

A review of less lethal weapons manufacture, trade and (mis)use - human rights and trade control implications

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ABSTRACT

At a time of unprecedented global unrest and social protest, an increasing number of law enforcement agencies are using less lethal weapons to control public gatherings, manage prisons and police borders on a greater scale, both in number and geographical spread, than ever. There is wide divergence in the types and quantities of weapons used, selection and testing procedures, procurement practices, policies and procedures for use, and the content of training, both between countries and between different agencies within the same country. Traditionally the manufacture and trade in less lethal systems has been dominated by companies based in Europe and North American. However, evidence shows that this is changing.

This paper presents some initial results and illustrative cases from an ongoing global survey of less lethal weapons, highlighting a range of traditional and novel less lethal weapons that are now being manufactured, traded and deployed by law enforcement officials throughout the world in custodial and non-custodial contexts. The paper presents less lethal law enforcement weapons and equipment in the following categories: electric shock weapons and devices; kinetic impact devices; and riot control agents; briefly examining the particular physical/medical effects of each weapon type and highlighting relevant human rights concerns associated with its use. Consequently the paper assesses whether the less lethal weapon or equipment in question can be used legitimately and if so under what constraints; or whether the manufacture, trade and use of certain less lethal weapons should be prohibited. Finally the paper highlights some examples of the current less lethal weapons marketplace, and examines recent international initiatives to more effectively regulate the trade in less lethal weapons and law enforcement equipment.

Keywords: manufacture, export, import, trade control, weapons, equipment, legislation

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1. INTRODUCTION

The duty of law enforcement officials to serve the community and to protect individuals against illegal acts does, exceptionally, require the use of force; yet the option to use such force when absolutely necessary brings a concomitant responsibility to use that force appropriately, and in proportion to the threat faced. Principles for the use of force in law enforcement are set out in the United Nations (UN) Code of Conduct for Law Enforcement Officials (UNCoC)ⁱ, and the Basic Principles on the Use of Force and Firearms by Law Enforcement Officials (UN Basic Principles)ⁱⁱ.

In order to facilitate the ability of law enforcement officials to employ appropriate and proportionate force, if required, Principle 2 of the UN Basic Principles encourages States to *“develop a range of means as broad as possible and equip law enforcement officials with various types of weapons and ammunition that would allow for a differentiated use of force and firearms.”* It further specifically recommends that States should include *“non-lethal incapacitating weapons for use in appropriate situations, with a view to increasingly restraining the application of means capable of causing death or injury to persons.”*ⁱⁱⁱ

Important constraints upon these weapons are subsequently elaborated under Principle 3 which stipulates that: *the development and deployment of non-lethal incapacitating weapons should be carefully evaluated in order to minimize the risk of endangering uninvolved persons, and the use of such weapons should be carefully controlled.*^{iv}

The authors of this paper acknowledge the value of developing such weapons and equipment (which they contend should be considered as less lethal rather than non-lethal) so as to decrease the risk of serious injury or death that is inherent in police use of firearms. Some less lethal weapons and equipment can have a legitimate use in law enforcement if employed correctly and in line with international standards for law enforcement. When used responsibly by well-trained and fully accountable law enforcement officials, such weapons and equipment can help prevent and minimize harm, serious injuries and death to assailants, suspects and detainees, while also protecting prison officers, law enforcement officials and the wider public. Yet such equipment can have unintended dangerous and even lethal effects if not used in compliance with human rights standards, and is also open to abuse.

Although the UNCoC and BPUFF provide important international standards for the use of force including less lethal weapons, both instruments are framed in broad aspirational terms and have not been elaborated further by more detailed and specific internationally accepted guidelines on the development and use of such weapons. Furthermore, neither instrument has been updated since its adoption with a view to keeping pace with changes in law enforcement practice or the development of new technologies. Indeed it is now nearly 30 years since the BPUFF were adopted, and the less lethal weapons environment has changed considerably since then, with a hugely expanded and an ever increasing range of less lethal weapons and equipment types being developed specifically for use by law enforcement officials.

To explore these issues further, the following section of this paper examines a selection of less lethal weapons and equipment: that are weapons commonly used in custodial settings including prisons, detention centres and certain closed medical facilities, and/or employed in extra-custodial settings including the policing of public assemblies including demonstrations and protests. The paper will briefly examine the particular physical/medical effects of each weapon type and highlight relevant human rights concerns associated with its use. Consequently the paper will assess whether the less lethal weapon or equipment in question

can be employed legitimately and if so under what constraints; or whether the manufacture, trade and use of the less lethal weapon should be prohibited.

The third section of this paper highlights some examples of current less lethal weapons manufacture and trade to illustrate how the traditional centres of less lethal weapons manufacture which were dominated by companies based in Europe and North America have expanded to now include non-traditional countries or regions of manufacture including Brazil, China, UAE and the Middle East and Turkey. This section also explores some implications of the considerable increase in the number of companies manufacturing, promoting and trading in such equipment and in their geographical spread (including into countries with weak or non-existent controls over product development, manufacturing quality or trade). The final section of the paper will conclude with recommendations for the development of effective regulation of the manufacture, trade and use of less lethal weapons.

