

# **“Come High Water, Come Hell”; Kinetic Weaponization of Water and the Interplay of International Humanitarian Law and International Disaster Law**

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**Abstract:** *The reverberating effects of mankind’s continued harnessing of the destructive potential of water and his deployment of such potential as a weapon in armed conflict, either as a means or a method of warfare, are extensive. Although international law provides, albeit insubstantially, for the protection of persons concurrently affected by armed conflict and disasters, it does not provide explicitly for disasters that are resultant to an ongoing armed conflict. This paper seeks to fill this gap by elucidating the instrumental international humanitarian law framework that implicitly prohibits the deployment of water as a kinetic weapon and the instrumental international disaster law framework that provides for response and relief in the event of disasters eventuated by the kinetic weaponization of water. In exploring the interplay between international humanitarian law and international disaster law pertinent to disasters eventuated by the deployment of water as a kinetic weapon in armed conflicts, the paper justifies why international humanitarian law prevails over international disaster law as *lex specialis* in the provision of protection for persons victimized by such disasters in armed conflicts.*

**Keywords:** *International Humanitarian Law, International Disaster Law, weaponization of water*

## **1. Introduction**

The history of man incontrovertibly evinces that mankind is a warring race immanently

called to conflict (Adam Fergusson, 1992), and of the innumerable armed conflicts man has engaged in through the three millennia past, water remains an integrant in innumerable wars waged (Peter H Gleick, 2006). The harnessing of the destructive potential of water and its subsequent deployment as a weapon of war by man is a marked exemplification of water as an integrant in armed conflict. Herein, the destructive potential of water comes to be employed as both a means and a method of warfare in the conduct of hostilities in armed conflicts globally, and that notwithstanding the myriad of provisions and prohibitions under international law.

The deployment of water as a weapon in armed conflicts beget multitudinous ramifications that are disastrous in, but unlimited to, the humanitarian paradigm (Camilo Sarmiento and Ted R Miller, 2006) invoking the interplay of international humanitarian law and international disaster law in the context of armed conflict. Ergo, this paper is written with the purpose of elucidating the existent instrumental legal framework, enumerating the provisions and prohibitions under international humanitarian law and enumerating the perplexities and provisions under international disaster law, pertinent to the kinetic weaponization of water in the humanitarian paradigm. The paper is limited to the armed conflicts traceable to the twentieth and twenty-first centuries only.

### *WATER IN WAR*

A trifold classification contrived by the Pacific Institute provides that water as an integrant to conflicts, armed or not, could either be a trigger for conflict, a weapon in conflict or a casualty of conflict (Pacific Institute, 2021). The tactical deployment of water as a weapon in armed conflict, either as a means and/ or a method of warfare, is traceable to the ancient Greeks (AK Chaturvedi, 2013) and the Islamic State post 2012 (Ibrahim Mazlum, 2017) alike. It is posited that water could be deployed as a weapon in armed conflict as one of three classes, namely toxic weapons, deprivatory weapons and kinetic weapons.

Although this paper is centered on the deployment of water as a kinetic weapon, it is acknowledged that transpositions between the aforementioned classes of weapons are an actuality dependent upon the circumstances of the armed conflict, including the calculated and/ or uncalculated changes in the course of the conflict as charted and/ or uncharted respectively by the armed actors that weaponized the water. Such transposition is amply evidenced in the flooding of the Pontine Marshes south of Rome, by the German army in 1944, wherein water deployed as a kinetic weapon through the opening of dykes to obstruct the Allied forces by forcing a flood transposed into a toxic weapon through the deliberate introduction of malaria to the flood water leading to casualties amongst combatants and civilians (Erhard Geissler and Jeanne Guillemin, 2010).

### *KINETIC WEAPONIZATION OF WATER*

The deployment of water as a kinetic weapon entails the targeting, or controlling, of a body of water and the concomitant releasing en masse of such water, thereby deliberately exploiting its inherently dangerous kinetic potential rendering it a weapon in warfare. The isolated targeting of a dam controlled by an

adversary in an armed conflict in order to enfeeble such adversary is an exemplification of the kinetic weaponization of water as a means of warfare as evidence in the diversion of the water of the Jubba River in Somalia by Al Shabaab in 2018, forcing the adversary to an undefendable territory by flooding the defendable territory (Christina Goldbaum, 2018). Correspondingly, the sporadic or systematic release of water held in a dam, or series of dams, controlled by an armed actor in an armed conflict as an offensive stratagem intended to impede the belligerent activities of an adversary is an exemplification of the kinetic weaponization of water as a method of warfare evidenced in the control of multiple dams in Iraq and Syria by the Islamic State between 2014 and 2017 (Leith Aboufadel, 2017).

