

WATER PROTECTION IN ARMED CONFLICT AND THE U.N. WATERCOURSES CONVENTION

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SUMMARY

The U.N. Watercourses Convention is a crucial agreement governing non-navigational use of international watercourses, at a time when war continues to pose challenges to water and aquatic ecosystems. This Article examines Article 29 of the Convention, which specifically addresses protection of international watercourses and related installations during armed conflict. It traces the evolution of Article 29 and reveals that its reminder function and non-prejudicial nature vis-à-vis existing laws facilitated its adoption despite initial controversy. It then investigates the strengths and weaknesses of Article 29 and examines its role within the broader framework of international law. The Article further explores how other treaties might draw inspiration from this provision to better address environmental issues arising during armed conflict.

The protection of international watercourses and related installations during armed conflict has become an increasingly critical issue in contemporary international law, especially given the devastating impacts witnessed in recent conflicts in Ukraine and Gaza. The destruction of the Kakhovka Dam in Ukraine, which has led to a significant ecological and humanitarian crisis with transboundary effects, and the ongoing water crisis in Gaza highlight the urgent need for stronger legal frameworks to safeguard vital water resources during times of armed conflict.¹

Water is not only essential for human survival, but also a crucial component of the environment. Interna-

tional humanitarian law (IHL), as the primary legal framework governing armed conflict, contains various provisions and principles addressing this issue from both humanitarian and environmental perspectives. Simultaneously, from the perspective of international environmental law (IEL), the protection of water in armed conflict as part of the broader environmental context has garnered considerable attention. Given the intertwined nature of water in relation to both humanitarian and environmental purposes, this Article approaches water protection in armed conflict from both humanitarian and environmental perspectives.

Among all environmental treaties, the Convention on the Law of the Non-Navigational Uses of International Watercourses (U.N. Watercourses Convention, or the Convention) stands out as the only global framework that specifically addresses use and protection of international watercourses. It represents a vital piece of international law aimed at facilitating cooperation and preventing harm to shared water resources. Article 29 is particularly relevant to the current discussion, as it directly addresses protection of international watercourses and related installations during armed conflict, a rarity in environmental treaties.

Thus, against the backdrop of several ongoing armed conflicts, this Article aims to answer the following question:

To what extent does Article 29 of the U.N. Watercourses Convention address the challenges posed by armed conflict to protection of international watercourses, and what inspiration can other IEL treaties draw from this provision to better tackle environmental issues in armed conflict?

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1. See, e.g., Anas Baba & Scott Neuman, *There's a Water Crisis in Gaza That the End of Fighting Might Not Solve*, WPR (Dec. 29, 2023), <https://www.wpr.org/news/theres-water-crisis-gaza-end-fighting-might-not-solve>; Lei Nguyen, *The Environmental Impact of the Kakhovka Dam Explosion in Ukraine*, EARTH.ORG (June 28, 2023), <https://earthorg.mystagingwebsite.com/the-environmental-impact-of-the-kakhovka-dam-explosion-in-ukraine/>; Bryan M. Spears et al., *A Rapid Environmental Risk Assessment of the Kakhovka Dam Breach During the Ukraine Conflict*, 8 NATURE ECOLOGY & EVOLUTION 834 (2024); UNITED NATIONS ENVIRONMENT PROGRAMME (UNEP), RAPID ENVIRONMENTAL ASSESSMENT OF KAKHOVKA DAM BREACH (2023) [hereinafter UNEP, KAKHOVKA DAM]; UNEP, ENVIRONMENTAL IMPACT OF THE CONFLICT IN GAZA: PRELIMINARY ASSESSMENT OF ENVIRONMENTAL IMPACTS (2024) [hereinafter UNEP, CONFLICT IN GAZA].

Section I.A begins with an overview of how armed conflicts affect international watercourses and installations, emphasizing the need to protect these vital resources under existing international law. Section I.B examines the role of IHL in this context, identifying gaps concerning water protection during armed conflict, particularly from an environmental perspective. Section I.C explores the increasing relevance of IEL in addressing water protection during armed conflicts, providing recent examples of how IEL treaties have engaged with this issue.

The Article then shifts focus to Article 29 of the U.N. Watercourses Convention. Section II.A provides an overview of the Convention and the content of this provision. Section II.B delves into the historical evolution of Article 29, revealing the compromises that shaped the current form of Article 29 and providing context for evaluating its impact in the subsequent section. Section II.C addresses the often-overlooked issue of protecting transboundary aquifers during armed conflict and the role Article 29 plays in this area.

Section III.A assesses the strengths and weaknesses of Article 29, particularly in the context of ongoing conflicts, while Section III.B analyzes what inspiration other IEL treaties can draw from this provision to better tackle environmental issues in armed conflict. Part IV addresses the research question and offers concluding reflections.

I. Protecting International Watercourses in Armed Conflict: Perspectives From IHL and IEL

A. How Does Armed Conflict Impact International Watercourses and Related Installations?

As populations grow and climate change challenges hydrological patterns, the importance of governing international watercourses becomes increasingly pronounced.² However, the complexities of this task are further compounded by the intersection of water management with the stark realities of armed conflict.³ As of October 2025, the world marked more than three-and-a-half years of the Russia-Ukraine conflict, which has resulted in devastating consequences not only for the human population, but also for the environment.⁴ Concurrently, the Gaza Strip has been witnessing an enduring humanitarian and ecological disaster stemming from armed conflict.⁵

2. Catherine-Lune Grayson et al., *The Climate and Environment Charter for Humanitarian Organizations: Strengthening the Humanitarian Response to the Climate and Environment Crises*, 105 INT'L REV. RED CROSS 1227, 1227 (2023).
3. Mara Tignino, *Water, International Peace, and Security*, 92 INT'L REV. RED CROSS 647, 647-48 (2010).
4. Oleksandra Shumilova et al., *Impact of the Russia-Ukraine Armed Conflict on Water Resources and Water Infrastructure*, 6 NATURE SUSTAINABILITY 578, 579 (2023).
5. Nina Lakhani, *Emissions From Israel's War in Gaza Have "Immense" Effect on Climate Catastrophe*, GUARDIAN (Jan. 9, 2024), <https://www.theguardian.com/world/2024/jan/09/emissions-gaza-israel-hamas-war-climate-change>.

These armed conflicts not only have caused devastating humanitarian crises, but also pose severe damage to vital ecosystems such as watercourses, often with transboundary impacts. This section explores the major impacts of armed conflict on international watercourses and related installations, drawing from contemporary events to underscore the urgent need for protection.

One of the most immediate effects of armed conflict on watercourses is the physical destruction of water-related infrastructure such as dams, dikes, and water treatment plants.⁶ Combatants may intentionally target water sources to weaken adversaries or as a tactic of warfare, further complicating recovery efforts and leading to long-term ecological and humanitarian crises.⁷ Such destruction disrupts the supply and quality of water, which can have devastating effects on local populations as well as the environment.⁸

The destruction of the Kakhovka Dam during the Russia-Ukraine conflict on June 6, 2023, exemplifies the profound environmental and humanitarian repercussions of armed conflict. The collapse of the dam, located in southern Ukraine along the Dnieper River, one of Europe's major international watercourses, likely resulted from an explosion.⁹ The aftermath has led to extensive environmental degradation, impacting ecosystems both upstream and downstream.¹⁰ The devastation has been particularly severe for protected nature reserves in the region, resulting in the destruction of wildlife and diverse habitats.¹¹ This environmental catastrophe has further exacerbated a humanitarian crisis, causing significant economic losses with long-term implications for Ukrainian citizens.¹²

The impact of conflict is not limited to the destruction of infrastructure; it also includes severe pollution and contamination of water resources.¹³ Armed conflicts can result in the release of toxic substances from damaged industrial sites or military operations.¹⁴ The ensuing contamination of watercourses poses serious public health risks and compromises the quality of ecosystems.¹⁵ Moreover, the breakdown of sanitation systems during conflicts often leads to untreated sewage entering waterways, exacerbating the spread of waterborne diseases and placing additional burdens on already strained health care systems.¹⁶