2. Examination of three significant less lethal weapons types

2.1 Electric shock weapons

2.1.1. Direct contact electric shock weapons

The Omega Research Foundation has documented the development and promotion to prison and law enforcement officials throughout the world of a wide range of direct contact electric shock weapons including electric shock batons, shields, stun guns, stun gloves and electric shock capture devices. Whilst their design varies widely, the electric shock from these weapons and devices is applied directly by hand, as they are pressed against an individual, causing intense localized pain but generally not incapacitating the subject.

Although promoted as less lethal weapons, direct contact electric shock weapons and devices, as a result of their nature and design, carry an intrinsic risk of delivering arbitrary force to the targets. Potential injuries include burns, puncture wounds and welts, as well as the risk of secondary injuries should the subject fall. These weapons are also open to conscious abuse, including for torture and ill-treatment, as they allow the user to inflict extreme pain, often without leaving long-lasting identifiable physical traces, at the touch of a button. Documented examples of the abuse of such weapons include the application of sustained shocks, multiple shocks or shocks to sensitive and inappropriate areas of the body, and their use as a punishment. UN and regional torture monitors, and non-governmental anti-torture organizations have recorded incidents of abuse in all regions of the world.^v

South Africa: electric shock shields used to torture prisoners

There have been repeated reports from human rights organisations, the media and prison oversight bodies of the misuse of a variety of direct contact electric shock weapons including electric shock shields by guards in South African prisons. For example, in 2009 an inmate was killed by prison officials at Pietermaritzburg Correctional Centre and the subsequent Judicial Inspectorate for Correctional Services (JICS) investigation reported that “[o]fficials used batons, crutches and an electric-shield even when [the inmate was] mechanically restrained”.^{vi} In this case criminal charges were brought against the perpetrators. In the same year, following the killing of an inmate by officials at Ebongweni Correctional Centre, Kokstad, the JICS reported: “[The] deceased [was] brutally assaulted by officials with batons, electric shields and booted feet [who] then failed to provide adequate and timeous medical attention.”^{vii} In 2014 approximately 20 inmates claimed that they had been assaulted and tortured with electric shock shields by prison warders and members of the Emergency

Support Team at Leeuwkop Max C Prison. One of the examining doctors was “*absolutely shocked*” at the brutality of the beatings, saying, “[t]he four inmates I examined were all badly beaten but the injuries on two of them indicated they had been severely assaulted, viciously attacked and seriously injured. One of them had bad burn-marks on his back consistent with electric shock. I found contusions, burn marks, bruising, lacerations and swellings on all of them.”^{viii}

Italy: electric shock batons used to torture migrants and refugees

Amnesty International has documented the repeated use of electric shock batons by Italian police against newly arriving refugees and migrants, particularly to forcibly fingerprint people in police stations. Children were also subjected to such treatment. A 16-year-old boy from Sudan arrived in Italy on 7 June 2016, fleeing the conflict in Darfur, which killed his father, and hoping to join his brother in France. When he was disembarked in Sicily, he was taken to a police station and detained there. He told Amnesty International: “*After three days ... they took me to the ‘electricity room’. There were three policemen wearing uniforms, plus a woman without uniform ... The police then asked me to give fingerprints. I refused. Then they gave me electricity with a stick, many times on the left leg, then on the right leg, chest and belly. I was too weak, I couldn’t resist.*”^{ix}

Both the European Committee for the Prevention of Torture and Inhuman or Degrading Treatment or Punishment (CPT) and the European Court of Human Rights have expressed “*strong reservations*” about the use of electric shock equipment in contact mode, noting that “*properly trained law enforcement officials will have many other control techniques available to them when they are in touching distance of a person who has to be brought under control*”.^x The CPT have raised concerns about the arming of custodial staff with electric shock weapons in certain Council of Europe States and have recommended that “*immediate steps be taken to put a stop to custodial staff in police arrest houses routinely carrying electro-shock weapons*”.^{xi} Although most cases of torture and ill-treatment have been reported in prisons, detention centres and closed psychiatric facilities, such devices have also been deployed in non-custodial settings including crowd control, with their use in certain cases resulting in injuries and deaths due to crowd fear and stampedes.^{xii}

2.1.2. Body worn electric shock weapons

A range of electric shock devices, activated by remote control, are intended for attachment directly to detainee’s bodies; they include stun belts, stun vests and stun cuffs. They are worn, sometimes for many hours at a time, with the constant threat that they would be activated at any moment, and in the case of stun belts will deliver a 50,000 volt shock, via electrodes placed near the detainee’s kidneys, resulting in severe pain for the duration of the shock and causing muscles to contract involuntarily, rendering the subject immobile. Other physical effects can include muscular weakness, involuntary urination and defecation, heartbeat irregularities, seizures and welts on the skin.

Although both the UN Committee against Torture^{xiii} and the CPT^{xiv} have condemned the use of stun belts and recommended such practices be halted, they, and other body worn electric shock devices, have been manufactured by companies in the Americas, Africa and Asia, and have been promoted by companies in all regions of the world. These devices have been used to control prisoners in certain countries including South Africa,^{xv} and some states of the United States of America (US),^{xvi} and notoriously employed in a school in the US^{xvii}.

