

On (Im)Permissibility of Flechette Anti-Personnel Weapons – A Historical Overview

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1. Introduction

Efforts to prohibit or control certain methods and means of warfare are an important part of the international law of armed conflict.¹ Although weapons are an essential component of the use of force, there is no recognized definition of what constitutes a weapon under international law.² Basically, however, a weapon is a means of warfare used to carry out hostilities by killing, incapacitating, or injuring enemy combatants, as well as destroying or damaging matériel and property, as military objectives. It includes various weapons systems, such as rocket launchers, cannons, tanks, howitzers, and machine guns, as well as ammunition like rockets, bombs, mines, grenades, and bullets. Finally, it may involve other means, such as malicious software or devices that serve those purposes.³

¹ G. S. Corn, K. Watkin, J. Williamson, *The Law of War: A Concise Overview*, London 2023, p. 295.

² S. Casey-Maslen, Weapons [in:] B. Saul, D. Akande (eds), *The Oxford Guide to International Humanitarian Law*, Oxford 2020, pp. 261–262.

³ W.H. Parks, *Conventional Weapons and Weapons Review*, “Yearbook of International Humanitarian Law” 2005, vol. 8, https://www.researchgate.net/publication/232022335_Conventional_Weapons_and_Weapons_Reviews, access date: 24 November 2024, pp. 115–116.

In 1899 and 1907, the states codified the principle of international law that the right of belligerents to use methods that harm the enemy is not without limits, as stated in the Regulations concerning the Laws and Customs of War on Land (Article 22).⁴ The Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts, adopted in 1977 (Additional Protocol I), extended such limitation on methods of warfare i.e. the ways of behaving of parties in armed conflict (Article 35 paragraph 1).⁵ Furthermore, derived from the fundamental principles of international law governing armed conflict, such as the differentiation between combatants and non-combatants, as well as regarding the prohibition of causing unnecessary suffering to combatants, the prohibitions of various weapons were imposed. These include poisonous and asphyxiating gases, biological and chemical weapons, explosive and dum-dum bullets, etc. Apart from the prohibitions, there are also various restrictions on the use of certain weapons.

Following the fundamental principles codified during The Hague peace conferences and continuing to the present day, there has been a tendency to prohibit weapons that are incapable of distinguishing between military targets and civilian objects. These weapons are unable to be directed solely at military objectives, resulting in an unacceptable number of civilian casualties and damage to civilian property that exceeds the military advantage gained. Efforts have been made to prohibit weapons that inflict excessive pain or suffering on combatants, beyond what is necessary for legitimate military objectives.⁶ Due to their general nature, principles alone may not be enough to definitively declare a certain weapon as prohibited. Since the Saint Petersburg Declaration of 1868⁷, states have been striving to conclude international treaties that explicitly prohibit specific types of weapons.⁸ The practice shows that provisions of the majority of these

⁴ Second International Peace Conference (The Hague), *Convention (IV) Respecting the Laws and Customs of War on Land and Its Annex: Regulations concerning the Laws and Customs of War on Land*, 205 CTS 277, 18 October 1907.

⁵ International Committee of the Red Cross, *Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Additional Protocol I)*, 1125 UNTS 609, 8 June 1977.

⁶ H. Meyrowitz, *The Principle of Superfluous Injury or Unnecessary Suffering: From the Declaration of St. Petersburg of 1868 to Additional Protocol I of 1977*, "International Review of the Red Cross" 1994, no. 299, <https://international-review.icrc.org/articles/principle-superfluous-injury-or-unnecessary-suffering-declaration-st-petersburg-1868>, access date: 28 May 2024, pp. 102–103.

⁷ Declaration Renouncing the Use, in Time of War, of Explosive Projectiles under 400 Grammes Weight (St Petersburg Declaration), 138 CTS 297, 11 December 1868.

⁸ Y. Dinstein, *The Conduct of Hostilities...*, op. cit., p. 89.

treaties, typically involving multiple nations, gradually evolved into established principles of customary international law. The necessity of explicit prohibitions on certain types of weapons was indirectly reinforced by the 1996 Advisory Opinion of the International Court of Justice (ICJ) regarding the legality of the threat or use of nuclear weapons.⁹

While some may argue that nuclear weapons have already been prohibited based on previously mentioned fundamental principles, the ICJ emphasized the absence of a specific international treaty or rule of international customary law that explicitly prohibits nuclear weapons. Such ICJ's viewpoint also relativizes its own position regarding the Martens Clause, that its continuing existence and applicability is not to be doubted. Namely, if only explicit prohibitions (or restrictions) must be reached, then amorphous wording of the Martens Clause prevents its practical and effective applicability to prohibitions or restrictions of use of particular types of weapons. However, attaining an international treaty to prohibit specific weapons can be challenging due to a lack of determination among states. Consequently, the use of certain weapons is *de facto* tolerated, despite of their effects which can be reasonably labeled as contrary to the aforementioned fundamental principles. Therefore, the discussions regarding the specific incidents, even their legal qualifications, frequently fail to reach the desired outcomes in terms of prohibiting or restricting the use of certain weapons, even when considering other concepts of international law such as the selection of military objectives, proportionality, and precautions during attacks.

An example of a disputed weapon, which is the primary subject of this article, is the flechette. This is the anti-personnel variant, unlike the anti-armor one, the use of which is controversial. While the use of flechette weapons in contemporary armed conflicts is quite rare, each new occasion repeatedly opens discussions about its (im)permissibility within the international law and renews the criticisms of its usage. In the 21st century, the Israeli use of flechette against non-state actors in Gaza and Lebanon has been examined, whereas recent cases of Russian use of flechette weapons in Ukraine to limited extent only.¹⁰ It is commonly argued that flechette is an area weapon which, by its nature, is

⁹ International Court of Justice, *Legality of the Use by a State of Nuclear Weapons in Armed Conflict – Advisory Opinion*, The Hague 1996, <https://www.icj-cij.org/case/95/advisory-opinions>, access date: 30 April 2024.

¹⁰ A. Dangwal, *Russia Unleashes Horrifying Razor-Sharp Inch-Long Metal Projectiles on Ukraine That Needs Pilers To Take Them Out*, "The Eurasian Times" 18 May 2022, <https://www.eurasiantimes.com/russia-unleashes-horrifying-razor-sharp-inch-long-metal-projectiles-on-ukraine/>, access date: 6 December 2023.

unsuitable for differentiating between the military objectives and civilian objects.¹¹ In addition to criticism regarding civilian casualties, particularly in urban areas, it had also been noted that specific wounds that flechette cause to combatants go beyond acceptable gravity.¹²

It is our intention to, first, analyze the existing framework of international law that governs the conduct of armed conflicts, as well as the opinions of legal writers on international legal aspects of the use of flechette weapons. Furthermore, we will consider the mode of operation of flechette weapons and the military rationale (necessity) regarding its use, including the available information on the circumstances of its use. Moreover, we will analyze the sources concerning the negotiations held at international conferences aimed at prohibiting or restricting the use of certain conventional weapons. This includes the materials elaborating the contributions from military, medical and legal experts. We will examine various sources to find an explanation for the absence of an explicit international legal prohibition or restrictions on the use of flechette weapons, from the Vietnam War to the current conflict in Ukraine.

