KINETIC IMPACT PROJECTILES IN LAW ENFORCEMENT

AN AMNESTY INTERNATIONAL POSITION PAPER

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Cover photo: *A protester in Egypt shows expended shotgun cartridges. © REUTERS/Amr Abdallah Dalsh*

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1. Introduction: what are Kinetic Impact Projectiles?

Law enforcement officials around the world are usually provided with a range of weapons that are designed and supposed to serve different law enforcement purposes. Kinetic Impact Projectiles (KIPs) are one of these less-lethal weapons that law enforcement officials are equipped with.

KIPs, commonly referred to as rubber or plastic bullets, can be made of a wide range of materials and vary considerably in size and shape. They can be hand thrown or fired with many different weapons and launchers (see section 2.1 for a more detailed description of the different types of projectiles and launch weapons).

KIPs are distinct from so-called "live-ammunition" which are bullets that are purposefully designed to be lethal: KIPs are supposed to only cause blunt trauma as a result of the impact on a person's body - exclusively through the kinetic energy transmitted from the firing weapon and without penetrating the skin or causing in any other way more serious injury.

However, the effect on the health and physical integrity of a person hit may be graver, can reach the level of serious injury, and in the most severe circumstances, can even cause death.[1] The severity of the consequences depends both on the specific weapon employed and the manner and circumstances in which it is used. The potential risks involved for the health and physical integrity of the affected person are described in section 2.2 below.

As for any use of force, when resorting to kinetic impact projectiles, law enforcement officials must do so in full compliance with international human rights law and standards and respect the principles of legality, necessity, proportionality, non-discrimination and accountability. Sadly, research by Amnesty International[2] and others[3] have frequently documented the misuse of these weapons. This position paper provides detailed guidance on how law enforcement agencies should prevent such misuse and ensure that this weapon is only resorted to in a fully human rights compliant manner.

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1 Physicians for Human Rights, "Kinetic Impact Projectiles Fact Sheet", June 2020, https://phr.org/our-work/resources/health-impacts-of-crowd-control-weapons-kinetic-impact-projectiles-rubber-bullets/; Rohini Haar, Vincent Iacopino, Nikhil Ranadive and others, "Death, injury and disability from kinetic impact projectiles in crowd-control settings: a systematic review", 5 December 2017, https://pubmed.ncbi.nlm.nih.gov/29255079/

2 Amnesty International and others, *Colombia, Shoots on Sight: Eye Trauma in the Context of the National Strike,* (Index: AMR 23/5005/2021), 26 November 2021, https://www.amnesty.org/en/documents/amr23/5005/2021/en/; Amnesty International, *Eyes on Chile: Police Violence and Command Responsibility during the period of social unrest*, October 2020, (Index: AMR 22/3133/2020), http://www.amnesty.org/en/latest/research/2020/10/eyes-on-chile-police-violence-at-protests; Amnesty International, *Losing sight in Kashmir – the impact of pellet-firing shotguns*, September 2017, https://www.amnestyusa.org/reports/losing-sight-in-kashmir; More references available at: Police and Human Rights Resources – Amnesty Country reports on Kinetic impact projectiles (policehumanrightsresources.org)

3 Council of Europe Commissioner for Human Rights, Maintaining public order and freedom of assembly in the context of the "yellow vest" movement: recommendations by the Council of Europe Commissioner for Human Rights - Commissioner for Human Rights, 26 February 2019, https://www.coe.int/en/web/commissioner/-/maintaining-public-order-and-freedom-of-assembly; Physicians for Human Rights, "Now they seem to just want to hurt us": Dangerous Use of Crowd-control Weapons against Protestors and Medics in Portland, Oregon, October 2020, https://phr.org/our-work/resources/now-they-just-seem-to-want-to-hurt-us-portland-oregon/; *Lebanon Protests* / Human Rights Watch (hrw.org); B'Tselem, "Israeli Border Police fire black sponge round at chest of 10-year-old boy in a-Ram, killing him", 03 August 2016, https://www.btselem.org/firearms/20160802_killing_of_muhyi_a_din_a_tabakhi

KIPs are generally used in the handling of public order situations and/or in violent confrontations between individuals or groups of individuals. However, in light of the considerable risks of these weapons causing serious harm, law enforcement agencies must do a careful assessment regarding the operational need of these weapons and whether it can indeed be justified to distribute them to law enforcement officials in a given context (see below 3.1.). If provided with such a weapon, law enforcement officials, in the fulfilment of their duty, may only resort to the use of KIPs in very limited exceptional situations in which this is duly justified (see section 3.2 for the type of situations when this would or not be the case). If the firing of kinetic impact projectiles is generally justified in a given situation, this must be done in a way that minimises harm and injury and protects other persons (see section 4 below). Specific care is required in the use against people more likely than others to suffer from serious injuries, such as children (see section 5).

In many instances, the assessment of whether or not the firing of kinetic impact projectiles complies with international human rights law will largely depend on the situation and the way they are used. But several types of projectiles should never be used: the related human rights concerns are simply too great to accept the use of these devices, given that they are likely to cause excessive harm (see section 6).

To ensure the human rights compliant use of kinetic impact projectiles, law enforcement agencies must provide proper instructions and training to all law enforcement officials who may be equipped with them (section 7). They also have important obligations regarding the development and testing of these weapons; and their trade and transfer to security forces in other countries must be clearly regulated (section 8). Finally, accountability for the use of kinetic impact projectiles must be ensured at all levels within a law enforcement agency (see section 9).

2. What type of KIPs are there, and what are their health implications?

2.1 Types of KIPs

There is a large variety of kinetic impact projectiles (KIPs) available on the market, and an equally large range of weapons is used to launch them. They will be described below, but it should be underscored that not all of them can be used in a human rights compliant way and therefore should not be used at all. This will be addressed in section 6 further down.

2.1.1 The projectiles

KIPs vary considerably in size, shape, material and how they are launched. They can be made of a great variety of materials: Rubber, plastic, PVC, foam or foam tipped, wood, combined with metal or lead etc.