### *PROVISIONS AND PROHIBITIONS – INTERNATIONAL HUMANITARIAN LAW*

The kinetic weaponization of water, as a means or method of warfare, is not explicitly provided for under international law. Nonetheless, cognate implicit prohibitions pertinent to the conduct of hostilities in armed conflicts exist in international law, notably under the Additional Protocol I and Additional Protocol II to the four Geneva Conventions, and under customary international humanitarian law. The existent provisions implicitly prohibit the kinetic weaponization of water by providing for the release of water as a dangerous force consequent to the deliberate targeting of a work or installation containing such force as opposed to explicitly prohibiting the targeting, or controlling, of a work or installation with the singular intention of releasing the water contained, that has the potential of being a dangerous force, as a kinetic weapon.

Article 56 of Additional Protocol I provides for the consequent kinetic weaponization of water in international armed conflicts. Herein, per

Article 56 (1), Additional Protocol I prohibits works or installations holding dangerous forces, such as dams and/ or dykes, from being the object of an attack regardless of their status as military objectives thereby preventing the release of dangerous forces that could cause severe losses among the civilian population. In an international armed conflict, the attacking of works or installations holding containing dangerous forces in contravention of the prohibition per Article 56 (1) of Additional Protocol I, thereby deploying water as a kinetic weapon, amounts to a grave breach of international humanitarian law, per Article 85 (3) (c) of Additional Protocol I, if the armed actor attacked with the “knowledge that such attack will cause excessive loss of life, injury to civilians or damage to civilian objects, as defined in Article 57, paragraph 2 a) iii)”. An extension of the prohibition under Additional Protocol I exists in relation to the attacking of military objectives at or in the vicinity of the aforementioned works or installations thereby prevent similar consequences per Article 85 (3) (c).

Correspondingly, Article 15 of Additional Protocol II provides for the consequent kinetic weaponization of water in non-international armed conflicts. Yet, aberrantly, no grave breaches provision akin to Article 85 (3) (c) of Additional Protocol I exists in Additional Protocol II with regard to non-international armed conflicts. Comparable to the absence of the grave breaches provisions in Additional Protocol II is the absence of the extension of the prohibition on the implicit weaponization of water as a kinetic weapon in the context of non-international armed conflicts as opposed to that provided per the second limb to Article 56 (1) of Additional Protocol I.

Notwithstanding the prohibitive provisions per Article 56 (1) of Additional Protocol I, an exemption lies with regard to dams and/ or

dykes used regularly, significantly and directly in support of military operations in excess of their normal function. The exemption permits the attack on such works or installations if it is the only viable means to terminate such support to the adversary in an international armed conflict per Article 56 (2) (a) of Additional Protocol I. An extension of such permissive exemption under Additional Protocol I exists in relation to the attacking of military objectives located at or in the vicinity of such dams or dykes per Article 56 (2) (c) of Additional Protocol I. The airstrikes by the US led coalition on Islamic State targets in the vicinity of the Mosul dam, Haditha dam and Fallujah dam in Iraq in 2014 is an exemplification of this exemption in praxis (Julian E Barnes, 2014). The exemptions per Article 56 (2) of Additional Protocol I are bound nonetheless by the obligations on precaution per Article 57 of Additional Protocol I and the necessity for the taking of practical precautions to obviate the release of dangerous forces Article 56 (3) of Additional Protocol I. It is noteworthy, and aberrantly so, that a no permissive provisions exist on the implicit kinetic weaponization of water in non-international armed conflicts.

The prohibitions enumerated per Article 56 1 of Additional Protocol I and Article 15 of Additional Protocol II are found in customary international humanitarian law per Customary International Humanitarian Law Rule 42. The rule in customary international humanitarian law reflects the practice of States, as provided through a multitude of military manuals, such as per Paragraph 8.5.1.7 of United States Naval Handbook of 1995, and domestic legislations that deem contravention of the stipulated prohibitions in international armed conflicts and non-international armed conflicts as offences, such as per Section 3 (1) and Section 4 (1) of the Geneva Conventions Act of 1962 of Ireland. The governmental policy of States

further reflects their bearing on the implicit customary international humanitarian law prohibitions on the kinetic weaponization of water, amply evidenced in the expression of the Office of the Human Rights Adviser of the Presidency of the Colombian Republic on “the need for restraint and precaution... with respect to an attack by government troops on a dam in order to dislodge guerillas” (Jean-Marie Henckaerts and Louise Doswald-Beck, 2009).