2. International legal framework for selection of military objectives, means and methods of warfare in armed conflicts

Essentially, the prohibition or restrictions of use of certain weapons are primarily based on the requirement of differentiating between combatants and non-combatants, as well as the prohibition of causing unnecessary suffering to combatants.¹³ Therefore, the weapons that lack the ability to differentiate between military objectives and civilian objects, meaning they cannot exclusively hit military objectives (with tolerance of proportional collateral casualties or damage), are prohibited. Since the Saint Petersburg Declaration of 1868, the provisions of which became a customary law, the weapons that unnecessarily exacerbate the suffering of combatants by inflicting greater pain than inevitable for achieving legitimate military purpose is also prohibited.

¹¹ United Nations, General Assembly-Human Rights Council, *Human Rights in Palestine and other Occupied Arab Territories – Report of the Fact-Finding Mission on the Gaza Conflict*. A/HRC/12/48, New York 2009, <https://www2.ohchr.org/english/bodies/hrcouncil/docs/12session/a-hrc-12-48.pdf>, access date: 15 December 2023, p. 414.

¹² S. Watts, *Regulation-Tolerant Weapons, Regulation-Resistant Weapons and the Law of War*, "International Law Studies" 2015, vol 91, <https://digital-commons.usnwc.edu/cgi/viewcontent.cgi?article=1411&context=ils>, access date: 16 May 2024, p. 595.

¹³ N. Tsagourias, A. Morrison, *International Humanitarian Law – Cases, Materials and Commentary*, Cambridge 2023, p. 192.

The Additional Protocol I, in Article 35 paragraph 2, specifies that it is prohibited to use “weapons, projectiles and material and methods of warfare of a nature to cause superfluous injury or unnecessary suffering”.¹⁴ This is an instance of a general prohibition of weapons based on the criterion of their effects, in terms of excessive wounds and unnecessary suffering of combatants, and – in addition to the Saint Petersburg Declaration – based on the criterion of the way in which the weapons are used.¹⁵ In other words, if use of certain weapon would unnecessarily aggravate suffering of the incapacitated, or would render their death inevitable, the use of such weapons would be unlawful. Therefore, such prohibition applies to those weapons that are primarily designed for use against human beings, i.e. enemy combatants. The motivation behind it is not to protect civilians, as they are already safeguarded by various other regulations of international law. Instead, the focus is on safeguarding combatants.¹⁶

As far as protection of civilians is concerned, weapons are primarily designed with the principle of distinction in mind (Article 51 of Additional Protocol I). Here it is worth to differentiate between the actual, *de facto* use of a certain weapon, and its nature. In other words, every weapon can potentially be used in contravention with the principle of distinction between military objectives and civilian objects.¹⁷ Therefore, indiscriminate use of a certain weapon in particular context must not label that weapon with “an indelible imprint of illegality”, as it can be used in some other military operations fully complying with international law of armed conflict.¹⁸ At the same time, it is essential to clearly establish that certain weapons indeed, by their nature, cannot comply with the principle of distinction. For example, the biological weapons by their nature lack the ability to distinguish between combatants and civilians. Thus, such weapons must be deemed illegal *per se* – they will unavoidably spread contagious disease without being capable of distinguishing between combatants and civilians, even with the potential to continue its impact spatially and temporally due to a reproductive ability of biological agents. In essence, it is comparable to chemical weapons, as its impact can potentially be further intensified depending on atmospheric conditions. Due to these reasons, biological and chemical weapons must not be used even against the legitimate military objectives.

¹⁴ International Committee of the Red Cross, *Protocol Additional...*, op. cit.

¹⁵ H. Meyrowitz, *The Principle...*, op. cit., p. 102.

¹⁶ S. Casey-Maslen, S. Haines, *Hague Law Interpreted: The Conduct of Hostilities under the Law of Armed Conflict*, Oxford 2018, p. 208.

¹⁷ Y. Dinstein, *The Conduct of Hostilities...*, op. cit., p. 83.

¹⁸ *Ibidem*.

Weapons that lack precise targeting capabilities, such as unguided rocket missiles, may not necessarily be considered unlawful.¹⁹ For instance, in larger open areas where no civilians are present, as was the case in the Gulf War where Iraqis used Scud missiles in desert areas where only military forces were deployed. However, when these missiles are employed to attack cities where civilians are present, despite the presence of legitimate military targets, their use violates the principle of distinction.²⁰ Exactly because of the potential for civilian casualties, apart from the enemy combatants as legitimate military objective, international law may impose certain restrictions of use of a particular weapon. These restrictions, driven by the aim of safeguarding civilians, may impose prohibition of a particular weapon in certain circumstances, rather than a complete prohibition.²¹

The principles of distinction between combatants and non-combatants, and prohibition of causing unnecessary suffering to combatants are, by their nature, formulated in a general and non-specific manner. Therefore, the states tend to facilitate their implementation by way of concluding international treaties aimed at explicit prohibition of particular weapons.²² The absence of an explicit international treaty prohibiting a certain weapon does not negate or eliminate the significance of those principles. However, it is evident from the experience that non-existence of international treaty factually leads to disagreements among states regarding the legal status of a particular weapon or modalities of its use within international law.²³ As previously stated, the states have long been aware of this reality and, consequently, resort to the conclusion of international treaties.

According to Additional Protocol I (Article 52 paragraph 2), „military objectives are limited to those objects which by their nature, location, purpose or use make an effective contribution to military action and whose total or partial destruction, capture or neutralization, in the circumstances ruling at the time, offers a definite military advantage”.²⁴ Although military objective primarily implies objects, the enemy combatants are also considered military objectives.²⁵

¹⁹ M.N. Schmitt, J.S. Thurnher, „*Out of the Loop*”: *Autonomous Weapon Systems and the Law of Armed Conflict*, “Harvard National Security Journal” 2013, vol. 4, no. 2, <https://centaur.reading.ac.uk/89863/1/Vol-4-Schmitt-Thurnher%20out%20of%20the%20loop.pdf>, access date: 6 May 2024, p. 246.

²⁰ Ibidem.

²¹ Y. Dinstein, *The Conduct of Hostilities...*, op. cit., p. 89.

²² C. Henderson, *The Use of Force and International Law*, Cambridge 2024, p. 95.

²³ Y. Dinstein, *The Conduct of Hostilities...*, op. cit., p. 89.

²⁴ International Committee of the Red Cross, *Protocol Additional...*, op. cit.

²⁵ H. Meyrowitz, *The Principle...*, op. cit., p. 115.

As previously stated, it is prohibited to cause them suffering that is not necessary for the accomplishment of legitimate military purposes.²⁶ In order to limit extensive interpretations, as well as to prevent voluntarism in the selection of military objectives (which are common tendencies), Additional Protocol I introduced additional rule. That rule (Article 52 paragraph 3) prescribes that “in case of doubt whether an object which is normally dedicated to civilian purposes, ..., is being used to make an effective contribution to military action, it shall be presumed not to be so used”. Consequently, such object must not be attacked directly and intentionally. Moreover, indiscriminate attacks are prohibited. This includes attacks that are not directed at a specific military objective, or that employ a method or means of combat which cannot be directed at a specific military objective or those which employ a method or means of combat the effects of which cannot be limited as required by Additional Protocol I (Article 51 paragraph 4). Therefore, attacks would strike military objectives and civilians or civilian objects without distinction.

The Additional Protocol I also decrees that even attack on military objective would be considered unlawful if it causes collateral loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, which is excessive in relation to achieved military advantage. Therefore, if collateral civilian losses are proportional to the circumstances ruling at the time, they are deemed legally permitted.²⁷ Nevertheless, the planners of military operations and military decision-makers must undertake precautions (Article 57). It refers to the obligation to take “constant care” to spare the civilian population, civilians and civilian objects, by way of verifying whether the objective to be attacked is indeed a military objective, as well as choosing of means and methods of attack “with a view to avoiding, and in any event to minimizing, incidental loss of civilian life, injury to civilians and damage to civilian objects”.