6. See, e.g., Andrew E. Kramer, *They Flooded Their Own Village, and Kept the Russians at Bay*, N.Y. TIMES (Apr. 27, 2022), <https://www.nytimes.com/2022/04/27/world/europe/ukraine-russia-war-flood-infrastructure.html>.
7. *Executive Summary*, in UNEP, *THE ENVIRONMENTAL IMPACT OF THE CONFLICT IN UKRAINE: A PRELIMINARY REVIEW* (2022).
8. *Id.* at 2-4.
9. UNEP, *KAKHOVKA DAM*, *supra* note 1, at 9.
10. *Id.*
11. Jeffrey Gettleman & Finbarr O'Reilly, *The Never-Ending Nightmare of Ukraine's Dam Disaster*, N.Y. TIMES (Sept. 3, 2023), <https://www.nytimes.com/2023/09/03/world/europe/ukraine-dam-flooding-damage.html>.
12. *Id.*
13. UNEP, *supra* note 7, at 18.
14. Doug Weir, *How Does War Damage the Environment?*, CONFLICT & ENV'T OBSERVATORY (May 2025), <https://ceobs.org/how-does-war-damage-the-environment/>.
15. *Id.*
16. UNEP, *supra* note 7, at 9.

The recent United Nations Environment Programme (UNEP) preliminary assessment of the environmental impact of the conflict in Gaza also underscores this issue. The assessment highlighted that the escalation of conflict since October 7, 2023, has resulted in an unprecedented scale of destruction, particularly affecting water and sanitation infrastructure.¹⁷ Sewage and wastewater treatment facilities have collapsed, with some being contaminated by unexploded ordnance, asbestos, and other hazardous substances.¹⁸ This has triggered a humanitarian crisis, with access to clean water becoming a critical issue for the population in the Gaza Strip.¹⁹ In addition, the consequences of the aforementioned content has severe ecological consequences as well, including the loss of biodiversity as habitats are destroyed and species displaced.²⁰

B. IHL and Water in the Current Conflict Era: Have All the Gaps Been Filled?

Due to the multifunctional value of water, which serves not only as an essential component of the environment but also as an indispensable resource for civilian populations, water is protected under IHL from both humanitarian and environmental perspectives. From a humanitarian perspective, these protections can be found in the four 1949 Geneva Conventions and the 1977 Additional Protocol I (AP I) and Protocol II (AP II) to the Geneva Conventions. Those important documents are at the core of IHL.²¹

The 1949 Geneva Conventions define the rights and protections afforded to noncombatants who fulfill the criteria of being protected persons.²² Water, as an essential component of food, medical services, and hygiene for protected persons such as the wounded, sick, and prisoners of war, has received certain attention from the Geneva Conventions. For instance, Article 26 of the Third Geneva Convention Relative to the Treatment of Prisoners of War (GC3) states that sufficient drinking water shall be supplied to prisoners of war.²³ In the updated 2020 Commen-

tary to GC3 provided by the International Committee of the Red Cross (ICRC), further details are provided regarding the quality and quantity of drinking water that must be supplied, and in special circumstances such as hot climates, more water must be offered.²⁴

In the two decades following the adoption of the Geneva Conventions, the world witnessed an increase in non-international armed conflicts and wars of national liberation. In response, two additional protocols to the four 1949 Geneva Conventions were adopted in 1977. These protocols strengthen the protection of victims of international and non-international armed conflict and place limits on how wars are fought.²⁵ They also include significant provisions regarding water and water-related installations during armed conflicts, such as the prohibition on destroying objects indispensable to the survival of the civilian population and the prohibition on attacking works or installations containing dangerous forces.²⁶ Additionally, in the realm of IHL, there are regulations prohibiting the poisoning of drinking water.²⁷

From an environmental perspective, in the historical trajectory of IHL, the explicit protection of the environment emerged relatively recently.²⁸ Treaty provisions directly addressing environmental impacts began to appear only from the 1970s onward.²⁹ This development notably includes the adoption of the 1976 Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques (ENMOD),³⁰ alongside Articles 35 and 55 of AP I.³¹

Article 35.3 of AP I states that “it is prohibited to employ methods or means of warfare which are intended, or may be expected, to cause widespread, long-term and severe damage to the natural environment.” The identical term is used in Article 55.1 of AP I. ENMOD also sets a similar standard to prohibit the use of environmental modification techniques as a means of warfare. However, it is widely acknowledged that the criteria of “widespread, long-term, and severe” damage, as specified in Articles 35.3 and 55, establish a threshold that is exceedingly high and, in practice, provide few to no safeguards for the natural environment.³²

17. UNEP, CONFLICT IN GAZA, *supra* note 1, at 19-21.

18. *Id.*

19. Billy Stockwell & Sana Noor Haq, *Children Are Drinking From Puddles and Wading Through Sewage Pools, as Israel Pummels Water Systems in Gaza*, CNN (Aug. 23, 2024), <https://www.cnn.com/2024/08/23/middleeast/israel-gaza-water-shortages-heatwave-crisis-intl/index.html>.

20. Emily Anthes, *A “Silent Victim”: How Nature Becomes a Casualty of War*, N.Y. TIMES (Apr. 13, 2022), <https://www.nytimes.com/2022/04/13/science/war-environmental-impact-ukraine.html>.

21. In particular, Geneva Convention (III) Relative to the Treatment of Prisoners of War, Aug. 12, 1949, 75 U.N.T.S. 135 [hereinafter GC3]; Geneva Convention (IV) Relative to the Protection of Civilian Persons in Time of War, Aug. 12, 1949, 75 U.N.T.S. 287; Protocol Additional to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of International Armed Conflicts (Protocol I), June 8, 1977, 1125 U.N.T.S. 3 [hereinafter AP I]; Protocol Additional to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of Non-International Armed Conflicts (Protocol II), June 8, 1977, 1125 U.N.T.S. 609.

22. MARCO SASSÒLI, INTERNATIONAL HUMANITARIAN LAW: RULES, CONTROVERSIES, AND SOLUTIONS TO PROBLEMS ARISING IN WARFARE 36-37 (2019), <https://www.elgaronline-com.mu.idm.oclc.org/display/9781786438546/9781786438546.xml>.

23. GC3, *supra* note 21, art. 26.

24. ICRC, COMMENTARY ON THE THIRD GENEVA CONVENTION: CONVENTION (III) RELATIVE TO THE TREATMENT OF PRISONERS OF WAR art. 26, para. 2129 (2021), <https://doi.org/10.1017/9781108979320>.

25. SASSÒLI, *supra* note 22, at 38-39.

26. See AP I, *supra* note 21, arts. 54, 56.

27. Regulations Concerning the Laws and Customs of War on Land, Annexed to the Hague Convention (IV) Respecting the Laws and Customs of War on Land, 18 October 1907, in The Hague Conventions and Declarations of 1899 and 1907, art. 23(a), 205 C.T.S. 277.

28. Antoine Bouvier, *Protection of the Natural Environment in Time of Armed Conflict*, 31 INT'L REV. RED CROSS 567 (1991), <https://doi.org/10.1017/S0020860400072557>.

29. ANNE DIENELT, ARMED CONFLICTS AND THE ENVIRONMENT: COMPLEMENTING THE LAWS OF ARMED CONFLICT WITH HUMAN RIGHTS LAW AND INTERNATIONAL ENVIRONMENTAL LAW (2022), <https://link.springer.com/10.1007/978-3-030-99339-9>.

30. ENMOD, *adopted* Dec. 10, 1976, *opened for signature* May 18, 1977, 1108 U.N.T.S. 151 (entered into force Oct. 5, 1978).