#### *COME HIGH WATER*

The deployment of water as a kinetic weapon in an armed conflict entails diverse ramifications that are disasters in their own right or exacerbate a core disaster. Flooding is the single most disastrous ramification of the deployment of water as a kinetic weapon in armed conflict, leading to incalculable losses amongst men and their property caught in the floods; amply evidenced in the destruction caused by the Islamic State through the inundation upstream the Fallujah dam, including the city of Abu Ghraib, consequent to the closing of the dam’s floodgates and diversion of its water in 2014 (United Nations Counter-Terrorism Executive Directorate, 2017).

The flooding is compounded by a myriad of resultant ramifications that include, but are not limited to, the transmission of water borne and vector borne communicable diseases as in flooding of the Pontine Marshes south of Rome by the German army in 1944 (Erhard Geissler and Jeanne Guillemin, 2010), the contamination of sources of fresh water, the contamination and/ or devastation of sources of food including livestock, as evidenced in the extensive losses amongst livestock caused by the inundation upstream the Fallujah dam eventuated by the closing of the dam’s floodgates and diversion of its water by the Islamic State in 2014 (United Nations Counter-Terrorism Executive Directorate, 2017),

infrastructural degradation, and psychological traumatization of the survivors of the floods.

#### *RESPONSE AND RELIEF – INTERNATIONAL DISASTER LAW*

The recognized response to flooding and to the concomitant ramifications are provided for under international disaster law. The International Law Commission’s Draft Articles on the Protection of Persons in the Event of Disasters of 2016 is the foremost instrument in international law that provides for response and relief in the context of disasters (Robin Geiss and Nilz Melzer, 2021). Yet the Draft Articles is a non-binding instrument and not customary international law unlike the greater body of international humanitarian law and, as the title of the instrument suggests, is comprised of draft articles that are not unanimously ratified by the international community (Giulio Bartolini, 2017).

Draft Article 9 provides that States are to reduce the risk of disasters by taking measures apt to prevent, mitigate and prepare for disasters. Draft Article 9 is complimented by Draft Article 10, imposing a duty upon a State affected by a disaster to “to ensure the protection of persons and provision of disaster relief assistance in its territory, or in territory under its jurisdiction or control”. Herein, Draft Article 11 to 17 provide for external assistance in disaster relief with an emphasis on the sovereignty of the affected State.

The Draft Articles is an instrument that comprehensively provides for disasters under international disaster law, yet such provisions are strictly pertinent to the disasters that eventuate in times and contexts of peace. Draft Article 3 Subparagraph (a) Commentary 12 of the commentary to the Draft Articles holds that armed conflicts are not provided for per Draft Article 3 (a). Therein, the Draft Articles remains implicitly impertinent to the disasters

consequent to the deployment of water as a kinetic weapon in armed conflict. It is explicitly provided through Draft Article 18 (2) that the Draft Articles “do not apply to the extent that the response to a disaster is governed by the rules of international humanitarian law”, that is in armed conflicts. Draft Article 18 (2) thus mirrors Paragraph 1 (4) of the Guidelines for the Domestic Facilitation and Regulation of International Disaster Relief and Initial Recovery Assistance of 2007 in excluding the provisions of international disaster law to armed conflicts and/ or to disasters that transpire in the context of armed conflicts.

Classification of the armed conflict concerned, and other concomitant circumstances and complications only heighten the inapplicability of international disaster law in armed conflicts, including the kinetic weaponization of water. Herein lies the need to give thought to the interplay between international humanitarian law and international disaster law, especially to provide for the suffering that ensues from disasters in armed conflict, effectuated by the deployment of water as a kinetic weapon or otherwise.

*INTERPLAY – INTERNATIONAL  
HUMANITARIAN LAW AND INTERNATIONAL  
DISASTER LAW*

The disasters that demand giving thought to the interplay between international humanitarian law and international disaster law could be categorized as complex emergencies, which is as the Inter-Agency Standing Committee defined in 1994, “a humanitarian crisis in a country, region or society where there is total or considerable breakdown of authority resulting from internal or external conflict” (United Nations Refugee Agency, 2001). In such complex emergencies wherein disaster is eventuated by the kinetic weaponization of water, the invocation of Draft Article 18 (2) would evince that international

humanitarian would be applicable as the *lex specialis*. Yet, this notion remains rather convoluted for the regime of international law that provides most protection in the context of a disaster consequent to the deployment of water as a kinetic weapon would rely purely on the aggregate circumstances of the armed conflict and crisis in question.