If this obligation cannot be fulfilled, and the principle of proportionality cannot be observed, the attack must be cancelled or suspended – either because it became apparent that the objective is not a military one, or that civilian losses or damage to civilian objects would be excessive in relation to the concrete and direct military advantage anticipated.²⁸ Precautions during attack also include an obligation to provide, if circumstances permit, effective advance warning of the attack if it could impact the civilian population. However, it must be noted that the enemy’s treatment of its own civilians or civilian objects can prevent

²⁶ N. Tsagourias, A. Morrison, *International Humanitarian...*, op. cit., p. 226.

²⁷ C. Henderson, *The Use of Force...*, op. cit., pp. 316–317.

²⁸ N. Tsagourias, A. Morrison, *International Humanitarian...*, op. cit., p. 220.

attacking forces from fulfilling their obligations under the international law regarding the precautions in an attack. The behavior of the enemy can also contribute to the disproportionate nature of the attack.

3. The mode of operation of the flechette weapons and the military rationale for their use

The purpose of every anti-personnel weapon is to intentionally inflict wounds, pain and suffering to enemy combatants. Flechettes (“little arrows”) are narrow and sharp metallic or rarely plastic needles or stingers, typically several centimeters in length, with aerodynamically shaped tip, that are fitted into the body of tank or artillery projectile. If made of steel, they typically weigh less than one gramme, and are even lighter if made of depleted uranium.²⁹ Projectiles containing flechettes are usually unguided, meaning that it is not possible to modify their ballistic trajectory. The mass and initial velocity of projectiles upon firing generate kinetic energy which in combination with pointed shape and small cross-section of flechettes leads to incapacitation of enemy combatants. Due to dispersion of flechettes, this weapon is not effective for precisely targeting individual enemies. Instead, it affects a specific area where the enemies are located, even if a specific target is aimed at. Thus, this weapon is highly suitable for combat actions against larger infantry units, as well as smaller crews operating air-defense or artillery systems. Considering favorable ballistic characteristics of the flechettes, the desired trajectory of fired projectiles goes almost in parallel with the ground.³⁰

During the First World War, the French forces used flechettes in air defense, to increase odds to hit enemy aircraft. During the Second World War there was no significant use, while some development projects failed to reach operational use. Renewed greater operational use of flechette weapons happened in Vietnam, where the U.S. forces mostly used artillery flechette projectiles for repelling attacks on its outnumbered defense positions.³¹ However, the U.S. Army

²⁹ International Committee of the Red Cross, *Weapons that may Cause Unnecessary Suffering or have Indiscriminate Effects – Report on the Work of Experts*, Geneva 1973, https://library.icrc.org/library/docs/DOC/DOC_00165.pdf, access date: 4 May 2024, p. 31.

³⁰ International Committee of the Red Cross, *Conference of Government Experts on the Use of Certain Conventional Weapons (Lucerne, 24 September – 18 October 1974)*, Geneva 1975, <https://tile.loc.gov/storage-services/service/ll/llmlp/RC-conf-experts-1974/RC-conf-experts-1974.pdf>, access date: 4 May 2024, p. 55.

³¹ E. Barak, *Deadly Metal Rain: The Legality of Flechette Weapons in International Law*, Leiden 2011, pp. 45–46.

regulations also allowed for the use of flechette weapons in attacks.³² The efficiency of flechette projectiles in Vietnam was highly praised on terrains with dense vegetation, when compared to other types of artillery and tank anti-personnel projectiles.

During the Cold War Soviet tank and anti-armor units were also equipped with flechette projectiles. Israeli forces (*Israel Defense Forces* – IDF) also started to use flechette projectiles in armed conflicts in the Middle East. In the 21st century, the IDF used flechette projectiles primarily in anti-personnel version, with reports of their use in Gaza. Following the delivery of 105 mm caliber flechette artillery projectiles by the USA almost fifty years ago, Israel subsequently upgraded them with adjustable electronic igniter, which enabled burst of front section of projectile's body at desired distance and altitude, followed by dispersion of metal flechettes.³³ Projectiles of 105 mm caliber contain approximately 8000 flechettes measuring 37.5 mm in length.³⁴ Within the 120 mm caliber, there is a range of 10000 to 14000 flechettes. Due to explosive charge contained in the projectile, the flechettes disperse in conical shape over an area approximately 90 meters wide and up to approximately 300 meters long.³⁵ Media reports indicate that in 2022, Russian forces deployed 122 mm caliber artillery flechette projectiles in Ukraine.³⁶ It was estimated that length of flechettes from Russian projectiles is slightly larger than in U.S. projectiles.³⁷ It cannot be ruled out that Russian flechette projectiles used in Ukraine originate still from the Soviet era.

Therefore, taking into account its widespread use in Vietnam and later in the Middle East during the 21st century, flechette weapons were predominantly employed as anti-personnel weapons.³⁸ In earlier times, there were ambitions to use flechettes in certain anti-armor projectiles, and for the purpose of destroying solid, immovable targets. However, these endeavors were found to be

³² S. Rodan, *Israel's Military Debates Use of Flechette Round*, "Jane's Defence Weekly" 22 May 2001, <https://electronicintifada.net/content/israels-military-debates-use-flechette-round/4025>, access date: 7 December 2023.

³³ Ibidem.

³⁴ N. Logan, *Israel-Gaza conflict: What are Flechette Shells and Are They Legal?*, "Global News" 21 July 2014, <https://globalnews.ca/news/1464455/israel-gaza-conflict-what-are-flechette-shells-and-are-they-legal/>, access date: 7 December 2023.

³⁵ S. Rodan, *Israel's Military...*, op. cit., p. 1.

³⁶ L. Tondo, *Dozens of Bucha civilians were killed by metal darts from Russian artillery*, "The Guardian" 24 April 2022, <https://www.theguardian.com/world/2022/apr/24/dozens-bucha-civilians-killed-flechettes-metal-darts-russian-artillery>, access date: 6 December 2023.

³⁷ R.F. Bellamy, *Little Arrows...*, op. cit., p. 360.

³⁸ E. Barak, *Deadly Metal Rain...*, op. cit., p. 45.

inadequate in terms of effectiveness.³⁹ In some modern versions, flechette weapons are used for neutralization of already fired enemy's anti-armor and other projectiles. The use of flechette weapons in an anti-personnel capacity is justified by their ability to effectively cover a specific area and generate a greater number of fragments compared to conventional tank projectiles used in artillery. Nevertheless, the impact on human beings provokes criticisms and controversies, especially when innocent civilians are among the casualties. Specifically, when the flechette travels at a velocity above 900 m/s, upon striking the body it tumbles in a wound and consequently increases primary injury.⁴⁰ This is a result of the flechette bending into a hook shape upon reaching the body, due to its velocity. This bending is followed by the rupture and separation of its rear part, leading to a secondary wounding.⁴¹

4. Do they really cause superfluous injuries and unnecessary suffering? – medical aspects of flechette weapons' impact

First of all, superfluous injuries and unnecessary suffering are comparative, not absolute, concepts.⁴² How to measure the gravity of wounding and suffering, and determine that certain wounds and sufferings are superfluous and excessive, thereby deeming them unnecessary for gaining military advantage? Do certain weapons unnecessarily exacerbate suffering of combatants and cause them pain greater than those inevitable for the achievement of legitimate military purposes? Those questions cannot be answered neither by fields of law in general nor by scientific branch of international law. Similar to a judge, being an expert in law, who acts in case of compensation claim for endured physical and mental pain, cannot independently establish all facts necessary for reaching a verdict. For that purpose, judge shall seek findings and opinion of expert witness of medical branch. Therefore, neither an assessment on inadmissibility of certain weapon due to superfluous wounds and unnecessary suffering it causes, nor a view on necessity of its prohibition in international law, cannot be made without an opinion of medical experts. Specifically, the opinions of experts with extensive experience in directly treating and healing the wounded, and understanding the effects of certain

³⁹ International Committee of the Red Cross, *Conference of Government... (Lucerne)*, op. cit., p. 55.