31. AP I, *supra* note 21, arts. 35, 55.

32. THE ENVIRONMENTAL CONSEQUENCES OF WAR: LEGAL, ECONOMIC, AND SCIENTIFIC PERSPECTIVES (Jay E. Austin & Carl E. Bruch eds., 2000),

Since then, momentum to enhance environmental protection in times of armed conflict has continued to develop. Alongside these established rules, two significant developments have absorbed the progressive development of environmental considerations in armed conflict. In 2020, the ICRC published its Guidelines on the Protection of the Natural Environment in Armed Conflict, updating their 1994 predecessor and outlining existing rules under IHL.³³ Further, after a decade of work, the International Law Commission (ILC) finalized and adopted its Principles on the Protection of the Environment in Relation to Armed Conflicts, which were subsequently endorsed in a U.N. General Assembly (UNGA) resolution on December 7, 2022.³⁴ These documents, when compared with the established IHL provisions concerning the environment, reflect a more contemporary understanding due to their currentness.

C. Protecting Transboundary Waters in Armed Conflict: Insights From IEL Treaties

Traditionally, there has been a division between the laws governing armed conflict, primarily IHL, and those governing peacetime, such as human rights law and environmental law.³⁵ However, this conventional separation has been increasingly challenged over the years. The International Court of Justice (ICJ) in past decades has contributed to broadening the discussion of environmental protection in armed conflict, extending beyond IHL to other areas of law.

The most famous case in relation to applicability of other branches of law in armed conflict is the Advisory Opinion on the Legality of the Threat or Use of Nuclear Weapons. In this opinion, the ICJ refrained from giving a clear answer to the question of “whether” environmental treaties remain applicable during armed conflict.³⁶ Instead, the ICJ reformulated the question to ask “whether the obligations stemming from these treaties were intended to be obligations of total restraint during armed conflict.”³⁷ It then concluded that such was not the case while stressing at the same time that States had to interpret their right to self-defense and their *ius in bello* obligations in light of environmental considerations.³⁸

More recently, in the ICJ judgment in the Armed Activities on the Territory of the Congo case, the ICJ directly

referred to a peacetime treaty, Article 21 of the African Charter on Human and Peoples’ Rights, to support its conclusion.³⁹ These opinions rendered by the ICJ have a similar approach to the ILC’s, suggesting that *lex specialis* principles do not necessarily exclude the application of other branches of law such as IEL treaties.

Moreover, the development of international law for protecting the environment in armed conflict is evident in the actions taken under several major environmental treaties in recent years to actively engage in this arena.⁴⁰ For example, the Convention Concerning the Protection of the World Cultural and Natural Heritage (World Heritage Convention) is an important environmental treaty that specifically addresses the safeguarding of global natural and cultural heritage, even in the midst of armed conflict.⁴¹ The World Heritage Convention explicitly mandates the inclusion of properties significantly threatened by armed conflict in the designated List of World Heritage in Danger.⁴²

Already in 2000, the World Heritage Centre initiated the program “Biodiversity Conservation in Regions of Armed Conflict: Protecting World Heritage in the Democratic Republic of the Congo.”⁴³ The World Heritage Committee has also been actively involved in the protection of World Heritage sites during armed conflict, as illustrated by its efforts to safeguard Virunga National Park in the Democratic Republic of the Congo.⁴⁴ In light of recent events, such as the Russia-Ukraine conflict, three additional World Heritage sites were included in the List of World Heritage in Danger in 2023.⁴⁵ Concurrently, the U.N. Educational, Scientific, and Cultural Organization (UNESCO) has also voiced deep apprehension about the repercussions of the ongoing conflict on cultural heritage, notably evident in the Gaza Strip.⁴⁶

At the same time, proactive measures have been undertaken by the Conference of the Contracting Parties (COP) to the Ramsar Convention to safeguard the endangered

<https://www.cambridge.org/core/books/environmental-consequences-of-war/068D68636BBB3051D96C233C1FDF0CD>; Bouvier, *supra* note 28; DIENELT, *supra* note 29.

33. ICRC, GUIDELINES ON THE PROTECTION OF THE NATURAL ENVIRONMENT IN ARMED CONFLICT (2020).

34. *Draft Principles on Protection of the Environment in Relation to Armed Conflicts*, [2022] 2 Y.B. Int’l L. Comm’n 96.

35. ELIZABETH MREMA ET AL., PROTECTING THE ENVIRONMENT DURING ARMED CONFLICT: AN INVENTORY AND ANALYSIS OF INTERNATIONAL LAW 34 (2009).

36. Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, 1996 I.C.J. 226 (July 8).

37. *Id.* ¶ 20.

38. *Id.*

39. Armed Activities on the Territory of the Congo (Dem. Rep. Congo v. Uganda), Judgment, 2005 I.C.J. 168, ¶ 252 (Dec. 19).

40. Although this Article addresses water protection in armed conflict from both humanitarian and environmental perspectives, this section focuses primarily on the environmental aspects of water protection due to the strong environmental orientation of the relevant IEL treaties.

41. World Heritage Convention, *adopted* Nov. 26, 1972, 1037 U.N.T.S. 151 (entered into force Dec. 17, 1975).

42. WORLD HERITAGE CENTRE, WHC.21/01, OPERATIONAL GUIDELINES FOR THE IMPLEMENTATION OF THE WORLD HERITAGE CONVENTION para. 179(b) (v) (2021).

43. U.N. Educational, Scientific, and Cultural Organization (UNESCO) World Heritage Convention, *Biodiversity Conservation in Regions of Armed Conflict: Protecting World Heritage in the Democratic Republic of the Congo*, <https://whc.unesco.org/en/congobiodiversity/> (last visited Oct. 3, 2025).

44. See, e.g., Britta Sjöstedt, *The Role of Multilateral Environmental Agreements in Armed Conflict: “Green-Keeping” in Virunga Park. Applying the UNESCO World Heritage Convention in the Armed Conflict of the Democratic Republic of the Congo*, 82 NORDIC J. INT’L L. 129 (2013).

45. *Damaged Cultural Sites in Ukraine Verified by UNESCO*, UNESCO (Sept. 22, 2025), <https://www.unesco.org/en/articles/damaged-cultural-sites-ukraine-verified-unesco>.

46. See, e.g., UNESCO, *UNESCO’s Action in the Gaza Strip/Palestine*, <https://www.unesco.org/en/gaza> (last visited Oct. 3, 2025); UNESCO, *Impact and Consequences of the Current Situation in the Gaza Strip/Palestine in All Aspects of UNESCO’s Mandate: Draft Resolution*, U.N. Doc. 42 C/COM.APX/DR.2 (Nov. 9, 2023), <https://unesdoc.unesco.org/ark:/48223/pf0000387432>.

wetlands in Ukraine during the Russia-Ukraine conflict.⁴⁷ These wetlands, crucial for their ecosystem services, have been significantly affected by the ongoing conflict, posing a threat to their existence.⁴⁸ Recognizing the urgency of the situation, in November 2022, the COP to the Ramsar Convention adopted Resolution XIV.20, “Environmental Emergency in Ukraine Relating to the Damage of Its Wetlands of International Importance (Ramsar Sites) Stemming From the Russian Federation’s Aggression.”

This marks the first time the Ramsar Convention adopted a resolution specifically aimed at preserving wetlands during armed conflict,⁴⁹ and its subsequent implementation has elicited positive responses.⁵⁰ These responses include financial support from contracting Parties to aid in conducting environmental assessments for endangered Ramsar sites in Ukraine, as well as collaboration with other institutions to develop methodologies for such assessments.⁵¹

Based on the framework established by these international environmental agreements, concrete measures can be taken to assess environmental damage and to provide the technical and scientific support crucial for environmental reconciliation. While IHL provides crucial protections during armed conflict, it lacks the specific mechanisms and detailed provisions necessary to assess and address environmental damage. Therefore, the measures initiated by multilateral environmental agreements serve as tangible examples of how proactive strategies can contribute to mitigating environmental harm during periods of armed conflict.

