset that is open to things outside the legal text.

Dr. He: *We share a lot more in common than we highlight. This includes having longstanding traditions from many countries in our region. We can do more to connect despite our diversity and even learn from each other's histories and experiences. Be receptive to new perspectives and ideas. This is how we will be able to contribute more effectively to IHL developments as voices from the Asia-Pacific.*