⁴⁰ International Committee of the Red Cross, *Weapons that may Cause...*, op. cit., p. 43.

⁴¹ International Committee of the Red Cross, *Conference of Government... (Lucerne)*, op. cit., pp. 59–60.

⁴² W.H. Boothby, *Weapons and the Law of Armed Conflict*, Oxford 2016, p. 53.

weapons on human beings, are essential. Hence, in order to effectively argue for the possible prohibition of certain weapons, it is necessary to have the support of medical experts.⁴³ That is a very valuable addition to the collaboration of politicians, diplomats, soldiers, and lawyers.

Already at the end of 19th century, there had been attempts of military and medical experts to measure a lower limit of amount of energy necessary to kill or incapacitate a human being.⁴⁴ That effort led to understanding that, apart from the quantity of energy of projectile, there are additional factors that affect incapacitation or killing, including velocity of projectile, position of the wound, physical and moral strength of the wounded, etc.⁴⁵ Previous research has also arrived at similar conclusions when attempting to measure the extent of pain inflicted by specific types of weapons. It has been concluded that basically three main criteria are relevant for the assessment of a degree of suffering – degree of pain, degree of permanent disability and degree of probability of death.⁴⁶ Pain, in most cases, arises from a combination of two factors – physiological and psychological. Therefore, the degree of pain experienced is not solely determined by physical injury, but also by the victims' psychological perception of their suffering.⁴⁷

The subjective nature of pain is a crucial factor that prevents any general quantification of a degree of pain caused by a certain weapon or projectile.⁴⁸ When it comes to physiological aspect of pain, it is generally observed that the intensity of pain increases when there is a greater extent of tissue damage, simultaneous bone fractures, or a higher number of wounds caused by multiple fragments.⁴⁹ Regarding the likelihood of death, it is not solely determined by the type of weapon or projectile used, but also by the location of the wound, the time elapsed between the injury and medical intervention, and the physical resilience of the wounded individual.⁵⁰ A greater number of fragments certainly increases the probability of harming vital parts of the body.⁵¹

⁴³ R.M., Coupland, *Abhorrent Weapons and "Superfluous Injury or Unnecessary Suffering": From Field Surgery to Law*, "British Medical Journal" 1997, vol. 315, no. 7120, <https://typeset.io/pdf/abhorrent-weapons-and-superfluous-injury-or-unnecessary-5grhzb10wq.pdf>, access date: 2 May 2024, p. 1451.

⁴⁴ International Committee of the Red Cross, *Weapons that may Cause...*, op. cit., p. 25.

⁴⁵ Ibidem.

⁴⁶ Ibidem.

⁴⁷ Ibidem, p. 27.

⁴⁸ Ibidem.

⁴⁹ Ibidem, pp. 27–28.

⁵⁰ Ibidem, p. 28.

⁵¹ Ibidem.

A particular impetus to inclusion of medical expertise in discussions on the need for prohibition of certain kinds of weapons was expected from the project of International Committee of the Red Cross (ICRC) named SIrUS („superfluous injury or unnecessary suffering“), which was planned to greatly rely upon ICRC's extensive database of war wounds.⁵² In the latter half of the 1990s, the SIrUS Project established four criteria. Meeting at least one of these criteria would be enough to conclude that a particular weapon causes unnecessary suffering. These criteria are as follows: 1) specific disease, specific abnormal physiological state, specific abnormal psychological state, specific and permanent disability or specific disfigurement; 2) field mortality of more than 25% or a hospital mortality of more than 5%; 3) Grade 3 wounds as measured by the Red Cross wound classification⁵³; 4) effects for which there is no well recognized and proven treatment.⁵⁴ Although the consequences for one's health are also associated with the weapon's design and its use, the SIrUS Project found that nature of wounds is closely related exactly to the weapon's design.⁵⁵ On the other hand, number of the wounded and their status within international law of armed conflict are predominantly related with the weapon's use, while a section of the body to be wounded could depend both on weapon's design and its use.⁵⁶

For instance, an assault rifle is specifically engineered to deliver a projectile with an energy deposit of up to 2500 joules upon impact with the human body. This potential for causing wound is a direct result of the weapon's design. However, the category of wounded persons, the percentage of mortality among the wounded, the percentage of the wounded with limb injuries, etc. does not depend on the design, but rather on how the weapon is used – for example, indiscriminate firing into a crowd, aimed bullet at the head of a specific individual by sniper, etc. On the other hand, when buried anti-personnel mine is triggered by a foot pressure, the amputation of foot or leg can generally be expected due to design of such weapon, while a number or category of wounded persons depends on its use(r).⁵⁷ While design of a weapon can certainly contribute to its

⁵² International Committee of the Red Cross, *The SIrUS Project: Towards a Determination of Which Weapons Cause „Superfluous Injury or Unnecessary Suffering“*, Geneva 1997, <https://tile.loc.gov/storage-services/service/l1/llmlp/SIrUS-project/SIrUS-project.pdf>, access date: 6 May 2024, p. 7.

⁵³ This criterion is needed to apply to weapons which, without targeting a particular part of the body, simply inflict large wounds, which would be the case for exploding bullets and dum-dum bullets.

⁵⁴ International Committee of the Red Cross, *The SIrUS Project...*, op. cit., p. 8.

⁵⁵ S. Casey-Maslen, S. Haines, *Hague Law Interpreted...*, op. cit., pp. 214–215.

⁵⁶ International Committee of the Red Cross, *The SIrUS Project...*, op. cit., p. 10.

⁵⁷ Ibidem, p. 11.

indiscriminate effects, such effects can also result from user's behavior. Consequently, both a weapon and its use may be an object of prohibition or restriction within international law.⁵⁸ However, an important precondition for such regulation to be adopted is sufficient level of public stigmatization of a particular weapon as was the case, for instance, with anti-personnel mines.⁵⁹

Thus, explaining the effects of certain weapon, especially from medical point of view, can be exceptionally beneficial in shaping the views of politicians, soldiers, lawyers and the general public with respect to some weapon as inhuman or abhorrent. This can be achieved by describing the excessive injuries and unnecessary suffering caused by the weapon or its use.⁶⁰ The SIrUS Project started exactly from the repercussions of conventional weapons i.e. from the consequences, instead of weapon's nature, type or technology used.⁶¹ The flechette weapons operate by utilizing explosion and fragmentation, resulting in an exceptionally high degree of fragmentation due to thousands of metal flechettes scattered across the targeted area. Consequently, the probability of hitting, multiple wounding and killing of enemy combatants is significantly increased.⁶² Higher number of wounds can require simultaneous engagement of several surgeons, which in war conditions complicates possibilities to provide adequate medical care.⁶³ For those reasons, the use of flechette weapons is more likely to result in permanent disability or death for the victim compared to other types of conventional anti-personnel weapons that cause fragmentation.⁶⁴ The previously

⁵⁸ Ibidem.