Such complexities are reflected per Draft Article 18 Commentary 9 of the commentary to the Draft Articles, which provides that in situations of armed conflict, “the rules of international humanitarian law shall be applied as *lex specialis*, whereas the rules contained in the present draft articles would continue to apply “to the extent” that legal issues raised by a disaster are not covered by the rules of international humanitarian law”. In that, per Draft Article 18 Commentary 9 of the commentary to the Draft Articles, the Draft Articles would provide *cassus omissus* to international humanitarian law “in the protection of persons affected by disasters during an armed conflict while international humanitarian law shall prevail in situations regulated by both the draft articles and international humanitarian law”.

The application of international humanitarian law, rather than international disaster law, as the *lex specialis* to provide for disasters eventuated by the deployment of water as a kinetic weapon in armed conflict is propitious in the provision of protection to those victimized in light of the personal and geographical scopes of application of international humanitarian law. Herein, the personal scope of application of international humanitarian law casts a wider protective net by encompassing the protection of victims of armed conflict, irrespective of whether their victimization is attributable solely to the armed conflict or to a disaster in the context of an armed conflict. The overarching application

of the personal scope of international humanitarian law, as opposed to that of international disaster law which provides for those victimized by disasters in the context of peace, ensures the prioritization of the needs of the civilian population in times of an armed conflict irrespective of circumstances effectuating such needs.

The application of international humanitarian law as the *lex specialis* in providing for disasters in the context of armed conflicts is apt in terms of the geographical scope of application of international humanitarian law. Upon adoption of a purely functional approach in addressing the complexities concomitant to the circumstances of disaster, such as the collapse of infrastructure, and armed conflict, such as the loss of territorial control, international humanitarian law prevails as the most viable regime that provides for the protection of the victims of combined circumstances, that is the victims of disasters in the context of armed conflict. Moreover, international humanitarian law prevails as the more efficacious regime in providing for disasters and armed conflicts that exists concurrently, including disasters eventuated by the deployment of water as a kinetic weapon in armed conflicts, and that in light of the circumvention of the aforementioned complexities.

An exemplification of the efficaciousness of international humanitarian law as the *lex specialis* in providing for disasters in armed conflicts is evidenced the provisions for consent to relief operations. Although Draft Article 13 provides for the question of consent of the affected State on the provision of external relief, it remains wholly inadequate for application in the contexts of an armed conflict. Alternatively, the question of consent to relief is provided for in international humanitarian law, yet with a focus on the

actualities of the armed conflict, especially in terms of how an armed conflict is classified. Herein, per Article 59 of the Fourth Geneva Convention, international humanitarian law provides for the provision of humanitarian relief by “States or by impartial humanitarian organizations such as the International Committee of the Red Cross” in cases of occupation per Article 59 Paragraph 2 of the Fourth Geneva Convention. Correspondingly, Article 70 of Additional Protocol I provides for the provision of humanitarian relief in the context of international armed conflicts whilst the provisions of humanitarian relief in non-international armed conflicts is provided for per Article 18 of Additional Protocol II with an emphasis on the particularities of such armed conflicts.

#### *COME HELL*

The flooding eventuated downstream the river Sutlej in Pakistan by the release of water by India from a dam upstream as recent as August 2019 (Reuters, 2019) evinces that water continues to be employed by man as a means and method of warfare and deployed as a kinetic weapon in armed conflicts regardless of their classification. Yet, notwithstanding such actuality, the predominately prohibitive, and partially permissive, international humanitarian law framework provides only implicitly for the kinetic weaponization of water, that is in consequence to the deliberate targeting of a work or installation containing such force as opposed to explicitly prohibiting the targeting, or controlling, of a work or installation with the singular intention of releasing the water contained as a kinetic weapon.

Since international humanitarian law does not prevail as an explicitly preventive framework providing for the kinetic weaponization of water at present, mankind must rely on the responsive framework of international law to

provide for the disasters eventuated by the deployment of water as a kinetic weapon. Yet, man is nonetheless limited by recourse to international humanitarian law over international disaster law in providing for such disasters. The prevalence of international humanitarian law as the *lex specialis* in provision of response and relief in the wake of disasters that exist concurrent to armed conflicts remains efficacious as it provides for the unique operational dynamics of armed conflicts and coincidental disasters (Marwan Jilani, 2009). Ergo, international humanitarian law prevails as the framework applicable to the disasters eventuated by the deployment of water as a kinetic weapon in armed conflicts as it better provides for those victimized by such disasters.

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