Broadly, three general types can be distinguished:

- Single projectiles
- Multiple projectiles
- Projectiles with combined effects.

Single projectiles

Single projectiles can come in the form of:

- Round bullets of different sizes, from small bullets to those that are the size of tennis balls

Rubber ball used by Spanish police forces, Barcelona- (Photo by Andrea Baldo/LightRocket via Getty Images)

Cartridges displaying a range of metal projectiles. © Omega Research Foundation

- Cylinders sometimes with a flight-stabilising component at one end or with foam at the end

Rubber bullets that were fired by the police to disperse protesters in Bangkok, 2021 Photo by Peerapon Boonyakiat/SOPA Images/LightRocket via Getty Images

Rubber bullet with a foam tip fired by a riot gun during an anti-government demonstration, Paris, January 2019, Photo by SAMEER AL-DOUMY/AFP via Getty Images)

- Fabric bags that can be filled with different materials, such as smaller bullets, pellets or sand; they are often referred to as bean bags.

Image displaying a standard bean bag round used by law enforcement - Screenshot from : Beanbag Rounds, While Nonlethal, Still Inflict Serious Injury | MedPage Today

A protester is holding up the beanbag that hit her backpack in Wisconsin, USA, 2020. Photo by ROBERT CHIARITO/AFP via Getty Images.

Multiple projectiles[4]

Multiple projectiles are usually contained in canisters that open up when fired and release a smaller or larger quantity of projectiles over a wider target area. They can vary from very small pellets (often referred to as bird or buckshot), to larger bullets. Others are supposed to open up upon impact and cause a number of injuries over a certain area of the body.

← *Shotgun pellets used by the security forces who opened fire on demonstrators in Gléi, Togo, © Amnesty International*

Combined effects[5]

Sometimes, projectiles are combined with other elements: e.g. colour marker, a chemical irritant such as capsicum, or with an explosive or sound effect.

2.1.2 The launchers

KIPs are usually fired from a launching weapon. The types of launchers used for the firing of KIPs are as varied as the KIPs themselves: they can be specifically designed to fire a certain type of KIP, they can be shotguns that can fire a variety of ammunition, including live ammunition or tear gas canisters, and they can be vehicle mounted multiple barrel launchers.

All these will have a different firing power and range within which they are supposed to be used.

↑ *Riot police officers fires rubber bullets during a protest in Thailand. Photo by Jack TAYLOR / AFP) (Photo by JACK TAYLOR/AFP via Getty Images*

↑ *This 'solid rubber baton' round cartridge was found in the aftermath of a lethal raid by riot police early on 17 February 2011 in Manama, Bahrain. Photo by Amnesty International*

4 See section 6 below for the concerns regarding these projectiles.
5 See section 6 below for the concerns regarding these projectiles.

Other KIPs take the form of a hand-thrown grenade that explodes and releases a number of KIPs in all directions when hitting the ground or shortly after being activated before being thrown.

2.2 The health effects of kinetic impact projectiles

KIPs are supposed to cause blunt trauma (bruising, pain through impact) and to make people comply through the pain caused. They are not supposed to penetrate the skin and cause open wounds, nor are they supposed to cause other more serious injuries. However, in practice, they have a very high risk of causing more serious injury or even death:

Hitting the face or head with a single projectile may result in skull fracture and brain injury. Further, hitting the eyes usually has severe consequences, including often permanent loss of eyesight.[6] Targeting the torso may cause damage to vital organs, including organ rupture and internal haemorrhaging. They may also cause blunt cardiac injuries, including potential death from thoracic trauma).[7] Depending on the degree of impact and size and form of the projectile, KIPs may also cause muscle or nerve damage, bone fractures, or they may penetrate the skin causing more serious wounds. Many of these effects can lead to permanent disabilities or even death.

↑*Woman injured by a rubber bullet shot by Military Police in São Paulo, Brazil, Photo by Mídia Ninja*

6 Physicians for Human Rights, "Health Impacts of Crowd-Control Weapons: Kinetic Impact Projectiles (Rubber Bullets)", January 2017, https://phr.org/our-work/resources/health-impacts-of-crowd-control-weapons-kinetic-impact-projectiles-rubber-bullets/

7 See such cases being reported for instance in: AhaJournals, Gilles Soulat, Etienne Puymirat and Elie Mousseaux, "Blunt Cardiac Injuries Due to Rubber Bullets", October 2020, https://www.ahajournals.org/doi/epub/10.1161/CIRCIMAGING.120.010485; ScienceDirect, Grant Schalet, Brooke Davis, Mario Gomez, Timothy Dickhudt, Ivan Puente, "Acute cardiac tamponade secondary to nonpenetrating injury from gunshot with beanbag round: A case report and literature review", December 2022, https://www.sciencedirect.com/science/article/pii/S2352644022001297

Whether these more serious, unwarranted injuries occur will largely depend on the following elements:

- the area of the body hit by the KIP,
- the power of the impact, and
- the susceptibility of the individual hit to suffer more serious consequences

Which **area of the body** will be hit and whether this will be a part of the body susceptible to more serious injury (e.g. the eyes, the head, the groin area) will depend on the accuracy of the weapon as well as the way the weapon is fired: Aiming the weapon at the upper part of the body increases the risk of causing more serious injury, e.g. to the head, neck/throat, face or inner organs. Even if aimed at the legs, the KIP's type, shape and material will influence the flight accuracy, hence the ability to avoid or not particularly sensitive areas of the body. Multiple projectiles are per se inaccurate and indiscriminate and pose a high risk of unwarranted injuries.[8] So too, is the use of random firing or skip fire (with the projectile re-bouncing off the ground) while also increasing the risk of hitting, for example, the face, including the eyes.

↑ *Brazilian photographer Sergio Silva holding his glass eye. He lost his eye after he was struck by a rubber bullet fired by police during a protest, São Paulo, Brazil © Sergio Silva*

The material that the KIP is made from, the firing power and mode of the launcher and the distance from which a KIP is fired will determine **the power of the impact**, in particular, whether there is the likelihood to penetrate the skin and/or to cause harm to inner organs: the harder the material, the closer the range and the stronger the firing power, the more serious the impact and hence, the possible injury.