II. Article 29 of the U.N. Watercourses Convention: Content, Evolution, and Influence

While several environmental treaties have addressed the protection of the environment during armed conflict, it is rare for such treaties to include specific provisions dedicated to this issue within their texts. Notably, Article 29 of the U.N. Watercourses Convention was adopted to explicitly safeguard international watercourses and related installations during times of conflict. In light of ongoing armed conflicts worldwide, this part aims to analyze the content and evolution of Article 29, as well as its impact on the protection of transboundary aquifers during armed conflict.

A. Article 29: International Watercourses and Related Installations in Times of Armed Conflict

The U.N. Watercourses Convention was adopted in 1997 and entered into force in 2014.⁵² It stands as a landmark multilateral environmental agreement aimed at governing the use, management, and protection of international watercourses.⁵³ The U.N. Watercourses Convention highlights several key principles.

First, it mandates the equitable and reasonable use of international watercourses, requiring States to manage shared waters fairly, considering factors like geography, climate, and socioeconomic needs, ensuring no State disproportionately benefits.⁵⁴ It also establishes the obligation not to cause significant harm, requiring States to avoid harming others through their use of shared waters.⁵⁵ Additionally, the Convention encourages cooperation, including data-sharing, consultations, and advance notifications of activities that may affect shared resources.⁵⁶ It also emphasizes the sustainable use of watercourses, urging States to prevent pollution, protect ecosystems, and manage resources for present and future needs.⁵⁷

Article 29 of the U.N. Watercourses Convention is a unique provision that specifically addresses the protection of international watercourses and related installations during armed conflict, as follows: “International watercourses and related installations, facilities, and other works shall enjoy the protection accorded by the principles and rules of international law applicable in international and non-international armed conflict and shall not be used in violation of those principles and rules.”⁵⁸ Without laying down any specific regulations, Article 29 serves as a general reminder of the applicability of existing principles and rules of international law on international watercourses during armed conflict.⁵⁹ The commentary on this article further elaborates on what these rules and principles are, both from humanitarian and environmental perspectives of water protection.⁶⁰

For example, the poisoning of water supplies is prohibited by the Hague Convention of 1907 Concerning the Laws and Customs of War on Land.⁶¹ Provisions from Article 56 of AP I protect dams, dikes, and other works from attacks that “may cause the release of dangerous forces and consequent severe losses among the civilian population.”⁶² Similar protections apply in non-international armed con-

47. Ramsar Convention, *Resolution XIV.20: The Ramsar Convention’s Response to Environmental Emergency in Ukraine Relating to the Damage of Its Wetlands of International Importance (Ramsar Sites) Stemming From the Russian Federation’s Aggression* (2022).

48. RAMSAR CONVENTION SECRETARIAT, REPORT OF THE 14TH MEETING OF THE CONFERENCE OF THE CONTRACTING PARTIES 62-63 (2022).

49. Meng Wang, *The Unprecedented Ramsar Resolution: Ukrainian Wetlands Protection in Armed Conflict*, 70 NETH. INT’L L. REV. 323, 323 (2023), <https://doi.org/10.1007/s40802-024-00246-8>.

50. Ramsar Convention, *Update of the Secretariat on the Implementation of Resolution XIV.20*, SC63 Doc.24 (June 2024), https://www.ramsar.org/sites/default/files/2024-03/SC63_24_implementation_ResXIV20_e.pdf.

51. *Id.* at 2-3.

52. U.N. Convention on the Law of the Non-Navigational Uses of International Watercourses, *adopted* May 21, 1997, 2999 U.N.T.S. 77 (entered into force Aug. 17, 2014) [hereinafter U.N. Watercourses Convention].

53. ALISTAIR RIEU-CLARKE ET AL., UN WATERCOURSES CONVENTION: USER’S GUIDE 46 (2012).

54. U.N. Watercourses Convention, *supra* note 52, art. 5.

55. *Id.* art. 7.

56. *Id.* art. 8.

57. *Id.* art. 24.

58. *Id.* art. 29.

59. *Draft Articles on the Law of the Non-Navigational Uses of International Watercourses and Commentaries Thereto and Resolution on Transboundary Confined Groundwater*, [1994] 2 Y.B. INT’L L. COMM’N 89, 131.

60. *Id.*

61. *Id.*

62. *Id.*

flicts under Article 14 and Article 15 of AP II.⁶³ Also relevant to the protection of international watercourses in times of armed conflict is Article 55 of AP I, in that “care shall be taken in warfare to protect the natural environment against widespread, long-term and severe damage.”⁶⁴

It should be noted that Article 29 refers to international principles and rules; however, this does not mean that those rules and principles are limited to the provisions specifically mentioned. On the one hand, this is because the provisions provided in the ILC commentary is non-exhaustive. On the other hand, there is inherent flexibility within the treaty to incorporate new norms—particularly environmental norms—that have developed since the treaty’s conclusion. Both the ICJ and the International Tribunal for the Law of the Sea (ITLOS) have addressed the concept of evolving provisions and the dynamic application of international law, especially in the context of environmental protection.⁶⁵

In this light, while examining the exact rules and principles that Article 29 refers to, it is important to recognize that the provision shall embody the idea that international legal obligations related to the protection of watercourses during armed conflict adapt to evolving norms of international law, particularly regarding environmental protection. For instance, Article 29’s reference to the application of international law during armed conflict may open the door to incorporating new environmental norms, such as those related to climate change standards or biodiversity conservation in aquatic systems. These modern developments may not have been anticipated when the U.N. Watercourses Convention was adopted, but the dynamic application of Article 29 shall take into account both IHL and emerging IEL to make sure this provision remains relevant in addressing contemporary environmental challenges in armed conflict.

B. From Extensive to Concise: The Evolution of Article 29

As introduced, Article 29 of the U.N. Watercourses Convention serves as a reminder rather than introducing new rules. This raises the question of why the provision remains as it stands and whether the Convention should establish its own rules for armed conflict situations or continue to reference existing principles and rules of international law. To address this, it is essential to examine the process by which the U.N. Watercourses Convention was developed. Therefore, this section reviews the ILC’s work of the draft articles on the law of the non-navigational uses of international watercourses, which form the foundation of the

63. *Id.*

64. *Id.*

65. See, e.g., Gabčíkovo-Nagymaros Project (Hung. v. Slov.), Judgment, 1997 I.C.J. 7, ¶ 112 (Sept. 25); Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, 1996 I.C.J. 226, ¶ 27 (July 8); Responsibilities and Obligations of States Sponsoring Persons and Entities With Respect to Activities in the Area, Case No. 17, Advisory Opinion of Feb. 1, 2011, 2011 ITLOS Rep. 10, ¶ 122.

Convention. Through this review, the section seeks to uncover the reasons behind the significant transformation of Article 29, from its initially detailed formulation to its current concise form.

The ILC was established by the UNGA in 1947 with a mandate to promote the progressive development and codification of international law. In 1970, the UNGA recommended that the ILC “take up the study of the law of the non-navigational uses of international watercourses with a view to its progressive development and codification.”⁶⁶ The ILC’s work concerning the non-navigational uses of international watercourses includes a succession of five special rapporteurs.⁶⁷ They perform several tasks, including preparing reports on the topic, participating in the consideration of the topic in plenary, contributing to the work of the Drafting Committee on the topic, and preparing the text of the commentaries to the draft provisions for consideration by the ILC.⁶⁸

For the first time during the drafting process, considerable attention was paid to water security in times of armed conflict in the report submitted by the special rapporteur at that time in 1982.⁶⁹ The special rapporteur proposed draft Article 13, focusing on water resources and installation safety, for the consideration of his successor special rapporteurs and the ILC.⁷⁰ This marked the first attempt during the drafting process to address the protection of water resources and installations specifically in the context of armed conflict.