United States of America:

The media, civil liberties groups and human rights organisations have reported several instances of inappropriate activation of body-worn electric shock devices during judicial proceedings in the United States of America.^{xviii} For example, in July 2014 in Maryland, a judge ordered a shock device attached to a defendant's ankle to be activated when the defendant, who was representing himself, verbally interrupted the judge. The defendant reportedly screamed out three times and fell to the ground when the 50,000- volt shock was administered^{xix} later stating that *"It felt like fire went through my back,"*.^{xx} In March 2016, the judge pleaded guilty to a misdemeanor civil rights violation for ordering this inappropriate activation. The court sentenced him to one year's probation, fined him \$5,000 and ordered him to take anger management classes. Maryland's highest court also banned him from the bench for life.^{xxi}

2.1.3. Projectile electric shock weapons

Projectile electric shock weapons were developed for law enforcement officials to incapacitate an individual at a distance. Most models hold one or more cartridges which can fire two barbed darts attached by thin wires to the launch device, at an individual, from several metres. The darts attach to a person's body or clothing, delivering an incapacitating high voltage electric shock that causes the subject to lose neuro-muscular control and collapse. Depending on the model, the shock can be continuous and prolonged (up to several minutes) if the trigger is held down, repeated numerous times if retriggered, or can be interrupted. Some projectile electric shock weapons are also equipped with "drive-stun mode", which applies a localised electric shock by direct contact with the skin or clothing, without having to fire a cartridge. This causes intense pain only, not incapacitation.

When deployed by highly trained police officers as a projectile in a stand-off situation to prevent an imminent threat of serious injury or death, such projectile electric shock weapons can be a legitimate alternative to firearms. Law enforcement officers authorized to use such weapons must abide by regional and international policing standards on the use of force and firearms, and should always be under a strict system of supervision and accountability so as to ensure that such standards are fully met.

The UN Committee against Torture has recommended that *"electrical discharge weapons are used exclusively in extreme and limited situations – where there is a real and immediate threat to life or risk of serious injury – as a substitute for lethal weapons and by trained law enforcement personnel only"*.^{xxii} Furthermore the Committee recommends *"establishing a high threshold for their use...expressly prohibiting their use on children and pregnant women...[and that such weapons]...should be inadmissible in the equipment of custodial staff in prisons or any other place of deprivation of liberty."*^{xxiii}

Recommendations:

- **States should prohibit the manufacture and trade of all direct contact electric shock weapons and body worn electric shock devices intended for law enforcement purposes. The use of all direct contact electric shock weapons and body worn electric shock devices by law enforcement officials should be prohibited and all existing stocks of such weapons and devices should be removed and destroyed.**
- **States should stringently control the manufacture and trade of projectile electric shock projectile weapons specifically intended for law enforcement purposes. The use of such weapons by law enforcement officials should be consistent with regional and international human rights standards, specifically the UN Basic**

Standards on the Use of Force and Firearms. Such devices should not be used in a prison or places of detention or against children or pregnant women. Furthermore the use of such weapons in the “drive stun” mode (i.e. as direct contact electric shock weapons) should be prohibited.

2.2. Kinetic Impact Weapons

2.2.1. Hand held kinetic impact weapons

Hand-held kinetic impact weapons (also known as striking weapons) include batons and other clubs. They are usually made of rubber, wood, plastic or metal and can be short or long (20cm – 2m), telescopic, collapsible or side-handled. They are one of the most common less lethal weapons with which law enforcement officers are equipped. Hand-held kinetic impact weapons are used by law enforcement officials to strike a subject to cause physical pain or to threaten physical pain in order to force them to comply or to deter them from an action. They can also be used defensively by law enforcement officials e.g. to protect from blows from assailants. Such weapons are widely employed by law enforcement officials notably in public order policing and also in places of detention. If employed in conformity with international human rights standards and use of force guidelines, certain types of such weapons can have a legitimate role in law enforcement. However human rights organisations have regularly documented their abuse to inflict unnecessary or excessive force through beating– which has included their employment in ill-treatment and torture - and in certain cases this has resulted in serious injury or death.

Ukraine:

Human Rights Watch have documented the unnecessary and excessive use of batons by Ukrainian riot police against peaceful protesters in Kiev on 30 November and 1 December 2013.^{xxiv} Police allegedly beat protesters who had already fallen on the ground, people who were trying to shield others and people trying to flee, leading to injuries including broken ribs, a broken wrist, bruising and cuts.^{xxv} Police also reportedly struck protesters on the head on multiple occasions, leading to several cases of concussion, cuts and other head injuries.^{xxvi}

2.2.1.1. Inherently abusive hand held kinetic impact weapons

Investigations by the Omega Research Foundation have discovered the ongoing manufacture and marketing to police and security forces of a range of inherently abusive and dangerous hand held kinetic impact weapons and devices including spiked batons and spiked shields; sjamboks and other strengthened whips; weighted gloves and weighted batons. They are designed to increase, not minimize, the amount of pain and injury inflicted on subjects, and certain types can cause skin tearing and puncture injuries. Their use would lead to severe physical pain, mental suffering and serious injury and they therefore clearly cannot legitimately be used for law enforcement purposes.

2.2.2. Launched kinetic impact projectiles

Launched kinetic impact projectiles incorporate a wide range of ammunition that can contain single or multiple projectiles propelled on firing and are intended to cause blunt or non-penetrative trauma. Often called “rubber bullets” or “plastic bullets”, projectiles can be made of rubber, plastic, wood or other materials. Ammunition can incorporate single or multiple projectiles including, for example, pellets, balls, blocks, cylinders, or fabric bags filled with pellets (bean bags). Kinetic impact projectiles are normally designed to be fired directly at a person, but should be fired to avoid sensitive areas of the body such as the head and chest.