8 See section 6 below for the human rights concerns in relation to these projectiles.

Certain individuals may be more susceptible than others to experience more serious consequences than mere bruises when being hit by a kinetic impact projectile:

- Individuals with a slimmer stature and thinner muscle tissue are more likely to suffer from injuries to inner organs, bones, joints or nerves.
- Certain health conditions, such as haemophilia or people taking blood-thinning medication (which will often be the case of a person of an older age), can more easily lead to more serious haemorrhage with potentially serious, even deadly consequences.

All this clearly shows that many of the serious and unwarranted health effects can and should be prevented. This will be discussed in different sections below (when and when not to use these weapons, how or not to fire, which types of KIP and weapons not to use etc.).

However, it must be noted that KIPs are, by design and purpose of deployment, most often used in highly volatile and unstable situations. Hence, it is impossible to rule completely out the occurrence of more serious injuries.

➔ Kinetic impact projectiles, despite their purpose to only cause blunt trauma, are very dangerous weapons that may cause serious injury and even death. This risk must be taken into consideration in deciding about the deployment of such weapons in general, as well as when and how (or how not) to use such weapons in a given situation.

People protest against Chilean President Sebastian Pinera's government with signs depicting eyes -referring to demonstrators whose eyes have been reached by police pellets- next to riot policehoto by MARTIN BERNETTI/AFP via Getty Images

3. When may KIPs be used, and when not?

3.1 Operational need: only in exceptional situations

Given the high risks of causing serious injury or even death involved in the use of kinetic impact projectiles, law enforcement agencies, in the decision whether or not to equip their members with such a weapon, must make a careful balancing assessment regarding the actual operational need for such weapons.

Law enforcement agencies are obliged to provide their officials with a range of means (weapons and equipment) to allow for a differentiated use of force to minimise harm and damage.[9] In this sense, any new weapon to be introduced should respond to an identified operational gap in law enforcement situations that may involve injury or harm to a person; its introduction should not simply be motivated by the availability of a new device on the market.

Therefore, when introducing a new weapon, it is important that the law enforcement agency making that decision has clearly defined its own operational requirements, with a view to minimising harm and injury. It should be mandatory for a law enforcement agency, before introducing any new weapon or equipment, to carry out a thorough review of past situations for which the use of the new weapon is contemplated.

Kinetic impact projectiles are usually distributed for use in certain public disorder situations. These situations present great challenges for law enforcement officials, and law enforcement agencies must have thoroughly developed policies in place on how to handle the different scenarios they may face, including if and when to resort to the use of weapons.

Weapons, by design, are supposed to cause some degree of harm to a person. However, law enforcement officials in the use of force are not supposed to cause greater harm than they want to prevent (principle of proportionality).[10] Hence, the greater the harm a weapon may cause, the higher must be the threshold of danger required to justify its use.

While kinetic impact projectiles are supposed to only cause blunt trauma, they can actually cause much more severe injuries and even death; therefore, they must be considered to be at the upper level of the use of force scale, just below the use of (lethal) firearms.[11] This means their use can only be justified if it is to prevent another person from being severely injured and not for any lower risk than this (for instance, damage to property, traffic disruption, the commission of merely administrative offences, etc.). **Furthermore, it is unacceptable that a kinetic impact projectile will injure other persons who do not present such a threat.**

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9 UN Basic Principle No. 2; Amnesty International, Use of force Guidelines, 2015, Guideline 6 and section 6.1, p. 133.

10 UN Special Rapporteur on the rights to freedom of peaceful assembly and of association, Report on Protection of human rights in the context of peaceful protests during crisis situations, A/HRC/50/42, 16 May 2022, para. 41: "[...] The use of less-lethal weapons is also bound by the above-mentioned principles on the use of force, including necessity and proportionality, and must also be used as a measure of last resort while ensuring minimum harm. The use of less-lethal weapons is likely to cause a certain degree of injury and hence can be considered proportionate only if their use is to counter the threat of a similar or graver harm."

11 OSCE, Human Rights Handbook on Policing Assemblies, 2016, p. 80.

Kinetic impact projectiles are typically used in environments of protest and hence, KIPs are sometimes referred to as "crowd-control"-weapons. However, this concept is confusing as it may wrongly infer that they are an ordinary tool for managing public assemblies, including as a means to disperse an assembly. This concept violates international human rights law and standards since it fails to take into consideration that kinetic impact projectiles are very dangerous weapons that are difficult to control and target, and they can cause serious injury and even death. Their use might also lead to a further escalation of an already tense situation, leading to even more violence, as well as a stampede with potentially serious consequences, when people try to escape from the situation. Therefore, decisions on whether or when to distribute and use them must take these serious risks into consideration. In particular, law enforcement agencies must establish a clear operational need for this weapon that cannot be addressed in a less risky and harmful manner.

In the handling of public order situations, such as protests, law enforcement officials might indeed face situations of considerable violence implying a great risk of injury, for instance: protesters throwing so-called "Molotov cocktails", firing large stones with slingshots, attacking other people (including other law enforcement officials) with large batons or metal bars.

However, even for such difficult situations, law enforcement agencies have different options for response – tactical ones (even without considering the use of force) as well as regarding the choice of the type of force and weapons they might resort to. It should be noted here that a number of law enforcement agencies have opted not to use kinetic impact projectiles, clearly not considering a pressing operational need for it in handling public order situations.[12] In any case, these weapons should never be deployed as a weapon of "convenience", just because it is available and might be perceived practical for police to use them in certain circumstances.

The guiding consideration must be the prevention of harm, and the decision to deploy such a dangerous weapon should be taken only to avoid even greater harm that may be caused, for instance, by the use of firearms**: Firearms bear an even greater risk and may only be used in the even more exceptional situation of an imminent threat of serious injury and death.**[13] **Considering the particular and serious risks they may present in public order situations, law enforcement agencies might, for instance, choose not to deploy any officials equipped with firearms at all, but rather to have a few selected and trained officials being deployed with weapons firing kinetic impact projectiles, instead.**

- ➔ In view of their inherent risks, kinetic impact projectiles are placed at the upper level of the use of force scale, just below the use of (lethal) firearms.
- ➔ Hence, law enforcement agencies should not equip their members with kinetic impact projectile weapons unless they can clearly demonstrate that this is necessary in response to exceptional and particularly serious circumstances that could justify taking the considerable risks inherent to this type of weapon.