This draft Article 13 included six detailed sub-articles, which are completely different from the final article in the U.N. Watercourses Convention’s text regarding this topic. The draft Article 13 read as follows:

Draft Article 13

Water resources and installation safety

1. System States shall employ their best efforts to prevent the poisoning of shared water resources by any and all persons or from any source.
2. Hydraulic installations and other facilities, associated with an international watercourse system and capable of releasing dangerous forces or substances, shall not be attacked, destroyed or damaged during peacetime, or in time of armed conflict unless such installations

66. G.A. Res. 2669 (XXV), on Progressive Development and Codification of the Rules of International Law Relating to International Watercourses, at 207 (Dec. 8, 1970).

67. The special rapporteurs who contributed to the ILC’s work on the law of the non-navigational uses of international watercourses were Richard D. Kearney (1976), Stephen M. Schwebel (1979-1982), Jens Evensen (1983-1984), Stephen C. McCaffrey (1985-1991), and Robert Rosenstock (1993-1994). See ILC, *Membership: Special Rapporteurs of the International Law Commission (1949-2025)*, <https://legal.un.org/ilc/guide/annex3.shtml> (last updated June 16, 2025).

68. ILC, *About the Commission: Organization, Programme, and Methods of Work*, <https://legal.un.org/ilc/methods.shtml> (last updated Oct. 8, 2024).

69. Stephen M. Schwebel (Special Rapporteur), *Third Report on the Law of the Non-Navigational Uses of International Watercourses*, ¶¶ 390-430, U.N. Doc. A/CN.4/348 and Corr.1 (Dec. 11, 1981).

70. *Id.* ¶ 415.

or facilities are demonstrably being used as part of an adversary's offensive military positions or apparatus.

3. Hydraulic installations and other facilities, associated with an international watercourse system and capable of releasing dangerous forces or substances, shall not be used in preparation for, or in the conduct of, offensive military operations.
4. System States shall, at the request of any of them, consult with a view to reaching agreement with respect to sufficient practicable security and safety measures, individual and joint, for the protection of shared water resources from poisoning and of hydraulic and other installations and facilities associated with their international watercourse system from terrorist acts of sabotage.
5. Without prejudice to the question of the effect otherwise of the outbreak of hostilities upon the status of any system agreements or other water-related treaties or arrangements, system States shall, to the extent possible, by direct or indirect means, sustain during times of armed conflict warning systems established with other system States for the purpose of informing a system State or States of the threat or occurrence of a water-related hazardous event.
6. Withholding, by diversion or other means, of water from a system State so as to place in jeopardy the survival of the civilian population or to imperil the viability of the environment is prohibited in peacetime and in time of armed conflict.⁷¹

However, this detailed account of the proposal concerning international watercourses and related installations in armed conflict received strong resistance from the successor special rapporteurs as well as the subsequent discussions between the ILC and the Sixth Committee. It is important to note that the drafting process is normally not linear, with various approaches being explored.⁷² This was partly due to differing perspectives among the special rapporteurs.⁷³ Additionally, regular interaction between the ILC and the Sixth Committee played a significant role.⁷⁴

The Sixth Committee of the U.N., also known as the Legal Committee, is one of the six main committees of the UNGA.⁷⁵ The Sixth Committee serves as the primary forum for examining legal issues in the Programme of the General Assembly.⁷⁶ The interaction between the ILC and the Sixth Committee primarily involved feedback on the

ILC's annual reports to the Sixth Committee.⁷⁷ The outcomes of these debates within the Sixth Committee were relayed to and incorporated by the ILC.⁷⁸

One of the primary discussions about the proposed Article 13 revolved around *whether and how* issues concerning armed conflict should be incorporated into this draft convention regarding international watercourses. It is noteworthy that a traditional belief holds that the law applicable during times of peace, such as environmental law, and that during times of armed conflict, such as IHL, are mutually exclusive, allowing only one to be in effect at any given time.⁷⁹ However, this belief has been challenged by the legal landscape surrounding this discussion as covered in the previous section of this Article. This has enabled issues related to armed conflict to be addressed more frequently in other branches of law, such as IEL.

The concern about addressing issues related to armed conflict remains despite the proposed Article 13 alignment with AP I and AP II.⁸⁰ Opinions were expressed by the successor special rapporteurs that such efforts could be perceived as attempts to modify established IHL instruments.⁸¹ AP I and AP II are the result of extensive and delicate negotiations and represent significant pillars of international law.⁸² In this light, although proposed draft Article 13 is obviously in harmony with the scope and tenor of the IHL instruments mentioned above,⁸³ the special rapporteurs still fear that any endeavor that might be interpreted as amending or supplementing these protocols could introduce unforeseen challenges to the future work of the ILC and raise objections.⁸⁴

Despite the concerns raised regarding proposed Article 13, the ILC has affirmed the necessity of addressing the protection of international watercourses and related installations during times of armed conflict due to their critical importance.⁸⁵ To avoid the risk of being perceived as undermining essential norms of IHL and to minimize objections, a compromise was reached regarding the inclusion of the topic of watercourses in armed conflict.

Following the special rapporteur's proposal of draft provisions in 1991, the Drafting Committee of the ILC adopted the following draft Article 29, based on the text prepared by successor special rapporteurs.⁸⁶

71. *Id.*

72. THE UN WATERCOURSES CONVENTION IN FORCE: STRENGTHENING INTERNATIONAL LAW FOR TRANSBOUNDARY WATER MANAGEMENT 16 (Flavia Rocha Loures ed., 1st ed. 2013).

73. *Id.*

74. *Id.*

75. Huw Llewellyn & Tutku Bektas, *United Nations, Sixth Committee*, in MAX PLANCK ENCYCLOPEDIA OF PUBLIC INTERNATIONAL LAW §A.1 (Oxford Univ. Press online ed. 2019).

76. *Id.*

77. Franklin Berman, *The ILC Within the UN's Legal Framework: Its Relationship With the Sixth Committee Focus Section: The International Law Commission: Sixty Years of Progress in Codification*, 49 GERMAN Y.B. INT'L L. 107, 116 (2006).

78. *Id.*

79. MREMA ET AL., *supra* note 35, at 34.

80. Jens Evensen (Special Rapporteur), *First Report on the Law of the Non-Navigational Uses of International Watercourses*, ¶ 46, U.N. Doc. A/CN.4/367 and Corr.1 (Apr. 19, 1983).

81. *Id.*

82. *Id.*

83. *Id.*

84. *Id.*

85. Stephen C. McCaffrey (Special Rapporteur), *Sixth Report on the Law of the Non-Navigational Uses of International Watercourses*, ¶ 22, U.N. Doc. A/CN.4/427 & Corr.1 and Add.1 (Feb. 23 & June 7, 1990).

86. *Draft Articles on the Law of the Non-Navigational Uses of International Watercourses. Titles and Texts Adopted by the Drafting Committee*, [1991] 1 Y.B. INT'L L. COMM'n 134, U.N. Doc. A/CN.4/L.458.

Draft Article 29*International watercourses and installations
in time of armed conflict*

International watercourses and related installations, facilities and other works shall enjoy the protection accorded by the principles and rules of international law applicable in international and internal armed conflict and shall not be used in violation of those principles and rules.⁸⁷

Draft Article 29 adopted by the ILC contains the most important features of the final Article 29 as it stands in the Convention's text. It omits any reference to existing IHL provisions that were included in the detailed initial proposal related to this topic. Draft Article 29 serves merely as a reminder that the relevant principles and rules of international law applicable to international watercourses remain in force during armed conflict.