⁵⁹ R.M. Coupland, p. Herby, *Review of the Legality of Weapons: A New Approach The SIrUS Project*, "International Review of the Red Cross" 1999, vol. 81, no. 835, <https://international-review.icrc.org/fr/articles/review-legality-weapons-new-approach>, access date: 2 May 2024, p. 584.

⁶⁰ International Committee of the Red Cross, *The SIrUS Project...*, op. cit., p. 13.

⁶¹ R.M. Coupland, *Abhorrent Weapons...*, op. cit., p. 1452. Publications on the SIrUS Project also include: D. Holdstock, J. Piachaud, R.M. Coupland, *The SIrUS Project Towards a Determination of which Weapons Cause „Superfluous Injury or Unnecessary Suffering“*, „Medicine, Conflict and Survival" 1998, vol. 14, no. 3, <https://www.jstor.org/stable/45352135>, access date: 30 October 2024, pp. 243–249; D.M. Verchio, *Just say no! The SIrUS project: well-intentioned, but unnecessary and superfluous*, "Air Force Law Review" 2001, vol. 51, no. 84, <https://www.afjag.af.mil/Portals/77/documents/AFD-081204-028.pdf>, access date: 30 October 2024, pp. 183–228; M. Marcinko, *Projekt SIrUS i zakaz stosowania broni powodującej nadmierne obrażenia lub zbędne cierpienia*, "Zeszyt Problemowy: Towarzystwo Wiedzy Obronnej" 2010, vol. 63, no. 3, https://www.researchgate.net/publication/340005848_Projekt_SIrUS_i_zakaz_stosowania_broni_powodujacej_nadmierne_obrazenia_lub_zbedne_cierpienia, access date: 30 October 2024, pp. 83–100.

⁶² International Committee of the Red Cross, *Weapons that may Cause...*, op. cit., pp. 39–41.

⁶³ R.F. Bellamy, *Little Arrows...*, op. cit., p. 59.

⁶⁴ International Committee of the Red Cross, *Weapons that may Cause...*, op. cit., p. 46.

mentioned potential for the tumbling and fracturing of flechettes inside the wound, certainly contribute to permanent disability or death.⁶⁵ That is precisely why the military utility of those weapons in terms of humanitarian aspects is called into question.⁶⁶ However, if “tumbling” does not occur, the flechette has a significantly reduced wounding effect. Even in the event of “tumbling”, the wounds could only slightly differ from wounds inflicted by other kinds of conventional weapons’ fragments.⁶⁷

A valuable contribution to review of spectrum of possible wounds from the flechette projectiles inflicted within the same military action was provided by one American military-medical analysis prepared in the 1980s regarding one incident that occurred during the Vietnam War (three howitzer flechette projectiles of 105 mm caliber were fired, each containing circa 8000 of flechettes).⁶⁸ Among eight soldiers whose wounds from flechettes were unintentionally inflicted and subsequently registered during the medical treatment, there were wounds ranging from multiple wounds of abdomen and extremities, including numerous harms of internal organs, wounds of chest with extensive bleeding, albeit without grave damaging of heart and lungs, to only superficial wounds.⁶⁹ On the other hand, the United Nations Fact-Finding Mission on the Gaza Conflict established in 2009 that five civilians killed by flechette projectile suffered wounds, including two cases of head injuries, one case of chest and head injuries, one case of abdomen, chest, and head injuries, one case of head and neck injuries, and one case of chest, head, and left leg injuries.⁷⁰

In above-mentioned U.S. medical analysis related to Vietnam War there was also a remark that fragments from other types of conventional weapons can be even larger and thus more lethal than flechettes. Therefore, it was concluded that flechettes are example of “improved’ fragmentation munitions”.⁷¹ Likewise, during the ICRC’s conference held in Lucerne, Switzerland fifty years ago (to be presented infra) some experts expressed the view that

⁶⁵ Ibidem, p. 43.

⁶⁶ International Committee of the Red Cross, *Conference of Government Experts on the Use of Certain Conventional Weapons (Second Session – Lugano, 28 January – 26 February 1976)*, Geneva 1976, https://library.icrc.org/library/docs/DOC/DOC_00173.pdf, access date: 4 May 2024, p. 205.

⁶⁷ International Committee of the Red Cross, *Conference of Government... (Lucerne)*, op. cit., p. 60.

⁶⁸ R.F. Bellamy, *Little Arrows...*, op. cit., p. 359.

⁶⁹ Ibidem.

⁷⁰ United Nations, General Assembly-Human Rights Council, *Human Rights in Palestine...*, op. cit., p. 192.

⁷¹ R.F. Bellamy, *Little Arrows...*, op. cit., p. 359.

prohibition of improved fragmentation munitions, where they included the flechettes, would *de facto* lead to exclusive use of conventional fragmentation weapons with metal fragments larger and more life threatening for combatants than those from flechette weapons.⁷² Based on criteria established within the SIrUS Project, the conclusion may be drawn that flechette weapons could meet the third criterion, as they can cause Grade 3 wounds as measured by the Red Cross wound classification. Specifically, as with exploding bullets and dum-dum bullets, the flechette weapons can inflict large wounds even without targeting a particular part of the body. However, there is an important difference in the way that exploding or dum-dum bullets regularly inflict grave damaging of the tissue, while grave wounding from the flechette projectiles is neither a rule nor a prevailing result of their use. Finally, the states have never unanimously supported the SIrUS Project paradigm. Instead, the United States, Germany, Sweden, Canada, Denmark, and the United Kingdom found it unrealistic, while maintaining the view that the process of determining legality of weapons should be left to sovereign states.⁷³

5. The efforts for international legal regulation of the use of flechette weapons

In addition to the role of states in drafting treaties and the efforts of international public opinion to ban or control certain types of weapons, the ICRC and several non-governmental organizations have always been actively involved in such processes and have had a major influence on them. Usually, that would come to the fore by means of documenting effects of particular weapons, as well as of defining items for discussions, and preparation of argumentation and its active presenting.⁷⁴ States, whose delegations take part in negotiations on prohibitions and restrictions of use of weapons, have always had a decisive role, though. To what extent will the discussions on acceptability of particular military technologies from the humanitarian standpoint be fruitful, finally depends exclusively on states, particularly those with the greatest political and military power and influence.

⁷² International Committee of the Red Cross, *Conference of Government... (Lucerne)*, op. cit., p. 61.

⁷³ D. M. Verchio, *Just say no!...*, op. cit., pp. 213–214.

⁷⁴ E. Prokosch, *The Development of the Convention on Conventional Weapons 1971–2003*, “Article 36-Guest Research Briefing” 2021, <https://article36.org/wp-content/uploads/2021/12/The-Development-of-the-CCW.pdf>, access date: 6 May 2023, p. 1.