12 For instance, research mandated by the Dutch police concluded in 2022 that - considering the high risks involved in the use of kinetic impact projectiles and the limited operational advantages - there is no reason to introduce the use of kinetic impact projectiles for the handling of public order situations, see (in Dutch): Vrije Universiteit Amsterdam, "Less than lethal weapons for the Mobile Unit explored: A study into demand, (new) supply and public support", December 2022, https://research.vu.nl/en/publications/less-than-lethal-weapons-voor-de-mobiele-eenheid-onderzocht-een-o; executive summary available in English: "Summary Less than Lethal Weapons", 2022, https://research.vu.nl/ws/portalfiles/portal/182414682/Summary_Less_than_lethal_Weapons.pdf; France-24, "Riot control guns: the different choices made by European nations", 1 February 2019, https://www.france24.com/en/20190201-riot-control-guns-different-choices-made-european-nations. Other countries are the Nordic countries, Croatia, Serbia and most states in Germany.

13 See UN Basic Principle No. 14: "Law enforcement officials shall not use firearms in such cases, except under the conditions stipulated in principle 9."

3.2 Key principles and considerations for the use of kinetic impact projectiles

It is crucial to bear in mind that the use of KIPs must adhere to the principles applicable to any use of force in law enforcement, which are: legality, necessity, proportionality, non-discrimination and accountability.

Legality

The use of force, including less lethal weapons such as KIPs, must be comprehensively regulated by domestic legislation that complies with international human rights law and standards. Law enforcement officers may only use force for a legitimate law enforcement objective established in law and compatible with international human rights law and standards.

Force should never be used for the purpose of intimidation or punishment – any use of force for the purpose of intimidation or punishment is prohibited under international human rights law.

Necessity

Law enforcement officials should not use force if less harmful means are available to obtain a legitimate law enforcement objective. The use of force must stop as soon as the legitimate objective has been met or as soon as recourse to less harmful means becomes possible, whichever is sooner.

Proportionality

Law enforcement officials should not cause more harm than the harm their use is meant to prevent. The use of force can only be justified in an instance to prevent harm of at least similar severity to the harm that the use of force may cause. If the use of force causes more harm than it prevents it cannot be considered proportionate.

Non-discrimination

Use of force may never be resorted to in a discriminating manner, for instance, to target specific groups, such as racialised groups, women, or LGBTIQ+ people.

Accountability

Law enforcement officials, as well as commanding officers, must be held accountable for each use of force.

These principles must be born in mind when considering if and for which law enforcement situations KIPs can be considered a suitable weapon: The situation must reach a certain threshold of danger, and KIPs must be a suitable weapon to address that danger and only when there are no other less harmful and less risky means available. Furthermore, KIPs are designed and supposed to obtain the compliance of a person through the pain it inflicts without causing serious injury.

Hence, it is a weapon to be directed against an individual presenting a threat and should only be used in circumstances where this can be ensured.

Therefore, the following rules should govern the decision by a law enforcement agency for which situations to deploy and authorise the use of KIPS:

- ➔ KIPs should not be regarded as a standard issue tool for public order situations and must not be used as a means to disperse an assembly.[14]
- ➔ KIPs should only be used against an individualised threat, namely an individual person who is engaged in serious violence and poses a risk of considerable harm to other people and only when there are no other, less harmful means available to stop the threat. The projectile should then be used with a view to stopping the violent behaviour of this individual.[15]
- ➔ KIPs should not be used in situations of extreme volatility with people quickly running through one another so that it is impossible to clearly aim and target at the individual engaged in serious violence. Commanding officers in charge of the management of a public order situation bear a particular responsibility to assess whether the situation is such that it allows for the use of this weapon or whether the risk of hitting the wrong person is simply too great.
- ➔ KIPs should never be used against people who are peaceful, merely passively resisting or running away.
- ➔ Every single use of a kinetic impact projectile must be justified (and the relevant law enforcement officials must be held accountable for them) under the principles of legality, necessity and proportionality. Hence, before each shot, the situation must be assessed accordingly, and there should be no uncontrolled repeated firing of KIPs.
- ➔ In public order situations, only a very limited number of law enforcement officials – specifically trained and deployed for that purpose - should be equipped with the weapon to ensure it is only resorted to in the described exceptional circumstances and in a carefully controlled manner with proper supervision by commanding officers.[16]

14 UNODC and UNOHCHR, Resource book on the use of force and firearms in law enforcement, 2017, pp. 94-5,

15 It is worth underlining – as stated by the Human Rights Committee in its General Comment No. 37 to the ICCPR – that mere "pushing and shoving or disruption of vehicular or pedestrian movement or daily activities do not amount to 'violence'" and hence can never justify the use of kinetic impact projectiles.

16 UNODC and UNOHCHR, Resource book on the use of force and firearms in law enforcement, 2017, p. 94.

4. Special precautions – children and other people at particular risk of serious injury

In relation to children, all the principles governing the use of force, including the use of kinetic impact projectiles, by law enforcement officials apply. However, in practice, the considerations can vary considerably in comparison to adults:

Even in situations in which children behave violently, it will, in most cases, be possible to overcome the threat they present with less harmful means than through resorting to such dangerous weapons as kinetic impact projectiles. The principle of necessity will, therefore, in most circumstances lead to the conclusion that the use of kinetic impact projectiles is unnecessary in the circumstances.