In 1991, the ILC decided to send the draft articles, via the U.N. secretary-general, to governments for their comments and observations.⁸⁸ The compromise to create a concise article addressing watercourses in armed conflict, to some degree, did achieve its goal of reducing objections, with only two States voicing objections against draft Article 29.⁸⁹

Several States, such as Hungary, explicitly mentioned their agreement with the provision regarding rights and obligations during armed conflict.⁹⁰ Greece noted that Article 29 handled a sensitive issue with care.⁹¹ Only the United Kingdom argued that the issue of environmental protection, particularly concerning watercourses and related installations, had already been addressed under existing rules of IHL.⁹² The Netherlands doubted the practical function of this article due to its brevity.⁹³

On June 24, 1994, the ILC adopted the final text of a set of 33 draft articles on the law of the non-navigational uses of international watercourses, with commentaries, and a resolution on confined transboundary groundwater.⁹⁴ By submitting the final text of a set of 33 draft articles and a resolution to the UNGA, the ILC completed its task.

C. *The Influence of Article 29 on Protecting Transboundary Aquifers in Armed Conflict*

It should be noted that the approach adopted by the ILC in Article 29 concerning international watercourses and

armed conflict has influenced the handling of similar concerns regarding confined aquifers and underground water in armed conflict. The discussions of fundamental obligations regarding international watercourses have generally assumed that the same rules apply to both surface water and groundwater. This assumption is supported by U.N. Watercourses Convention Article 2(a), which defines the term “watercourse” to include groundwater that is connected to surface water systems.⁹⁵ However, it is important to recognize that there is also “confined groundwater” that is not connected to surface water. By definition, these confined underground aquifers are excluded from the scope of the term “watercourse.”

The issue of “confined groundwater” was debated within the ILC during the final stages of its work on international watercourses.⁹⁶ The special rapporteur at that time for the second reading of the draft articles proposed including confined transboundary aquifers within the scope of these articles.⁹⁷ However, the ILC ultimately did not accept this recommendation. States may have felt uneasy about applying the principles and rules of watercourses to confined groundwater, which were not initially considered when formulating the texts.⁹⁸ Instead, the ILC adopted a resolution on confined transboundary groundwater.⁹⁹ This resolution commends States to be guided by the principles contained in the draft articles on the law of the non-navigational uses of international watercourses, where appropriate, in regulating transboundary groundwater.¹⁰⁰

In 1998, the topic of shared natural resources (confined groundwater and single geological structures of oil and gas) was included in the ILC's long-term program of work.¹⁰¹ This program eventually led to the finalization of the draft articles on the law of transboundary aquifers in 2008.¹⁰² Article 18 of the law on transboundary aquifers, particularly regarding protection during armed conflict, appears to mirror Article 29 of the U.N. Watercourses Convention on the same topic, and reads as follows:

Article 18*Protection in time of armed conflict*

Transboundary aquifers or aquifer systems and related installations, facilities and other works shall enjoy the protection accorded by the principles and rules of international law applicable in international and non-interna-

87. *Id.* para. 76.

88. ILC, Report of the International Law Commission on the Work of Its Forty-Third Session, U.N. Doc. A/46/10 (1991).

89. *The Law of the Non-Navigational Uses of International Watercourses—Comments and Observations Received From Governments*, [1993] 2(1) Y.B. Int'l L. Comm'n 145, U.N. Doc. A/CN.4/447 and Add.1-3.

90. *Id.* at 159.

91. *Id.* at 155.

92. *Id.* at 171.

93. *Id.* at 162.

94. *Draft Articles on the Law of the Non-Navigational Uses of International Watercourses and Commentaries Thereto and Resolution on Transboundary Confined Groundwater*, *supra* note 59.

95. U.N. Watercourses Convention, *supra* note 52, art. 2(a).

96. Robert Rosenstock (Special Rapporteur), *Second Report on the Law of the Non-Navigational Uses of International Watercourses*, U.N. Doc. A/CN.4/462, at 22 (Apr. 21, 1994).

97. *Id.*

98. STEPHEN C. McCaffrey, *THE LAW OF INTERNATIONAL WATERCOURSES* 209 (3d ed. 2019), <https://doi.org/10.1093/law/9780198736929.001.0001>.

99. *Resolution on Confined Transboundary Groundwater*, [1994] 2(2) Y.B. Int'l L. Comm'n 135.

100. *Id.*

101. *Report of the International Law Commission on the Work of Its Fiftieth Session (20 April-12 June and 27 July-14 August 1998)*, [1998] 2(2) Y.B. Int'l L. Comm'n 1, ¶ 554, U.N. Doc. A/53/10.

102. *Draft Articles on the Law of Transboundary Aquifers, With Commentaries*, [2008] 2(2) Y.B. Int'l L. Comm'n 22, ch. V, U.N. Doc. A/63/10.

tional armed conflict and shall not be used in violation of those principles and rules.¹⁰³

The final outcome of Article 29 reflects a compromise between two competing concerns. On the one hand, there was a fear that addressing international watercourse protection during armed conflict in the U.N. Watercourses Convention might be interpreted as an attempt to alter existing IHL instruments, potentially causing objections from States. On the other hand, there was recognition of the importance of the topic.

These apprehensions ultimately led to the exclusion from Article 29 of specific references to provisions and principles of international law applicable to watercourses during armed conflict. This compromise, which decided the concise nature of Article 29, contributed to its final adoption in the U.N. Watercourses Convention. At the same time, this formulation of Article 29 raises questions about whether it provides adequate protection, as it does not establish any new rules.

III. Article 29: Role, Challenges, and Broader Implications in Armed Conflict

A. Strengths and Limitations of Article 29 in Addressing Water Protection in Armed Conflict

This section evaluates the performance of Article 29, reflecting on its effects since the U.N. Watercourses Convention entered into force. It examines the practical implications and effectiveness of Article 29 in promoting the protection and management of international watercourses in armed conflict, assessing both successes and challenges encountered over the past decade.

It might initially seem doubtful to even discuss the practical value of Article 29 to the current discourse, given that it primarily serves as a reminder and does not establish any new rules. Additionally, it could easily be argued that a more detailed provision on this topic would be much more beneficial, as was suggested in the initial proposal by ILC. However, if we set aside these critiques momentarily and reexamine the history and context of how Article 29 was adopted into the final text of the U.N. Watercourses Convention, our perspective might shift.

The drafting and negotiation process of the law governing the non-navigational uses of international watercourses spanned nearly three decades, characterized by numerous rounds of deliberation and intense debates. International watercourses, each unique in terms of hydrographic, geological, geographical, and climatic factors, involve fundamental interests and even contradictions between the

States concerned.¹⁰⁴ The deep division among States on key issues such as the definition of equitable and reasonable utilization, as well as the dispute settlement mechanisms, was so profound that there were doubts that a final text could be agreed upon.¹⁰⁵

In this context, given the sensitivity surrounding issues related to armed conflict, the inclusion of Article 29 in the final text of the U.N. Watercourses Convention can be viewed as an achievement. In fact, without the cautious approach taken by the ILC with regard to Article 29, which is non-prejudicial toward existing rules, it is doubtful that such a provision would have even been accepted by States at all. Further, Article 29 acknowledges the potential threats that international watercourses and associated installations may encounter during times of armed conflict. The inclusion of a reference to the principles and rules of international law was vital, although a simple reminder, as it further confirmed the applicability of these rules and principles to watercourses in armed conflict.

It is important to note, however, that in other international water treaties, such as the Convention on the Protection and Use of Transboundary Watercourses and International Lakes, there are no similar provisions addressing the utilization of water during armed conflict.¹⁰⁶ Even when multilateral environmental agreements touch upon emergency circumstances like armed conflict, they often include derogation clauses in the treaty text. These clauses allow for exceptions or offer flexibility to States in fulfilling their obligations.

The Convention on Wetlands of International Importance Especially as Waterfowl Habitat (Ramsar Convention) is an illustration of this approach. Article 2(5) of the Ramsar Convention states that a contracting Party may, because of its “urgent national interests,” delete or restrict the boundaries of a wetland.¹⁰⁷ An analogous formulation can be found in the Revised African Convention on the Conservation of Nature and National Resources. Article XVII of this convention states that the obligation to protect the environment does not override the responsibilities of contracting States regarding the “paramount interest of the State,” allowing for potential exemptions from environmental obligations during armed conflict.¹⁰⁸ Therefore, while Article 29 of the U.N. Watercourses Convention merely serves as a reminder, it nonetheless contributes by affirming the existing rules, rather than disregarding the

103. *Id.* art. 18.