The U.S. use of flechette projectiles in Vietnam had initiated discussions regarding the necessity of their prohibition or regulation.⁷⁵ At that time, the USA was the only country to disclose that it possessed such projectiles, but also that it tended to keep them in their military inventories.⁷⁶ The fact is that neither prohibition nor restrictions of use of the flechette weapons have ever been achieved. In fact, the majority of these efforts were made in the 1970s, including the negotiations that preceded the adoption of the Convention on Prohibition or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects, which was adopted in 1980 (commonly known as the Convention on Certain Conventional Weapons or CCW).⁷⁷ However, these endeavors eventually dissipated.⁷⁸ The key arguments against the prohibition were only the sporadic use of flechette projectiles, and attribution of their indiscriminatory effects to the use rather than the nature of the weapon. Regarding the wounds, it was pointed out they are not more serious in comparison with the wounds inflicted by some other widely used conventional projectiles.⁷⁹

In 1972, the ICRC gathered an international panel of military, legal and medical experts, with the ambition of conducting a study of conventional weapons that could cause unnecessary suffering or have indiscriminatory effects.⁸⁰ The study was completed in 1973 and in 1974 the first formal initiative for prohibition of the flechette weapons, was launched. That initiative took a form of much wider, so-called “Seven Countries’ Proposal” (Sweden, Egypt, Mexico, Norway, Sudan, Switzerland and Yugoslavia).⁸¹ Those states formed so-called Ad Hoc Committee on Conventional Weapons, in which another dozen, mostly Third World states, occasionally participated as well.⁸² Allegedly, prior to drafting the “Seven Countries’ Proposal”, Sweden had previously developed its own program

⁷⁵ S. Watts, *Regulation-Tolerant Weapons...*, op. cit., pp. 594–595.

⁷⁶ E. Barak, *Deadly Metal Rain...*, op. cit., p. 66.

⁷⁷ United Nations (UN), *Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May be Deemed to be Excessively Injurious or to Have Indiscriminate Effects (with Protocols)*, 1342 UNTS 137, 10 October 1980.

⁷⁸ S. Watts, *Regulation-Tolerant Weapons...*, op. cit., pp. 594–595.

⁷⁹ Ibidem, p. 595.

⁸⁰ International Committee of the Red Cross, *Weapons that may Cause...*, op. cit., p. 1.

⁸¹ E. Prokosch, *The Development...*, op. cit., p. 3.

⁸² H. M. Kinsella, *Superfluous Injury and Unnecessary Suffering: National Liberation and the Laws of War*, “Political Power and Social Theory” 2017, no. 32, https://www.researchgate.net/publication/315846619_Superfluous_Injury_and_Unnecessary_Suffering_National_Liberation_and_the_Laws_of_War#full-text, access date: 8 April 2024, p. 219.

for the advancement of flechette weapons, but later decided to discontinue it.⁸³ Nevertheless, the “Seven Countries’ Proposal” stated that “multi-flechette weapons” result in “multiple injuries with the high degree of pain and suffering...”, with the accompanying difficulties in medical treatment and with substantial mortality risk.⁸⁴ Taking all that into consideration, the proposers stated that “it is queried whether the military advantage of these weapons is so great as to outweigh the humanitarian concerns which are raised by their use”.⁸⁵

The actual formulation of the Proposal concerning the flechette weapons was the following: “Weapons which act through the release of a number of projectiles in the form of flechettes, needles and similar, are prohibited for use.”⁸⁶ The discussions were held at the UN conference in Lucerne in October of 1974. The conference was closed for public, while representatives of 49 states took part in negotiations. The United States was one of those states, which had previously mostly boycotted efforts of the UN and the ICRC, as well as the work of international group of experts. In general, the USA acted with caution and distrust during that period, largely due to the increasing number of newly established states as a result of the decolonization process. These states largely favored prohibitions and restrictions on the use of various weapons.⁸⁷ As a result, the U.S. delegation in Lucerne was substantially large, consisting of experts for weapons, military commanders, military surgeons, and experts for international relations from both foreign affairs and defense ministries. *Inter alia*, they essentially emphasized that there is a minimal difference between the wounding potential of the flechette weapons compared to other kinds of fragments, even when the flechettes tumble within the body of the wounded.⁸⁸

At the subsequent conference in Lugano, held in 1976, the previous proposal for the prohibition of the flechette weapons was still on the agenda. The only difference was the usage of the term “munitions” instead of “weapons”.⁸⁹ However, the Sweden’s interest in prohibiting cluster and flechette weapons was noticeably diminished. Concurrently, Sweden demonstrated increased interest for the prohibition of small caliber projectiles.⁹⁰ The proposal for the prohibition of

⁸³ E. Prokosch, *The Development...*, op. cit., p. 3.

⁸⁴ Ibidem.

⁸⁵ Ibidem.

⁸⁶ Ibidem, p. 10.

⁸⁷ H. M. Kinsella, *Superfluous Injury...*, op. cit., pp. 220–221.

⁸⁸ E. Prokosch, *The Development...*, op. cit., p. 10.

⁸⁹ International Committee of the Red Cross, *Conference of Government... (Lugano)*, op. cit., p. 199.

⁹⁰ E. Prokosch, *The Development...*, op. cit., p. 4.

flechette weapons, initially part of the “Seven Countries’ Proposal”, “attracted little comment” in Lugano and *de facto* was removed from the agenda.⁹¹ When Mexico attempted to renew the proposal at the preparatory conference for the later adoption of the CCW, the discussion was very brief and lacked substance, allegedly due to limited time frame. Consequently, no concrete agreement was possible, so the CCW adopted at the main conference in 1980 did not include any provision concerning the flechette weapons.

Generally, as the adoption of the CCW was approaching, the USSR was also gradually adopting technologies for the construction of certain “politically vulnerable” weapons (as the U.S. side internally labeled some weapons and faced criticism for their use in Vietnam). Thus, the USSR’s interest in prohibiting such weapons was fading. During the Vietnam War, the USSR successfully obtained a range of captured U.S. weapons through its Vietnamese allies and “copied” them.⁹² It became evident during the Soviet intervention in Afghanistan in 1979, as Soviet forces started to use some of such weapons. If the reports about the occasional Russian use of the flechette weapons during the aggression on Ukraine are accurate, there is a possibility they come from several-decade-old stockpiles, made within the program of “copying” U.S. weapons seized during the Vietnam War.

The USA abandoned the use of the flechette projectiles still in the 1980s, primarily due to the technical advancement in the field of cluster munitions.⁹³ Prior to the Russian use of flechette projectiles in Ukraine in 2022 (in Bucha and Irpin, in particular), Israel was the primary user of such projectiles. They were used in Lebanon from 1980 to 1990 and in Gaza predominantly in 2008 and 2009. Furthermore, it is worth noting that following the Vietnam War, there have been no documented instances of flechette weapons being employed in high-profile armed conflicts such as the Gulf War or the wars and other armed conflicts in Former Yugoslavia.⁹⁴ All of that taken together certainly contributed greatly to non-achievement of prohibition or restrictions of use of flechette weapons by protocols to the CCW. However, the fact is that the views of military and medical experts involved in the matter were not unanimous when it came to the indiscriminate effects and unnecessary suffering caused by such weapons.

In September 2002, Terje Roed-Larsen, the UN Special Coordinator for the Middle East Peace Process, released a statement addressing the death of

⁹¹ Ibidem.

⁹² Ibidem, p. 6.

⁹³ S. Watts, *Regulation-Tolerant Weapons...*, op. cit., p. 596.

⁹⁴ E. Barak, *Deadly Metal Rain...*, op. cit., pp. 3–4.

Palestinian civilians during IDF's military operation in Gaza and West Bank.⁹⁵ More precisely, the death of four members of the same family was mentioned as the result of IDF's use of the flechette tank projectile. Roed-Larsen emphasized that flechette is "ordnance that fires thousands of small darts designed to maximize injury and death".⁹⁶ He also stated that "military action that fails to take reasonable measures to minimize civilian casualties is a violation of international law" and that "no justification can be offered for the intentional or unintentional killing of civilians".⁹⁷ He insisted that Israeli authorities conduct a thorough investigation into the incident and, if violations of international law are established, take action to ensure those responsible are held accountable.