Furthermore, rarely will the threat presented by a child be so serious that using a kinetic impact projectile could be justified under the principle of proportionality. And here, an additional consideration comes into play: Kinetic impact projectiles are not supposed to cause more than blunt trauma. However, even if used correctly, persons of particularly slim or small stature, such as younger children, are at greater risk of suffering more serious injury:

- For persons of a smaller height, police officers must be careful not to aim too high as this increases the risk of hitting the upper torso or head with potentially serious consequences.
- People of a slimmer stature, such as younger children, have thinner body tissue which increases the risk of skin penetration or bone injury – a risk that further increases the shorter the range is from which the projectile is fired.
- Children are also more likely than others to suffer serious psychological trauma.

➔ As a rule, KIP's should not be used against younger and/or smaller children or any other person, who are more likely to sustain more serious injury due to their smaller stature and thinner body tissue.

➔ Furthermore, law enforcement agencies should refrain from deploying weapons with kinetic impact projectiles in public order situations where there are a large number of younger children present, such as student protests or protests organised or carried out by younger children.

5. How to use KIPs and how not to use them

Kinetic impact projectiles must be used in a way that seeks to avoid any unnecessary or unwarranted injury. This requires particularly careful targeting and respect of the appropriate distance:

- ➔ A **clear warning** must precede the use of KIPs with sufficient time for people to comply with the order and stop their violent behaviour.
- ➔ KIPs should **never be fired indiscriminately towards a crowd** but must be carefully targeted at an individual person who is engaged in serious violence against another person.
- ➔ The weapon should be **aimed at the lower parts of that person's body** to avoid causing more serious injury, especially to the head, face or eyes; it should never be aimed at the upper part of the body.
- ➔ The weapon should **never be fired in skip-fire**, which means aiming against the ground with a view to making the projectiles re-bounce off the ground. This renders the projectiles particularly inaccurate and greatly increases the risk of hitting individuals other than the targeted person and/or hitting parts of the body that are particularly vulnerable to serious injury.
- ➔ KIPs should be fired from the **appropriate distance** as indicated by the manufacturer and approved by the command leadership of the law enforcement agency.
  The appropriate distance will depend on the size of the projectile as well as the firing power of the weapon.
  - ➢ Firing KIPs at a too close range creates the risk of skin penetration or a impact that causes other more serious injuries, such as internal bleeding or bone injury.
  - ➢ Firing KIPs at a too large range affects their accuracy and increases the likelihood to hit other than the targeted person and/or area of the body.

  It is crucial that law enforcement officials are aware of the distance that has been identified as appropriate for the KIPs they will be using and are trained to use them strictly in accordance with that range.
- ➔ KIPs should **never be fired from a significantly elevated location** (for instance, from the top of a roof or via a drone), as this increases the risks of hitting the head of a person.
- ➔ Any person injured from a KIP must be given **access to adequate and immediate medical care** as required by the seriousness of the injury.

6. Kinetic impact projectiles and weapons to be prohibited

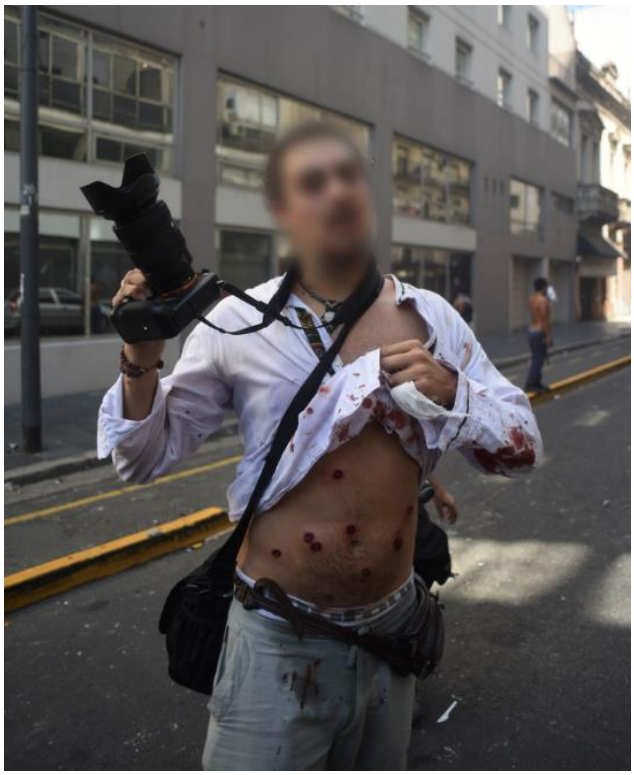
The harm caused by kinetic impact projectiles will depend heavily on the type of weapons and projectiles used, and law enforcement agencies must make a particularly careful assessment prior to deciding if and which type of projectile and weapon to use. However, certain types of projectiles and weapons are likely to cause excessive harm and injury and, therefore should never be used.

Multiple projectiles – even though they are designed for use in public order situations - are per se highly inaccurate: it is impossible to predict how far they will spread – not only over the body of the targeted person but even hitting another person nearby. They bear a particularly great risk of causing eye injury. **Hence, they cannot be used in a way that minimises harm and injury and therefore, they should be prohibited in all their forms.**[17]

- An example are the TEC Harseim kinetic multiple impact ammunition and 12-gauge rubberised buckshot used during the social unrest in Chile. An evaluation carried out by the law enforcement agency itself, the Carabineros, in 2012 already identified this problem of great inaccuracy and potential to cause serious harm. Despite this they were deployed and used during the protests in 2019, tragically leading to a particular large number of serious injuries, in particular loss of eyesight.[18]

It should be noted that law enforcement agencies are sometimes also firing metal pellets, which are multiple projectiles that were designed for hunting purposes (also referred to as bird or buckshot ammunition). Besides bearing the same risk of inaccuracy as other multiple projectiles, they were never designed nor tested for use in a law enforcement context and should, therefore, not be used at all and should be prohibited for use in law enforcement.

17 UNODC and UNOHCHR, Resource book on the use of force and firearms in law enforcement, 2017, p. 94.
18 Amnesty International, *Eyes on Chile: Police violence and command responsibility during the period of social unrest*, (Index Number: AMR 22/3133/2020), 14 October 2020, https://www.amnesty.org/en/documents/amr22/3133/2020/en/



← *A photojournalist holds his shirt up, showing rubber bullet wounds, during a protest against government-proposed pension reforms in Buenos Aires, Argentina. Photo by Mariano Sanchez/Anadolu Agency/Getty Images*

Certain single projectiles are too inaccurate by design, and it will be impossible for law enforcement officials to properly aim at the targeted person and to target area of the lower part of the body.