104. ILC, Report of the International Law Commission on the Work of Its Forty-Fifth Session: Topical Summary of the Discussion Held in the Sixth Committee of the General Assembly During Its Forty-Eighth Session, ¶ 378, U.N. Doc. A/CN.4/457 (1994).

105. For some of those debates, see for instance RIEU-CLARKE ET AL., *supra* note 53, at 109, 120, 130.

106. Convention on the Protection and Use of Transboundary Watercourses and International Lakes, *adopted* Mar. 17, 1992, 1936 U.N.T.S. 269 (entered into force Oct. 6, 1996).

107. Ramsar Convention art. 2(5), *adopted* Feb. 2, 1971, 996 U.N.T.S. 246 (entered into force Dec. 21, 1975).

108. Revised African Convention on the Conservation of Nature and Natural Resources art. XVII, *adopted* July 11, 2003 (entered into force July 23, 2016).

issue or relaxing environmental obligations due to emergency situations.

While the concise nature of Article 29 facilitated its adoption, its brevity—serving primarily as a reminder of the applicability of existing international legal principles during armed conflict—certainly raises questions about its practical implication and effectiveness, particularly in addressing the complex challenges posed by armed conflict to international watercourses.

One question concerning the practical implications of Article 29 is whether the riparian States of international watercourses would actually include this provision in specific regional agreements they conclude to implement the framework provided by the Convention.¹⁰⁹ The U.N. Watercourses Convention is designed as a framework convention, which is meant to be supplemented by more policy and legal frameworks applicable to watercourses through other regional agreements.¹¹⁰ However, after examining regional water treaties drawn from the provisions and principles of the U.N. Watercourses Convention, to the best knowledge of the author, no evidence has been found of the integration of Article 29 into these regional water treaties.¹¹¹

At the same time, while evaluating the practical importance of Article 29 a decade after the Convention entered into force, we find ourselves amidst at least two armed conflicts with wide global impact: the Russia-Ukraine conflict and the Gaza conflict. Through the lens of these ongoing conflicts, we could identify another deficiency in Article 29. Both conflicts vividly demonstrate the crucial importance of protecting water resources and installations for the health and survival of civilian populations, particularly in terms of drinking water supply, irrigation, and flood control measures. However, it is worth noting that the majority of the parties involved in the conflicts—Russia, Ukraine, and Israel—are not contracting Parties to the Convention. Thus, Article 29 would not even stand a chance of being invoked, even if the sabotage of water and related infrastructure occurs.

Compared to other international environmental agreements negotiated during a similar period, the U.N. Watercourses Convention has relatively few contracting Parties, with 38 States.¹¹² Other international environmental treaties adopted roughly around the same period, such as the Ramsar Convention and the World Heritage Convention, have more than 100 contracting Parties. The relatively low participation of States in the Convention further limits

the practical importance of Article 29. A range of reasons may contribute to why States showed low interest in joining the U.N. Watercourses Convention.¹¹³ It may include lacking awareness pertaining to the content and relevance of the Convention, an absence of leadership in promoting ratification, and a number of highly sensitive topics stemming from the Convention, such as the balance of interests between protecting and utilizing international watercourses among upstream and downstream States.¹¹⁴

Further, even if any party to the conflict were to invoke Article 29 during armed conflict to safeguard international watercourses, the nature of Article 29 poses challenges to the practical implications of this provision since it does not impose new obligations. The legal effect of Article 29 is that States will be obligated to protect and use international watercourses in accordance with the rules and principles that apply during times of armed conflict. Therefore, Article 29 mainly relies on the law that governs the situation of armed conflict, primarily IHL, to provide protection to international watercourses and related installations. However, as discussed in Section I.B, when it comes to the protection of water in armed conflict, especially from an environmental perspective, IHL exhibits significant deficiencies.

B. Article 29 and Its Implications for Ongoing Legal Discussions

Compared to other more widely discussed IEL treaties, Article 29 of the U.N. Watercourses Convention is often overlooked, especially in the context of water protection during armed conflict. However, amid the evolving landscape of international law, the interpretation and application of such specific provisions play an inspiring role. This is particularly relevant against the backdrop of ongoing armed conflicts and the pressing need to strengthen legal protection for water resources in these situations. Even though Article 29, as discussed in the preceding sections, may fall short of providing effective protection for international watercourses during armed conflict, the manner in which the provision was codified, along with the unique character of the Convention, can still offer valuable insights into current legal discussions on protecting water in times of armed conflict.

The first insight connects with the comprehensive objective of safeguarding watercourses provided by the U.N. Watercourses Convention. The Convention adopts an expansive definition of the “uses” of international watercourses, integrating environmental, economic, and social dimensions. While IHL has advanced the protection of water resources through both humanitarian and environmental lenses, the thresholds for applying environmental protections during armed conflict remain notably high.

109. *The Law of the Non-Navigational Uses of International Watercourses—Comments and Observations Received From Governments*, *supra* note 89, at 162.

110. AGNES CHONG, INTERNATIONAL LAW FOR FRESHWATER PROTECTION 63 (2022), <https://brill.com/display/title/61983>.

111. The examination includes East Africa, such as the Revised Protocol on Shared Watercourses in the Southern African Development Community and the Nile River Basin Cooperative Framework Agreement, which closely follow the U.N. Watercourses Convention. It also encompasses South and East Asia, particularly the bilateral water treaties established between China and riparian States, which treaties borrow heavily from the Convention.

112. U.N. Treaty Collection, *12. Convention on the Law of the Non-Navigational Uses of International Watercourses*, https://treaties.un.org/pages/viewdetails.aspx?src=treaty&cmdtsg_no=xxvii-12&chapter=27&clang=_en (last updated July 10, 2025).

113. See, e.g., Alistair Rieu-Clarke & Flavia Rocha Loures, *Still Not in Force: Should States Support the 1997 UN Watercourses Convention?*, 18 RECIEL 185, 189-90 (2009), <https://doi.org/10.1111/j.1467-9388.2009.00640.x>.

114. RIEU-CLARKE ET AL., *supra* note 53, at 23.

Further, the humanitarian and environmental dimensions of water protection under IHL often operate in silos, lacking significant integration or synergy. However, water in armed conflict is inherently a cross-cutting issue that implicates not only environmental concerns, but also critical humanitarian and economic considerations, such as the provision of drinking water and water for agricultural needs. In this regard, the comprehensive mandate positions Article 29 of the Convention as a tool for addressing watercourses during armed conflicts in a more integrated manner.

The second insight pertains to the debate during the codification history of Article 29, specifically whether an environmental treaty should address issues related to armed conflict. The apprehension that arose during the codification of this provision—stemming from fears that it could potentially interfere with established IHL norms—continues in the debates even today.

At first glance, one might attribute this to a lack of attention or awareness on the part of the ILC and its special rapporteur regarding the significance of regulating watercourses in armed conflict. Yet, a closer reading of the ILC's preparatory work as discussed suggests the opposite: both the special rapporteur and the ILC recognized the importance and complexity of the topic, but ultimately opted for restraint. The underlying driver, therefore, appears not to be ignorance but a form of collective hesitation—rooted in fear, risk aversion, and institutional caution.

Traditional international law scholarship assumes that actors—whether states or institutions—behave rationally to maximize their interests within a structured legal framework.¹¹⁵ Other scholars such as Anne van Aaken and Tomer Broude have shown that international decisionmakers, like individuals in domestic contexts, are influenced by bounded rationality and systematic cognitive biases.¹¹⁶ The drafting of Article 29 illustrates precisely these dynamics.