If employed in conformity with international human rights law and standards, in particular regarding the use of force, certain types of such weapons can have a legitimate role in law enforcement. However, most launched projectiles are relatively inaccurate, particularly at longer ranges and consequently cannot be safely used without the risk of impacting a person on a vulnerable part of the body leading to severe injury.^{xxvii} Ammunition containing multiple projectiles is both inherently inaccurate and indiscriminate, and poses a high risk of hitting anyone in the vicinity of the person targeted, as well as hitting vulnerable areas of the body e.g. head. Furthermore, ammunition containing small pellets poses a significant risk of severe eye injury and blinding.

Although kinetic impact projectiles are designed to cause non-penetrating blunt trauma on impact; they can penetrate the body and also cause other serious injuries including lacerations, broken bones, concussion, head injuries or internal organ damage and their use has resulted in many deaths. The risk of serious injury or death is also significantly increased when kinetic impact projectiles are aimed at sensitive parts of the body or fired at close range. Moreover, human rights organizations have regularly documented their abuse – in custodial and non-custodial settings - to inflict unnecessary or excessive force, which has amounted in certain cases to torture or other ill-treatment, or has resulted in serious injury or death

Brazil: Misuse of kinetic impact projectiles for the torture of prisoners

Closed circuit footage of a 2013 incident at the Joinville Regional Prison in Santa Catarina State, Brazil, received widespread media attention.^{xxviii} The footage showed officials, reportedly from the Department of Prison Administration, forcing a group of male detainees stripped down to their underwear to line up in tightly-packed rows, crouch down with their hands on their heads and face the wall. Behind the prisoners, a group of approximately 12 armed officials fire kinetic impact projectiles (as well as tear gas) against the detainees; officers are also seen spraying what appears to be a chemical irritant directly into prisoner's eyes. This behaviour clearly constitutes torture and consequently violates the UN Convention Against Torture^{xxix} and also the Inter-American Convention to Prevent and Punish Torture^{xxx}.

France: Misuse of kinetic impact projectiles during Yellow Vest demonstrators

Reports from human rights monitors and media organisations indicate the inappropriate and dangerous use by French police of a range of kinetic impact projectiles (classed as 'intermediate weapons') against 'Yellow Vest' protests which began in November 2018. Of particular concern has been the misuse of 40x46mm rubber bullets fired from 'lanceur de balle de défense LBD' launchers (B+T GL-06 grenade launchers). According to the French Ministry of the Interior, 12,122 LBD rounds (as well as 1,428 GLI F4 instantaneous tear gas grenades) were fired and 4,942 hand held sting grenades thrown between the beginning of the Yellow Vest protests until 4 February 2019.^{xxxi} The Council of Europe Human Rights Commissioner highlighted her concern at the "*high level of use of these so-called intermediate weapons despite the fact that their deployment is restricted and they can cause serious injury*".^{xxxii} According to research by an independent journalist, cited by the CoE Human Rights Commissioner, the three types of "intermediate weapon" referred to above were involved in 253 of 428 reports made to the journalist by persons claiming to be victims of police violence – with LBDs accounting for 193 of these cases. The CoE Human Rights Commissioner further noted that the journalist's count highlighted 38 wounds to upper limbs including 5 lost hands, 52 wounds to lower limbs, 3 wounds to the genitals and 189 head wounds including 20 people who had lost an eye.^{xxxiii} The CoE Human Rights Commissioner specifically noted that "*many head wound victims attributed their injuries to intermediate*

weapons, particularly LBDs”, and that this was despite “instructions reiterated by the Director General of the French national police force on 16 January 2019, that the use of LBDs must be “targeted”, with users aiming “only at the torso or the lower or upper limbs””.^{xxxiv} A further concern relates to the nature of some of those targeted by such weapons. For example, French police have reportedly used kinetic impact projectiles against school children protesting outside suburban schools around Paris in December 2018. A teacher at Simone de Beauvoir high school stated that a student’s cheek had *“burst open like a split pomegranate”* when he was struck with a kinetic impact projectile while talking to friends and posing no threat.^{xxxv}

Recommendations:

- **States should prohibit the manufacture and trade of spiked kinetic impact devices for law enforcement purposes. The use of such devices by law enforcement and prison officials should be prohibited, and any existing devices should be removed and destroyed.**
- **Launched kinetic impact ammunition determined to be inherently inaccurate and indiscriminate (and specifically ammunition containing multiple small pellets) should be prohibited for use by law enforcement officials in crowd control or dispersal operations.**
- **States should stringently control the manufacture and trade of all other launched-kinetic impact weapons or hand-held kinetic impact weapons. The use of such weapons by law enforcement officials should be strictly controlled and consistent with regional and international human rights standards, specifically the UN Basic Principles on the Use of Force and Firearms.**

2.3. Riot control agents

Riot control agents (RCAs) are toxic chemicals designed to deter or disable an individual by producing temporary irritation of the eyes and upper respiratory tract. The most frequently used RCAs include CN or CS (commonly called tear gas) and OC and PAVA (commonly called pepper spray). RCAs are generally delivered through aerosol sprays, hand-thrown grenades, weapon launched projectiles/grenades, as well as via water cannon. Launched irritant projectiles are the most widely used less lethal munition globally. RCAs are used around the world for a range of law enforcement purposes, including crowd control and dispersal and also to facilitate the arrest and restraint of individuals. When used in accordance with manufacturers’ guidelines and in line with international human rights and use of force standards, they can provide an alternative to other applications of force more likely to result in injury or death. However they can easily be misused, including in prison cells and detention centres, and during large scale policing of public assemblies. When RCAs are used in excessive quantities or in confined spaces where people cannot escape, serious injury or death, particularly to vulnerable individuals can result, due to either the toxic properties of the chemical agents or through asphyxiation.