- This was found to be the case for the so-called rubber balls (pelotas to goma) used by the National Police and the Civil Guard in Spain: They are intrinsically imprecise and cannot be used safely or in line with international standards on human rights[19] and therefore, they must be prohibited.

Some projectiles, such as rubber-coated metal bullets, have a too great power of impact and even though they are purportedly considered a less lethal weapon, have caused serious injury and death – for instance those fired by Israeli defence forces against Palestinian protesters in the Occupied Palestinian Territories.[20] Given the power of their impact, rubber-coated metal bullets cannot be considered less-lethal and should be prohibited.[21]

Certain projectiles may bear a particular risk of being inaccurate or causing excessive harm and should not be used unless thorough testing revealed that their design allows for a safe and human rights compliant use:

- Depending on their design, beanbags could have a particularly inaccurate flight trajectory or break up upon impact with the pellets they contain spreading over an unpredictable wider area. Hence, particularly thorough testing is required for beanbags in order to deploy only a type of device that is sufficiently accurate and that will not break up upon impact.

19 Amnesty International, *Spain: Excessive use of force by National Police and Civil Guard in Catalonia*, 3 October 2017, www.amnesty.org/en/latest/news/2017/10/spain-excessive-use-of-force-by-national-police-and-civil-guard-in-catalonia/.

20 Amnesty International, *Trigger-Happy: Israel's use of excessive force in The West Bank*, (Index: MDE 15/002/2014), https://www.amnesty.org/en/documents/mde15/002/2014/en/.

21 UNOHCR, Guidance on Less-lethal Weapons, 2020, 7.5.8.

Kinetic impact projectiles with combined effects should also be particularly tested regarding their accuracy and the degree of harm caused by the added effect:

- A KIP combined with other elements, such as colour markers or chemical irritants, might have a less stable flight trajectory and, as a result, be less accurate. This again would increase the risks of hitting people nearby the targeted person or hitting the upper part of the body, including the head, face and eyes. Hence, it is particularly important to ensure that the additional component does not lead to such an inaccuracy.
- Colour markers are sometimes used to identify people involved in violent acts to facilitate their subsequent arrest and prosecution. However, when hitting a person the colour might spread more widely, and also mark other persons who may not be involved in violence at all. Their subsequent arrest would therefore present an unlawful arbitrary arrest.[22] Hence, kinetic impact projectiles combined with markers should specifically be tested regarding the way the marking colour will spread and should only be used if there is no risk of marking other people around.

➔ All kinetic impact projectiles that by their design imply a risk of excessive injury or other harm should be prohibited, in particular: all multiple projectiles, any highly inaccurate single projectiles such as rubber balls, and projectiles with a too great impact such as rubber coated metal bullets.

22 See also on the similar problem when mixing water cannon with colour markers: Amnesty International – The Netherlands, Use of Force Guidelines, 2015, section. 7.4.2 c), p. 159.

7. Policy instructions and training

7.1 Instructions

Law enforcement agencies must establish clear instructions for the use of kinetic impact projectiles to minimise the risks of unwarranted harm or injury.

Instructions must:

- ✓ Provide specific, clearly-defined circumstances in which the weapon may be used and for which purpose, as well as a detailed prescription in which way the weapon is supposed to be used;
- ✓ Legislation, regulations or instructions that only establish a vague purpose for the use of the weapon, such "the handling of crowds", "the maintenance of public order" or the "fulfilment of law enforcement duties" are clearly insufficient in this regard.
- ✓ Demonstrate what precautions need to be taken for their use – in general, and concerning specific people more likely to sustain serious injury, such as younger children or children or other people of a smaller or thinner stature;
- ✓ Include explicit prohibitions for the circumstances and manner in which they must not be used (for example, as a means of crowd control or use in skip-firing mode);
- ✓ Warn of possible risks involved if used inappropriately (for example, if fired from too close of a distance, leading to penetrating wounds);
- ✓ Establish a clear chain of command for the decision to resort to kinetic impact projectiles in the context of public order situations.
- ✓ Commanding officers should explicitly be given the responsibility to carefully assess the risks involved in the use of the weapon and only to authorise them if the use is justified by the dangerousness of the situation and if they have ascertained that the weapon can be used in a manner that avoids serious injury as well as injury to persons who do not present any threat. Failure in this responsibility must entail the personal accountability of the concerned commanding officer.

7.2 Training

Law enforcement officers must be properly and consistently trained on all the rules and regulations that govern the use of kinetic impact projectiles.

They must be proficient in using the weapons in a way that causes the least harm possible:

- They must have confirmed shooting skills in order to be able to hit the targeted person at the targeted area of the body.
- They must be aware of the appropriate firing distance and be trained in assessing whether the person who presents the threat is within the range in which the weapon may be used.

Training should include appropriate decision-making skills regarding all the options available, including prioritising less harmful alternatives to KIPs.

Only duly certified law enforcement officers should be equipped with and allowed to use KIPs. Periodic re-certification should be mandatory, and if that is not done, law enforcement officials should have the certificate and the authorisation to use this weapon withdrawn.

➔ Law enforcement agencies must clearly instruct and train their personnel on the use of kinetic impact projectiles, including specific, narrowly-defined circumstances when and how they should be used, precautions to be taken to minimise harm and clear prohibitions when and how they may not be used. They should only hand out these weapons to certified law enforcement officials.

↑ *Protesters showed off rubber bullet casings that riot police fired at protesters. On August 11, 2021 in Bangkok, Thailand. Photo by Atiwat Silpamethanont/NurPhoto/Shutterstock*

8. Accountability and review

Law enforcement officials must be obliged to report on each use of kinetic impact projectiles.