In 2003, two Israeli non-governmental organizations filed a petition with the Israeli Supreme Court, requesting that the court prohibit the Israeli Defense Forces (IDF) from using tank shells of the "flechette" type in its activities in Gaza.⁹⁸ It was emphasized that "the use of flechette shells is in contravention of the principles of the laws of war, under which a prohibition applies to the use of weapons that are likely to strike indiscriminately also at those who are not taking part in the fighting and to cause unnecessary suffering to the wounded".⁹⁹ Two cases of fatal injuries to civilians were specifically mentioned. In first case, the IDF purportedly fired in response to a previous fire on their military outpost. The flechette shell fired by the IDF landed near a Bedouin tent killing three women. In the second case, three young men were killed when the IDF acted against suspected terrorists on their way to conduct a terrorist attack.¹⁰⁰

When the Supreme Court acted in this matter, it primarily established that question of prohibition of flechette weapons was previously raised in numerous instances before various international forums, but no agreement to prohibit them had ever been reached. The Court emphasized that the majority of discussions were conducted under the umbrella of the UN, within the efforts for the adoption of the CCW, which Israel eventually joined and ratified. However, the Court determined that the proposals for the prohibition of flechette weapons "were never really supported and were removed from the agenda". Thus, the

⁹⁵ United Nations, *The Question of Palestine*, "Statement by the U.N. Envoy on The Killing of Palestinian Civilians By Israeli Military" 2002, <https://news.un.org/en/story/2002/09/44132>, access date: 19 December 2023, p. 1.

⁹⁶ Ibidem.

⁹⁷ Ibidem.

⁹⁸ Physicians for Human Rights and The Palestinian Center for Human Rights.

⁹⁹ The Israeli Supreme Court Sitting as the High Court of Justice, *High Court Ruling 8990*, Jerusalem 2003, <https://www.hrw.org/legacy/press/2003/04/israelisupremecourt.pdf>, access date: 10 December 2023, p. 2.

¹⁰⁰ Ibidem.

Court found that CCW and the “laws of war” in general, “did not prohibit the use of weapons that contain sub-ammunition (such as flechette shells) and ruled that “the choice of weapons, which the respondents use for the goal of preventing murderous terror attacks, is not one of the topics in which this court sees fit to intervene”.¹⁰¹

The IDF acknowledged that the use of flechette shells “involves a heightened danger for incidental injury even of those not participating in the fighting against the army, and who happen to be within the boundaries of the area at which the shell was fired”.¹⁰² However, the IDF also claimed that “according to the estimates of the command and professional personnel charged with IDF activity in the Gaza Strip area, the use of flechette shells in the present security reality is necessary and has no suitable replacement”.¹⁰³ They added that IDF’s military rules do not encourage wide use of flechette weapons. Instead, there are guidelines for field commanders that allow them to assess the situations and circumstances and determine the necessity of using flechette shells. Furthermore, these rules stipulate that “the use of the flechette is restricted to areas ... in which the danger to innocent civilians is not actual, and only against those suspected of activity that endangers IDF soldiers or Israeli citizens”.¹⁰⁴

Due to the lack of any prohibition on flechette weapons in international law, the Court accepted the argumentation of the IDF regarding the military rationale and the need for field commanders to have autonomy in selecting weapons “for the goal of preventing murderous terror attacks”, all of that being based on military rules and manuals.¹⁰⁵ Hence, the Court left the assessment of preconditions for the use of flechette shells to authorized field commanders who follow professional military standards aimed, *inter alia*, at prevention of civilian casualties. In other words, the question of the IDF’s use of tank shells of the flechette type is left to the IDF itself and placed into the domain of military decision-making process, as a matter of selection of military objectives and determining the most appropriate weapons to use. Regarding the other views of the petitioners, the Court did not go into further examination of indiscriminate effects of flechette weapons or matters of unnecessary pain or suffering.

As petition was aimed at prohibition of use of flechette tank projectiles, it is possible to draw a conclusion that IDF did not use other kinds of flechette projectiles, e.g. artillery. On the other hand, it is evident from both the IDF’s and

¹⁰¹ Ibidem, p. 3.

¹⁰² Ibidem, p. 2.

¹⁰³ Ibidem.

¹⁰⁴ Ibidem, p. 3.

¹⁰⁵ Ibidem.

Court's wording that only people were deliberated as targets, suggesting that the IDF exclusively used anti-personnel flechette weapons. As far as concrete civilian casualties reported by petitioners are concerned, the IDF responded that these casualties could not be solely attributed to the use of flechette projectiles, and that their use was not in contravention with the military guidelines. The Court accepted the IDF's argumentation and concluded there was no evidence of deliberate targeting of civilians. Therefore, the Court considered the specified civilian casualties to be collateral. Furthermore, the Court confirmed that the use of flechette projectiles did not deviate from the guidelines restricting the use of this weapon and finally established that "these same civilians were likely to have been struck by the firing of ordinary shells, meaning that the harm to them cannot necessarily be attributed to use of the flechette".¹⁰⁶

Previously mentioned UN Fact-Finding Mission on the Gaza Conflict deliberated in detail the attack on civilian tent in 2009, where tens of civilians were mourning death of a first-aid volunteer.¹⁰⁷ As a result of the attack, which involved the use of flechette projectiles, five civilians were killed, while more than twenty were wounded. Based on the gathered information, the Mission concluded that no military objective was identified. Instead, it established to be "an intentional attack against the civilian population and civilian objects, willful killing and the willful infliction of suffering".¹⁰⁸ Moreover, the Mission found that "the attack was not only an attack intended to kill but also to spread terror among the civilian population, given the nature of the weapon used".¹⁰⁹ The Mission stated that flechette weapon is "an area weapon incapable of discriminating between objectives after detonation" and "particularly unsuitable for use in urban settings where there is reason to believe civilians may be present".¹¹⁰ With respect to its status in international law, the Mission admitted that "international humanitarian law does not explicitly prohibit the use of flechettes in all circumstances", but pointed out that "the principles of proportionality and precautions necessary in attack render their use illegal".¹¹¹

On the other hand, as far as the Palestinian armed groups were concerned, the Mission noted some indications of actions harmful to their own civilians and civilian objects (for instance, the conduct of attacks against the IDF from civilian,

¹⁰⁶ Ibidem.

¹⁰⁷ United Nations, General Assembly-Human Rights Council, *Human Rights in Palestine...*, op. cit., pp. 192–194.

¹⁰⁸ Ibidem, p. 193.

¹⁰⁹ Ibidem.

¹¹⁰ Ibidem, p. 21.

¹¹¹ Ibidem, p. 193.

even urban locations, often without providing sufficient warning to civilians to allow them to leave and protect themselves). Furthermore, the Mission found that the individuals belonging to those groups were not always dressed in a way that distinguished them from civilians.¹¹² Considering the specificities of the battleground in question (size of area, population density, etc.), the fulfillment of military purpose of either party of the armed conflict makes civilian casualties inevitable. This is particularly true if civilian objects are misused. Moreover, it is highly questionable whether (and to what extent) the requirements for proportionality and precautions in attack are practically feasible. Therefore, considering its status in international law, the use of flechette weapons must be evaluated comprehensively in each instance of civilian casualties, without *a priori* condemning or exonerating it.