Spain/Ceuta: Migrants drown at sea following misuse of tear gas

On 6 February 2014, 200 migrants, refugees and asylum seekers from Sub-Saharan Africa attempted to swim to Ceuta, an autonomous city of Spain on the north coast of Africa, from its border with Morocco. Members of the Spanish Civil Guard opened fire with tear gas, large rubber bullets, and blanks to stop their advance resulting in or contributing to the death of at least 14 people. An additional woman was also reported dead after the incident, though her body has never been found.^{xxxvi} A Spanish Government representative at first denied the use of the less lethal weapons. But after footage emerged of the equipment in use, the Spanish

Minister of Interior admitted it was used, but claimed that it was deployed in such a way as to avoid hitting any of the people who were in the sea. However, survivors told Spanish NGOs that some of them were hit by rubber bullets when they were in the sea and that the tear gas fired by the Civil Guards made it difficult for them to see and breathe.^{xxxvii}

Turkey: wide-spread excessive and inappropriate RCA use against demonstrators

The excessive and inappropriate use of tear gas and pepper spray by the Turkish police and security forces during the anti-Government Gezi Park protests in 2013 was the subject of an urgent appeal sent by the UN Special Rapporteurs on torture; extra-judicial execution; human rights defenders; freedom of peaceful assembly and association, and 4 other UN Special Procedures mandate-holders.^{xxxviii} A particular concern documented by human rights organisations was the firing and throwing of RCA cartridges and grenades into confined spaces such as residential buildings where protesters had sought refuge and the repeated use of tear gas at the entrance of, or inside, makeshift health clinics where injured people were being treated.^{xxxix} According to reports, police repeatedly used hand-held pepper spray devices abusively against peaceful protesters, including by spraying pepper spray in protesters' eyes as a punishment when they were apprehended at the scene of demonstrations.^{xl} Reportedly, four people including one police officer died after being exposed to large amounts of tear gas.^{xli}

2.3.1. "Wide area" means of RCA delivery

The Omega Research Foundation and the University of Bradford have documented the development and promotion of a growing range of systems capable of delivering significant amounts of RCA over wide areas or extended distances, some of which have the potential to cause substantial injuries to those targeted and to bystanders. These include certain large-capacity spraying devices, automatic grenade launchers, multi-barrel projectile launchers and large calibre RCA projectiles.^{xlii} A contemporary trend has been the related development of "remote control" RCA means of delivery including unmanned ground vehicles or unmanned aerial vehicles (drones) capable of carrying RCA-spraying devices or RCA projectile launchers.^{xliii} The use of "wide area" and "remote control" RCA means of delivery raises serious questions as to whether and under what circumstances such use can be in line with international human rights law and standards.

Recommendations

- **States should stringently control the manufacture and trade of all riot control agents and delivery mechanisms in their territories in accordance with the Chemical Weapons Convention. In addition all States should ensure that RCAs and related delivery devices are not transferred to any end users who will employ them for torture, ill-treatment or other human rights violations. States should ensure that all use of RCAs and associated delivery mechanisms by law enforcement and prison officers is in accordance with regional and international human rights standards. RCA grenades, launched cartridges and any mass dissemination of RCAs (e.g. via large backpack or riot sprayers) should be prohibited in confined spaces.**
- **States should determine which if any "wide-area" and "remote control" RCA delivery mechanisms may be justifiable for use in extreme large-scale law enforcement situations. The use of any such permissible devices must be in strict conformity with human rights standards. Any "wide-area" and "remote control" RCA delivery mechanisms deemed to be inappropriate for law enforcement should be considered to be chemical weapons; their production, possession, trade**

and use should be prohibited. Such prohibited devices should as a minimum include RCA artillery shells, aerial bombs, large-calibre mortar shells, and cluster munitions.

3. Overview of changing nature of less lethal weapons manufacture and trade

The manufacture, production and transfer of less lethal weapons has traditionally been dominated by companies in a small number of countries with well-established production of military and police munitions, largely concentrated in Europe and North America, particularly the USA, UK, France and Germany. This can partly be explained by a large domestic market and aggressive export policies (USA); ex-colonial administrations, trading and training links (UK and France); or advanced manufacturing and production (Germany). Whilst many other countries have had some small-scale production, often it was for domestic use, with only sporadic, limited exports.