The ILC faced a perceived dilemma: expanding the draft articles to include detailed wartime provisions promised normative completeness, but carried the risk of being seen as “re-interpreting” existing IHL norms and potentially causing difficulties for the ILC's future work. The potential “losses”—state opposition, delayed adoption, or even rejection by the General Assembly—loomed larger in the drafters' minds than the prospective “gains” of legal clarity or enhanced humanitarian protection. This asymmetrical perception reflects loss aversion in institutional behavior.

This dilemma remains highly relevant in contemporary discussions. The adoption of Ramsar Resolution XIV.20 addressing Ukrainian wetlands protection in the Russia-Ukraine conflict, as discussed in Section I.C, provides a relevant example. During the COP discussions of this resolution, similar concerns were raised about whether multilateral environmental agreements addressing issues in

times of armed conflict might exceed the environmental and technical mandates of these treaties,¹¹⁷ or whether IHL would be the more suitable forum to address such issues.¹¹⁸ These discussions highlight the complexities and sensitivity of IEL in engaging topics in relation to armed conflict.

In this context, the discussion of Article 29 becomes particularly relevant. It proves that environmental treaties have included attempts to address issues related to armed conflict since as early as the 1980s, as demonstrated by Article 29. While the provision adopts a more moderate formulation, it nonetheless succeeds in incorporating the topic of armed conflict into the treaty text—serving, at the very least, as a legal reminder of the continued relevance of environmental obligations during times of armed conflict. This precedent contributes to the current conversation on the development of traditionally peacetime-oriented laws—such as IEL and human rights law—in responding to the challenges posed by armed conflict.

This Article argues that, in fact, addressing armed conflict-related environmental issues under IEL treaties does not necessarily constitute a departure from the core mandate of such treaties. For instance, the Convention on Biological Diversity (CBD) outlines three main objectives of the treaty: the conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of benefits arising from the utilization of genetic resources.¹¹⁹ Similarly, the Ramsar Convention's mandate is to promote conservation and wise use of wetlands through local, regional, and national actions and international cooperation.¹²⁰

Both treaties are strongly oriented toward the protection of specific environmental goods, and the wording of their provisions tends to be relatively open-ended. This flexibility allows for broader interpretation. In this light, one could reasonably argue that environmental damage resulting from armed conflict—although emerging in a more sensitive and controversial context—still falls within the scope of their overarching protective objectives. Therefore, addressing issues related to armed conflict and even referencing principles or provisions of IHL in COP documents does not necessarily mean exceeding the mandate of an environmental treaty.

The more important—and perhaps more challenging—question is *how* issues related to armed conflict can be thoughtfully and appropriately addressed within the framework of IEL. Given the experience of the adoption of Ramsar Resolution XIV.20 in relation to Ukrainian wetlands protection and the analysis provided above, this research argues that a balanced approach may be necessary and beneficial. This conclusion is also reflected in the final outcome of Article 29, where compromises were made—ultimately allowing the provision to be retained in the final text. In this light, this section proposes a cautious yet

115. Anne van Aaken, *Behavioral International Law and Economics*, 55 HARVARD INT'L L.J. 421, 422 (2013).

116. See, e.g., *id.* See also Tomer Broude, *Behavioral International Law*, 163 U. PA. L. REV. 1099 (2015).

117. RAMSAR CONVENTION SECRETARIAT, *supra* note 48, at 64.

118. *Id.* para. 353.

119. CBD art. 1, *opened for signature* June 5, 1992, 1760 U.N.T.S. 79 (entered into force Dec. 29, 1993).

120. Ramsar Convention, *supra* note 107, art. 2.

pragmatic approach for IEL treaties in addressing armed conflict issues, illustrated with a few potential examples.¹²¹

Rather than directly invoking specific and applicable provisions of IHL, COP decisions could adopt general guiding principles that acknowledge the relevance of IHL in conflict settings. In parallel, environmental treaty secretariats could initiate or strengthen collaboration with key actors such as the ICRC, U.N. human rights mechanisms, and legal experts with different backgrounds in environmental and humanitarian law. These partnerships could facilitate the development of best practices and soft-law instruments—such as technical guidance documents, reporting templates, or voluntary codes of conduct—that help operationalize environmental protection in conflict-affected areas.

Further, COPs under environmental treaties could institutionalize strategic mechanisms within the treaty framework to address conflict-related environmental issues, rather than adopting a reactive approach only in response to environmental emergencies when they occur.

One pragmatic approach could be the organization of thematic side events, high-level dialogues, or expert round tables on environmental protection in conflict-affected areas during COP meetings. These informal or semiformal platforms can facilitate dialogue among States, scholars, U.N. agencies, and civil society organizations, creating space for knowledge exchange without necessitating formal COP outcomes or consensus language. In parallel, COP presidencies or secretariats could convene informal consultations or contact groups among interested Contracting Parties to explore ways of addressing armed conflict within the mandate of the treaty. These processes—conducted on a voluntary and nonbinding basis—could focus on less politicized aspects, such as the need for data collection, scientific assessment, and post-conflict ecosystem restoration.

IV. Concluding Remarks

In light of the several ongoing armed conflicts and the increasing interaction between IEL and environmental issues in armed conflict, this Article raises the question of to what extent Article 29 of the U.N. Watercourses Convention addresses the challenges posed by armed conflict to the protection of international watercourses. Simultaneously, it seeks to explore what inspiration other IEL treaties can draw from this provision to better tackle environmental issues in armed conflict.

In response to the first part of this research question, the Article concludes that while Article 29 holds certain value,

its function as a reminder—coupled with the absence of concrete, binding rules—may not provide adequate protection for international watercourses and related installations during armed conflicts. However, the provision still offers advantages in addressing certain gaps in the current legal framework.

The review of the current legal regime in regulating watercourses in armed conflict concludes that IHL offers protection for watercourses through various provisions and principles, but it exhibits shortcomings, particularly from an environmental perspective. At the same time, the potential for IEL to address this gap is increasingly recognized, as evidenced by the involvement of instruments like the World Heritage Convention and the Ramsar Convention in protecting the environment during armed conflicts.

In this context, Article 29 of the U.N. Watercourses Convention fills a crucial gap by addressing the protection of international watercourses, a subject largely overlooked in other legally binding international water law instruments. Reflecting on the Convention's codification history, the concise language of Article 29 and its non-prejudicial nature toward IHL provisions allowed for its inclusion in the U.N. Watercourses Convention. At the same time, the evolution of Article 29 reveals several shortcomings. Riparian States have shown limited interest in incorporating this provision into their regional or bilateral water treaties, and ongoing conflicts like those in Ukraine and Gaza have not invoked Article 29, primarily because most parties involved are not Contracting Parties to the Convention. The relatively limited number of Contracting Parties remains a significant obstacle to the broader applicability of the Convention.

Despite these challenges, Article 29 of the U.N. Watercourses Convention provides valuable insights. Its focus on protection—encompassing environmental, social, and economic aspects—provides a foundation for more comprehensive water protection during armed conflict. More importantly, the codification history of this provision serves as an early example of the complexity of integrating environmental treaties with armed conflict, a challenge that still exists today.

Drawing inspiration from the successful adoption of Article 29 in the final treaty text, this Article shows how armed conflict-related issues can be thoughtfully and appropriately addressed within the framework of IEL. It proposes a cautious yet pragmatic approach for IEL treaties in tackling these challenges, illustrated with practical examples.

121. It is important to acknowledge that the U.N. Watercourses Convention lacks institutions such as a COP that might directly engage in the protection of water in armed conflict. Therefore, compared with mechanisms like the Ramsar Convention's COP, which adopts specific resolutions, or the World Heritage Committee's listing of endangered properties on the World Heritage List in Danger, it might be challenging for the U.N. Watercourses Convention to offer concrete measures in relation to water protection in armed conflict. However, this does not diminish the fact that other IEL treaties could be inspired by such approaches.