6. Final remarks

Despite of various efforts over the past five decades, predominantly within the UN and ICRC-endorsed conferences in the 1970s, aimed at legal regulation of certain conventional weapons and their uses, no international treaty prohibiting or restricting the use of flechette anti-personnel weapons (*de facto*, flechette projectiles i.e. munitions) has been adopted by states. To be precise, all formally submitted initiatives aimed at prohibition instead of restrictions of use. The aforementioned criticism of flechette weapons mostly came from the perspective of protection of combatants and were related to the principle of prohibition of superfluous injuries and unnecessary suffering. Despite the considerable efforts made by experts, to explain ballistic and medical aspects of flechette weapons, the states failed to generate sufficient political determination to prohibit them. When discussing the impact of flechettes on the human body, medical professionals specifically highlighted the occurrences of these arrows tumbling, curling, and breaking inside the body. Nevertheless, medical professionals have not yet come to a unanimous agreement regarding the extent to which the health consequences of wounds caused by conventional fragmentation weapons are deemed unacceptable in comparison to other types of injuries and their associated health effects. For their part, the states have never unanimously supported the paradigm introduced by the SIrUS Project, thus leaving it in the sphere of expert and academic deliberations (and preventing it from becoming at least a soft-law in the area of war standards).

¹¹² Ibidem, p. 121.

The criticisms regarding the protection of civilians primarily revolved around the principles of distinction and proportionality. Thus, both the nature and the use of flechette weapons were deliberated in this context. The majority of the criticisms were related to indiscriminate effects, lack of precautions in attacks, use in urban or densely populated areas or even intentional use against the civilians, etc. Particular attention was given to the use of flechette projectiles in Gaza. Yet, neither the efforts of Israeli non-governmental organizations before the Israeli High Court in 2003 nor the findings of the UN Fact-Finding Mission in Gaza in 2009 – although motivated by protection of civilians and despite of international visibility of these efforts – yielded no success in terms of establishing a legal framework. However, these efforts applied a different approach – to restrict the use of flechette weapons when general prohibition in international law is not likely to be achieved. Similarly, media reports from Ukraine in 2022 highlighted the occasional use of flechette weapons by Russia in Bucha and Irpin, with a particular emphasis on the civilian casualties. Thus, possible formal initiatives for changes in the legal regime for such weapons have been made public.

The international practice in the field of legal regulation of weapons has demonstrated that the prohibitions or restrictions through international treaties have never been solely determined by measurable medical or military-technical indicators or parameters related to the number or degree of superfluous wounds or unnecessary suffering. Instead, the legal prohibitions and restrictions were established due to widely accepted and politically endorsed views that certain weapons are inhuman or abhorrent. These views usually started to govern decision-making processes due to concern of senior military commanders and politicians that enemy could use certain weapons against their compatriots, either combatants or non-combatants, too. The prohibition of poisonous weapons, chemical and biological weapons, and weapons that primarily cause injury through non-detectable fragments are highly illustrative examples. Despite extensive experience, analysis, learning, and discussion of flechette weapons by experts and state decision-makers over several decades, it is unlikely that a new international treaty to regulate these weapons would be successful. This is primarily due to the infrequent use of flechette weapons in modern times.

Consequently, the focus of interested public should be directed towards actual incidents of civilian casualties and their public condemnation, followed by legal qualifications in accordance with the existing body of both treaty and customary international law of armed conflicts. Non-governmental

organizations and media reporters, especially war correspondents, can assist states in exposing and documenting cases of intentional, indiscriminate, or disproportionate attacks, as well as the lack of precautions, etc. Without question, these efforts would be fully purposeful and efficient only if they result in coherent case studies and are subsequently followed by either national or international criminal prosecution of perpetrators. Given the potential for future instances of flechette weapons being used against civilians, it is imperative to adopt this approach, regardless of the rarity of such incidents. In this paradigm, the nature of flechette weapons becomes less relevant than its use. Regarding combatants as potential victims of flechette weapons, it is important to note that under current international law, they are still legally exposed to wounds and suffering inflicted by flechettes, as described by medical experts long time ago.

Abstract

This research aims to critically analyze the long-standing criticisms of flechette anti-personnel weapons prompted by media accounts of their use by Russia in Ukraine during the spring of 2022. The research starts from the principles of international customary law regarding the prohibition of unnecessary suffering of combatants and the distinction between combatants and non-combatants. The authors analyze those principles in relation to the nature and the use of flechette weapons, military necessity for them and their effects on the human body. Furthermore, the authors examine the attempts made in the 20th century to ban flechette weapons, taking into account the perspectives of both military-medical and military-technical aspects. Based on publicly accessible information about the non-governmental initiative and subsequent trial before the Israeli Supreme Court in 2003, as well as the findings of the UN fact-finding mission in Gaza in 2009, an examination is conducted on the criticisms regarding civilian casualties. The analysis is also correlated with the legal framework governing the selection of military targets and precautions during attacks. Finally, the authors summarize the factors that hindered the prohibition or restriction of flechette weapons in international law. In conclusion, they advocate for increased involvement of states, non-governmental organizations, and the media, particularly the war correspondents, as well as national and international criminal prosecutors in addressing specific instances of flechette weapons being used against civilians. However, they acknowledge that combatants legally remain exposed to wounds and suffering inflicted by “little arrows”, as described by medical experts long ago.

Key words: flechette, ICRC, superfluous injury, unnecessary suffering, Gaza, Ukraine

O (nie)dopuszczalności broni typu szrapnel w kształcie strzałek (flechette) – przegląd historyczny

Streszczenie

Niniejsze artykuł ma na celu krytyczną analizę długotrwałej krytyki broni typu szrapnel w kształcie strzałek (flechette), wywołanej relacjami medialnymi o jej użyciu przez Rosję na Ukrainie wiosną 2022 roku. Artykuł rozpoczyna się od przedstawienia zasad międzynarodowego prawa zwyczajowego dotyczących zakazu niepotrzebnego cierpienia kombatantów oraz rozróżnienia między kombatantami i niekombatantami. Autorzy analizują te zasady w odniesieniu do charakteru i zastosowania broni tego typu, konieczności jej użycia w celach wojskowych oraz jej wpływu na organizm ludzki. Ponadto autorzy badają próby zakazania broni tego typu podejmowane w XX wieku, biorąc pod uwagę zarówno aspekty wojskowo-medyczne, jak i wojskowo-techniczne. W oparciu o publicznie dostępne informacje na temat inicjatywy pozarządowej i późniejszego procesu przed izraelskim Sądem Najwyższym w 2003 r., a także ustaleń misji rozpoznawczej ONZ w Strefie Gazy w 2009 r., przeprowadzono analizę krytyki dotyczącej skutków jej użycia w postaci ofiar cywilnych. Analiza jest również skorelowana z ramami prawnymi regulującymi wybór celów wojskowych i środków ostrożności podczas ataków. Wreszcie, autorzy podsumowują czynniki, które utrudniały wprowadzenie zakazu lub ograniczeń dotyczących broni typu szrapnel w kształcie strzałek (flechette) w prawie międzynarodowym. Podsumowując, autorzy opowiadają się za zwiększonym zaangażowaniem państw, organizacji pozarządowych i mediów, w szczególności korespondentów wojennych, a także krajowych i międzynarodowych prokuratorów karnych w zajmowanie się konkretnymi przypadkami użycia broni tego typu przeciwko ludności cywilnej. Przyznają jednak, że kombatanci legalnie pozostają narażeni na rany i cierpienie zadawane przez „małe strzały”, jak opisali to dawno temu eksperci medyczni.

Słowa kluczowe: broń typu szrapnel w kształcie strzałek (flechette), MCK, niepotrzebne cierpienia i obrażenia, Gaza, Ukraina