However, over the last 10 years use of less lethal weapons and ammunition has increased dramatically both in the numbers used and also in the geographic scope of their use. Likewise less lethal weapons and ammunition production has also markedly increased amongst non-traditional manufacturing States including Brazil, China, Turkey and certain Middle East States, with a number of new companies becoming increasingly active in the market. Some illustrative examples include:

United Arab Emirates (UAE)

In 2009 the German company NEWCO Safety Technologies (NST) partnered with two UAE companies MP3 International and Caracal Light Ammunition (part of the Tawazun Group) to establish Caracal Pyrotechnics, and begin the local production in the UAE of a range of pyrotechnics and less lethal munitions including stun grenades, and a range of 40mm cartridge projectiles including barricade penetrator, flash-bang, coloured smoke, CS, OC, rubber baton and multi-rubber ball.^{xliv} The UAE government owned company, Caracal Pyrotechnics, subsequently changed its name to Advanced Pyrotechnics LLC (APT) and local production began in 2018 on a new production line, in a brand new factory.^{xliv} APT was set up with “the objective to manufacture and sell pyrotechnic and non-lethal ammunition to the regional and global markets”,^{xlvi} and the company has promoted a wide range of products at international exhibitions including Milipol 2013, Eurosatory 2015 (both in France) EDEX 2018 (Egypt) and IDEX 2019 (UAE) but to date it is unclear if any sales, other than to UAE police and armed forces have been achieved.^{xlvi}

Oman

The Oman government-owned Oman Munition Production Company (OMPC) was established in 2013, originally to produce small arms and light weapons ammunition. A contract was subsequently announced with French company Manurhin, to supply machinery and fit out of a new factory.^{xlvi} Construction of the factory began in 2015 and trial production began in 2016,^{xlvi} with the factory fully opened in 2018.¹

At the Defence Services Asia (DSA) 2018 international exhibition in Malaysia, OMPC promoted a range of less lethal weapons, including tear gas hand grenades, low velocity 40 mm caliber grenades, and 37/38 mm tear smoke grenades.^{li}

At the IDEX 2019 exhibition in February 2019 in the UAE, OMPC physically exhibited further less lethal munitions including the CSB-1B Flash Bang grenade, CS3P 37/38mm CS Tear Gas Cartridge Long Range and the 40mm Air Bursting cartridge. In the OMPC product catalogue distributed at the exhibition the company promoted less lethal munitions including CS tear gas hand grenades, 37/38mm CS smoke cartridges and 3-part multi-CS grenade. The

munitions, images, code numbers and specifications in the OMPC catalogue appear almost identical to those of a number of South Korean companies who produce less lethal munitions. The products are marked in the OMPC catalogue “Production through Partner”,^{lii} but the nature of the production and whether it is licensed production, local assembly or importation is not presently known.

Egypt

It has long been known that Egypt possessed the capacity to produce some less lethal munitions and ammunition, but until recently little detail was publicly available regarding their types and specifications, or use. Media reporting and social media images of less lethal munitions used in Egypt during protests over the past 5 years have indicated mainly US origin munitions. However, recently, a number of Egyptian companies have promoted their products either nationally or internationally indicating production of new types of less lethal munitions. Abikir Engineering Industries Company (also known as Factory 10, Abu Kir and Aboukir) currently manufactures a range of shotgun ammunition including “Anti Crime rubber Buckshot” which incorporates 15 rubber balls, in 12 or 16-gauge, “produced specially for law enforcement purposes”. The company’s factory has been equipped with specialist ammunition loading machinery from BSN of Italy.^{liii}

Kaha Company for Chemical Industries (also known as Factory 270) was known to produce a riot control rifle grenade amongst its military munitions, but no detail of other less lethal munitions was previously known.^{liv} Recently the company promoted new products at two Middle East international arms exhibitions, EDEX 2018 in Egypt and IDEX 2019 in the UAE. Products promoted included a wide range of less lethal munitions such as the ‘F1 270/3 Riot CS’ grenade, ‘G-270 Thunder Flash Stun Grenade’, ‘C-279 Concussion Hand Grenade’, 66mm and 76mm CS tear gas grenades, 38mm single, triple and quadruple CS tear gas projectile cartridges and a ‘Rubber Body CS Tear Gas grenade’.^{lv}

Brazil

Condor Tecnologias Não-Letais /Non Lethal Technologies has grown over the last 10 years to become a major manufacturer and exporter of less lethal munitions and devices. It manufactures a very wide range of less lethal devices including the Spark projectile electric shock weapon, less-lethal launchers, stun grenades, kinetic impact projectile ammunition and chemical irritant grenades, projectiles and sprayers.^{lvi} Condor’s reported exports rose from ‘up to USD 1 Million’ in 2009 to ‘USD 10-50 Million’ in 2015.^{lvii} Recent trade data indicates a conservative figure for exports of up to USD 20 Million to countries including Algeria, Saudi Arabia, Oman, Pakistan, Indonesia, Bangladesh and Kazakhstan.^{lviii}

China

China has become one of the largest developers and suppliers of less lethal weapons and munitions, police ‘riot control vehicles’ including water cannon and acoustic, optical and directed energy weapons. Data gathered by the Omega Research Foundation indicates that the number of Chinese companies involved in the development, manufacture and trade of less lethal weapons and equipment has risen from 28 in 2003, to over 130 during 2014.^{lix} Chinese manufacturers have also increased their marketing activities and presence at international policing and security exhibitions in the past 5 years, now regularly attending Milipol and Eurosatory in France, IDEX in the UAE, LAAD in Brazil, AAD in South Africa and DSA in Malaysia.^{lx} Chinese production is dominated by State owned companies such as Norinco, China Jing’an Equipment Import / Export Corporation and China South Industries Group (CSG), often with multiple subsidiaries producing a wide range of traditional less lethal munitions as well as optical, acoustic and directed energy systems. In addition, in the past 5

years there has been a growth in private Chinese companies producing and trading police equipment. Unfortunately to date there has been very little technical information made publicly available concerning Chinese less lethal weapons and associated ammunition.