The reports should be carefully reviewed and analysed in view of the justification of the use of the weapon and, where appropriate, followed by corrective measures, including training, coaching, and disciplinary or criminal sanctions. In addition, data should be collected and sorted by ethnicity, gender, age, and other relevant criteria to identify any possible discriminatory trends: In many contexts, it has been found that the use of force, including weapons, is often resorted to in an unlawful, excessive way, particularly against specific groups experiencing discrimination and law enforcement agencies should be particularly wary of identifying such problematic trends and take measures to prevent them from re-occurring,[23] Such discriminating patterns could also be observed in relation to the use of kinetic impact projectiles, for instance, in Israel, where rubber-coated metal bullets are exclusively used against protesters in the Occupied Palestinian Territories,[24] or in India, where highly inaccurate metal pellets are exclusively used in Jammu & Kashmir.[25]

In order to ensure proper identification of a law enforcement official who has fired a kinetic impact projectile, the number of officials deployed with such a weapon at any given event should be limited. The use of the weapon must be carefully supervised and controlled by commanding officers. The kinetic impact projectiles distributed to an individual law enforcement official should be marked and registered in a way as to facilitate the later tracing and identification of the official who discharged their weapon in a given situation.
Law enforcement agencies must constantly assess the overall situation regarding the deployment of kinetic impact projectiles. In particular, when serious injuries occur or when there are other indications of regular inappropriate or even clearly unlawful use of the weapon, it is the responsibility of the command leadership of a law enforcement agency to assess all relevant areas:

- the adequacy of the kinetic impact projectiles themselves and the launching weapons,
- the instructions regarding their use and their actual respect by law enforcement officials,
- the training of officials deployed with the weapon,
- the role of commanding officers.

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23 Amnesty International, *USA: The world is watching: Mass violations by U.S. police of Black Lives Matter protesters' rights*, (Index Number: AMR 51/2807/2020), 4 August 2020, https://www.amnesty.org/en/documents/amr51/2807/2020/en/; Amnesty International, Mexico: The (r)age of women: Stigma and violence against women protesters, (Index Number: AMR 41/3724/2021), 3 March 2021, https://www.amnesty.org/en/documents/amr41/3724/2021/en/; Human Rights Council Forty-seventh session, Conference room paper: Promotion and protection of the human rights and fundamental freedoms of Africans and of people of African descent against excessive use of force and other human rights violations by law enforcement officers, A/HRC/47/CRP.1, 28 June 2021; INCLO, Protesting during a Pandemic – State Responses during COVID-19, April 2021, p. 18, https://policehumanrightsresources.org/protesting-during-a-pandemic-states-responses-during-covid-19; etc.

24 See Amnesty International, *Trigger-Happy: Israel's use of excessive force in The West Bank*, (Index: MDE 15/002/2014), https://www.amnesty.org/en/documents/mde15/002/2014/en/

25 Amnesty International, *Losing sight in Kashmir – the impact of pellet-firing shotguns*, September 2017, https://www.amnestyusa.org/reports/losing-sight-in-kashmir.

Any shortcomings in these areas should be immediately addressed, and if this cannot be done with the required immediacy, the use of the weapon should be suspended until the relevant measures are taken.[26] Corrective measures must also include, where necessary, disciplinary and criminal sanctions against all officials involved – the law enforcement officials who resorted to the use of the weapon as well as their commanding officers if they failed to ensure the lawful and appropriate use of the weapon.

If there has been a particularly serious incident or there is constant reoccurrence of unlawful use of kinetic impact projectiles (large number of serious injuries and/or patterns of unlawful use) and the command leadership fails to stop and prevent this through appropriate measures, their own direct administrative, disciplinary and even criminal responsibility may be involved.[27]

External police oversight should be established and mandated to investigate specific incidents involving the use of KIPs and wider patterns of misuse, including the potential involvement of command responsibility as well as issues around the appropriateness and adequacy of policies, instructions and training.

Any relevant policies relating to the requisition, issuance or use of particular KIPs must be made publicly accessible.

- ➔ Each use of kinetic impact projectiles that violated applicable rules, regulations and human rights standards must be met by an appropriate response, including disciplinary and criminal sanctions against the law enforcement official who fired the weapon as well as the commanding officers, if they failed to ensure the lawful and appropriate use of the weapon.
- ➔ Law enforcement agencies must take appropriate measures to ensure the identification of the law enforcement official who fired a kinetic impact projectile, such as deploying only a limited number of law enforcement officials equipped with such a weapon, using traceable projectiles and ascertaining clear supervision and control.
- ➔ Law enforcement agencies should constantly assess the overall situation regarding the deployment of kinetic impact projectiles and immediately address any shortcomings concerning the projectiles and launchers used, the established policies and instructions, the training of law enforcement officials and the role of commanding officers. All related policies should be publicly accessible.
- ➔ If the command leadership fails to stop and prevent excessive harm and injury caused by kinetic impact projectiles through appropriate measures, their own direct administrative, disciplinary and even criminal responsibility may be involved.

26 For instance, Amnesty International has urged law enforcement authorities in France to suspend the use of a KIP and related launcher, the LBD 40, given that there are doubts regarding the accuracy of the weapon and that there were insufficient safeguards (including lack of adequate instructions and training) to ascertain that law enforcement officials would only resort to the weapon in a human rights compliant manner: Amnesty International, *Call For Suspending The Use Of Rubber Bullets Fired With The LBD40 And For Banning Grenades Gli-F4 In The Context Of Policing Protests*, (Index Number: EUR 21/0304/2019), 3 May 2019, amnesty.org/en/wp-content/uploads/2021/05/EUR2103042019ENGLISH.pdf.