4. Conclusions

4.1. Regulating the development and use of less lethal weapons

The UN Basic Principles on the Use of Force and Firearms by Law Enforcement Officials, adopted in 1990, encourages States to develop a range of less lethal weapons for law enforcement officials in order to enable a graduated response in the use of force and to offer less injurious alternatives to firearms and other existing weapons and equipment. Unfortunately, in the nearly 30 years since its adoption, its broadly worded recommendations regarding less lethal weapons and equipment have not been subsequently clarified and operationalised by more detailed internationally accepted guidelines on the development and use of such weapons. Furthermore, the UN Basic Principles have not been reviewed and revised since its adoption in order to reflect the significant development, proliferation and (mis)use of both old and new types of less lethal weapons or the broader challenges faced by, and consequent changes in, law enforcement operational practice.

A number of UN human rights monitors and non-governmental human rights organisations have sought to highlight the potential dangers of the disconnect between international standards on the use of force and the realities of less lethal weapons development and use today by law enforcement officials. The mandate of a UN Special Rapporteur on the enjoyment of the rights to freedom of peaceful assembly and of association was created in 2011 and has since become a focal point for consideration of these fundamental rights. In an April 2014 report to the UN Human Rights Council, the UN Special Rapporteur on Extrajudicial, Summary or Arbitrary Executions discussed the UN Basic Principles and developments in less lethal weapons technology since it was adopted and highlighted the need for a *“more nuanced and analytical approach.”*^{lxi} The UN Special Rapporteur stated that there was *“a need for independent guidelines on the development and use of these weapon technologies, over and above standards that may be set by individual police forces or the manufacturers”* and that *“training of law enforcement officials in the use of new weapons should be relevant, regular and integrate a human rights law approach.”*. Furthermore he stated that *“it may be necessary to place restraints on the international trade and proliferation of these weapons.”*^{lxii}

In 2014 the UN Human Rights Council (HRC) adopted Resolution 25/38, in which it requested that the Special Rapporteur on the enjoyment of the rights to freedom of peaceful assembly and of association and the Special Rapporteur on extrajudicial, summary or arbitrary executions prepare a compilation of practical recommendations for the proper management of assemblies.^{lxiii} A two year process of regional consultations and expert reviews culminated in the report which was presented to the HRC in January 2016.^{lxiv}

Further guidance to States on these issues has also been provided by the Office of the United Nations High Commissioner for Human Rights (OHCHR) in its 2017 ‘Resource book on the use of force and firearms in law enforcement’^{lxv}. OHCHR is currently completing a subsequent updated training manual for law enforcement personnel and OHCHR will also shortly publish further specific guidelines for the use of less lethal weapons.^{lxvi}

The authors support the findings of the UN Special Rapporteurs and the work of OHCHR in this area and consequently recommend that:

- **Before the selection, procurement or deployment of equipment, including less-lethal weapons, by law enforcement agencies, States should subject such equipment to a transparent and independent assessment to determine compliance with international human rights law and standards. In particular, equipment should be assessed for accuracy, consistency, reliability and its ability to minimize physical and psychological harm. Equipment should be procured only where there is sufficient capacity to train officers effectively on its proper use;**
- **Specific regulations and detailed operational guidance should be developed and publicly disseminated on the use of tactical options in assemblies, including weapons, which, by design, tend to be indiscriminate, such as tear gas and water cannon. Training must be human rights based and encompass the lawful and appropriate use of less-lethal equipment in crowds. Law enforcement officials should also be properly trained on protective equipment and clearly instructed that such equipment should be used exclusively as defensive tools.**
- **States should monitor the effectiveness of the training in the prevention of abuse or misuse of weapons and tactics; States should ensure that their laws governing the use of force by law enforcement officials are fully compliant with international human rights laws and policing standards.**
- **States should declare publicly which less lethal weapons and devices are permitted for use, publish the testing results of each type of equipment, as well as policies, procedures and guidance for their lawful and appropriate use. The use of non-standard or personal weapons should be prohibited.**
- **States should collect and disseminate data on use of force in a timely and regular manner. Data should include weapons and devices used and any injuries or deaths caused, and be of sufficient detail to allow a meaningful analysis of compliance with laws and standards.**
- **The UN Office of the High Commissioner for Human Rights together with the UN Office on Drugs and Crime, establish an international, independent panel of experts to examine the questions of use of force and less lethal weapons, with a view to establishing international standards on the design, development, testing and use of such weapons, and in furtherance of reducing the need for law enforcement personnel to use any kind of force at all.**