27 In Chile, Amnesty International research demonstrated such blatant failure in the command responsibilities by the highest level of authorities who should have taken action to prevent hundreds of people sustaining eye injuries as a result of the arbitrary and excessive use of highly inaccurate kinetic impact projectiles by security forces over many weeks: Amnesty International, *Eyes on Chile: Police violence and command responsibility during the period of social unrest*, (Index Number: AMR 22/3133/2020), 14 October 2020, https://www.amnesty.org/en/documents/amr22/3133/2020/en/

↑ *A protester holding bullet shells used by the police and military in Myamar. Photo by Kaung Zaw Hein/SOPA Images/LightRocket via Getty Images*

↑ *A police officer points a 40-millimetre rubber defensive bullet launcher LBD (LBD 40) towards protesters during an anti-government demonstration in Paris. Photo by Zakaria ABDELKAFI / AFP*

9. Testing, trade and transfer

All weapons used by law enforcement officials must be subjected to thorough testing to determine if they meet the required operational needs; technical requirements in terms of accuracy, precision, reliability and lifespan; and the degree of possible harm and suffering they may cause as well as possible unwarranted or unintended effects. Law enforcement agencies should never consider a weapon suitable simply because of its availability on the market or the claims made by manufacturers regarding its safety and effectiveness. There are no established international standards or controls law enforcement agencies can rely on for such testing, and this places a particular responsibility on them to have strict and appropriate processes in place to ensure such testing is carried out properly. This should be done by an independent body. Furthermore, each device should be subjected to an independent assessment of its compliance with international human rights law and standards, particularly in meeting the requirements of the principle of proportionality.[28]

Kinetic impact projectiles – together with the launchers used to fire them - are among the weapons that require a particularly detailed and thorough testing. They need to be tested in terms of accuracy, precision and reliability as well as the impact they have when hitting a person:

➔ **At what distance will they hit with which velocity/power and what type of injury that is likely to cause**. Any distance at which the projectile is likely to cause more than blunt trauma should be prohibited.

- Example from Catalonia: The manufacturer's indication regarding the kinetic impact projectiles SIR-X is that there is a likelihood of serious injury if fired from less than 30 m distance; however, the instructions from the Generalitat de Catalunya (at time of writing of this paper) is still that these projectiles can be used between 20-50 m.[29]
- Note: Sometimes, law enforcement officials are given a weapon for which the firing power/speed can be adjusted depending on the target's distance. It should be borne in mind that public order situations, particularly in case of violence, are very dynamic and highly stressful for law enforcement officials. It cannot be expected from them in such a scenario to constantly assess the distance and re-adjust the firing power of the weapon; this would clearly be conducive to human mistakes that might have tragic outcomes. Hence, such weapons should not be provided to law enforcement officials. They should only be given such launchers for which the use is relatively straightforward and can easily be trained and that have been assessed for the firing power and appropriate distance of use.

28 Amnesty International – The Netherlands, *Use of Force Guidelines* (previously cited), Guideline 6b) and c) and section 6.2.2.

29 Amnistía Internacional, *Derecho a la protesta en España: siete años, siete mordazas que restringen y debilitan el derecho a la protesta pacífica en España*, 2022, (AI Index: EUR41700022), p. 46, https://doc.es.amnesty.org/ms-opac/recordmedia/1@000035052/object/47075/raw

➔ **Projectiles and the launchers used for firing them need to be tested on their accuracy, whether they can be aimed with sufficient precision – and within what range - to ensure that they don't hit another person or an area of the body that was not targeted**.[30] A projectile or a launcher that proves to be too inaccurate must not be deployed. And for projectiles and launchers that are sufficiently accurate, instructions would then have to be formulated accordingly and indicate the safe range within which the weapon is found to be accurate and may be used.

  - Note: Measuring accuracy and determining firing distance to meet accuracy standards cannot be done in isolation. It must take into account the firing power as well. When the accuracy is only guaranteed at a certain distance, but at that distance, velocity and power would be too harmful, the projectile and its launcher must be discarded.

➔ **The type of impact they will cause and whether the shape or material of the projectile is likely to lead to skin penetration or any other injury beyond blunt trauma.** Any of such outcomes should lead to discarding this projectile for use in law enforcement.

➔ **Projectiles will also have to be assessed for their life span.** The material might harden and/or change their flight behaviour if stored for a long time. Therefore, storage conditions and duration need to be defined to ensure that projectiles, when handed out to law enforcement officials, still meet the standards and conditions under which they were initially tested and evaluated.

The testing should be done by independent medical, legal, policing and other experts and should not merely follow the manufacturer's claims regarding their safety.

The trade in policing equipment must be strictly controlled under human rights criteria. Trade in inherently abusive equipment must be prohibited; licences to export equipment that can have a legitimate law enforcement use should be denied where there are reasonable grounds for believing that the equipment will be used for serious human rights violations. This should also include related training and technical assistance.

➔ All weapons used by law enforcement officials, including kinetic impact projectiles and their launchers, must be subjected to thorough, independent testing to ensure they are safe and appropriate for human rights compliant use by law enforcement officials, in particular regarding the appropriate firing distance within which they must be sufficiently accurate, without having an impact that is likely to cause more than bruises.

➔ States must not authorise the export of kinetic impact projectiles, related launchers and technical assistance, when there are reasonable grounds for believing that the equipment will be used for serious human rights violations.

➔ Manufacture and trade in kinetic impact projectiles and related launchers that by design are likely to cause excessive injury or harm, such as multiple projectiles, highly inaccurate single projectiles, as well as rubber coated metal bullets should be prohibited.

30 UN OHCHR, Guidance on less-lethal weapons in law enforcement, 2020, 7.5.4.

↑*A riot policeman fires a shotgun at protesters during clashes at a side street near Tahrir Square in Cairo, Egypt. Photo by REUTERS/Goran Tomasevic*

10. Do's and don'ts

DO: Law enforcement officials should:

- ✓ Only use KIPs to stop an act of serious violence against another person likely to cause considerable harm.
- ✓ Only use KIPs as a last resort when there is no less harmful alternative available.
- ✓ Warn people of the intention to use KIPs and give them sufficient time to comply with the order.
- ✓ When using, target less vulnerable parts of the body (lower torso and limbs) and avoid the upper body, head and groin.
- ✓ Be able to justify every use of KIPs.

DON'T : Law enforcement officials should never:

- ✘ Use KIPs against people who are peaceful and/or only passively resisting or running away.
- ✘ Use KIPs as a means of dispersal.
- ✘ Fire KIPs randomly at a crowd.
- ✘ Aim at the upper part of the body.
- ✘ Use multiple projectiles.