4.2 Regulating the trade in less lethal weapons

The increasing number and diverse locations of companies manufacturing, promoting and trading in less lethal weapons and equipment poses a challenge for trade control regimes to ensure that such equipment is not transferred to end users who may use it in violation of international human rights law and policing standards including for torture or other ill-treatment. Traditionally less lethal weapons and ammunition manufacture has predominately taken place in countries with established arms and dual-use export control regimes, including EU member states and the USA. However even in these States it must be recognised that only certain, but by no means most, less lethal weapons and related ammunition are effectively regulated. For example the majority of traditional producers of less lethal weapons are in countries that are Member States of the Wassenaar Arrangement, a grouping of 42 countries that seeks to regulate trade and prevent proliferation of certain dual use goods and technologies. Unfortunately the WA is a voluntary regime and only covers a limited range of less lethal weapons within its control lists.^{lxvii} For example whilst some explosive grenades

(arguably including stun grenades) and some common types of riot control agents are included, the WA lists do not cover certain widely employed RCAs such as OC, pepper sprays or synthetic versions such as PAVA. Similarly, neither electric shock weapons nor many newer types of less lethal system such as optical dazzlers, acoustic devices or directed energy weapons are currently covered by the WA lists.^{lxviii}

Unfortunately the regulatory situation outside of the WA Member States is even worse. Many States where new production of less lethal munitions and equipment is being set up have weak or non-existent exports controls on such equipment, and export goods with little or no transparency at all. This almost complete lack of control and transparency on the trade and transfer of less lethal weapons and devices means that States with poor human rights records, including those where such equipment may be misused for torture or other ill-treatment, can continue to obtain such equipment and continue to misuse it.

However, there are indications that a growing number of States recognise their international obligations to effectively regulate the trade of certain less lethal weapons and associated law enforcement equipment, especially if such equipment can be readily (mis)used for torture and other ill-treatment. For example at the regional level, in May 2005 the EU adopted Council Regulation (EC) No. 1236/2005 concerning trade in goods which could be used for capital punishment, torture or other cruel, inhuman or degrading treatment or punishment. The EU ‘Torture Regulation’, which came into force in May 2006, filled a major gap in human-rights-based export controls, introducing unprecedented trade controls that are binding on all EU Member States on a range of security equipment – including certain electric shock weapons, RCAs and kinetic impact weapons. It has since been progressively strengthened with the latest set of amendments extending coverage to bans on promotion, brokering and transit of torture and death penalty goods across the EU, among other provisions.^{lxix}

At the international level a major advance occurred on 18 September 2017 with the launch of Alliance for Torture Free Trade. To date, over 60 states from all regions of the world have signed its Political Declaration to act together “*to further prevent, restrict and end trade in goods intended for use in torture or capital punishment*”; and to adopt legislation and efficient enforcement systems for the restriction and elimination of trade in such goods.^{lxx} In September 2018 the Global Alliance Member States committed themselves to working to establish a UN process to explore “*the feasibility and possible scope of a range of options, including a legally binding instrument, to establish common international standards for the import, export and transfer of goods used for capital punishment, torture or other cruel, inhuman or degrading treatment or punishment*”^{lxxi}

States should establish effective national measures to regulate the trade in less lethal weapons and associated law enforcement equipment. Such measures should:

- **Prohibit the export, import, transit, or trans-shipment of any less lethal weapons and equipment that has no practical use in law enforcement other than for the purpose of torture and other cruel, inhuman or degrading treatment or punishment; or where its use in practice has revealed a substantial risk of unwarranted injury.**
- **Strictly regulate the export, import, transit, or trans-shipment to law enforcement agencies of less lethal weapons and equipment that can be used legitimately in a manner consistent with international human rights standards for law enforcement, but nevertheless could also be misused to conduct or**

facilitate unlawful killings, torture or other cruel, inhuman or degrading treatment or punishment, or other human rights violations or abuses.

- Establish lists of prohibited and controlled less lethal weapons and equipment which must be regularly reviewed and updated to take account of new data and technological developments.
- Establish a comprehensive national trade control system to vet prospective transfers of controlled equipment. Decisions to grant export authorisations for controlled law enforcement equipment should be made on a case-by-case basis by the competent authority in the State where the applicant is based. If there is a substantial risk that the less lethal weapons and equipment would be used for prohibited purposes by the recipient law-enforcement authority, or be diverted to another unauthorised end-user, States should not authorise the transfer.
- To evaluate licence applications, the authority should take into account relevant information derived from UN and regional human rights monitors and respected NGOs, relating to the activities of the proposed law enforcement end users, in particular their compliance with human rights law and standards and their reported use, misuse and regulation of law enforcement equipment. States must regularly review export licences; in the event of the emergence of any substantial risk of misuse, States must immediately suspend licences pending further review.
- Inform their legislature and share information with other States about measures taken to regulate the trade in less lethal weapons and law enforcement equipment. They should publish an annual report in a manner containing meaningful information on the volume, value, nature of such less lethal weapons and equipment, and destination of their trade in this area, so as to enable appropriate oversight by elected representatives and independent bodies. States should notify their legislature of all decisions approving or rejecting a request for an export authorisation and of any decisions rescinding an export authorisation that has already been granted, along with the reasons for each decision.

Establishing effective national measures to regulate the trade in less lethal weapons and other law enforcement equipment, though vital, will not be sufficient to ensure that law enforcement agencies engaged in human rights violations including torture and other ill-treatment do not continue to receive less lethal weapons and law enforcement equipment from unscrupulous exporters in other countries. To combat such activities, inter-governmental organizations should establish regional, and eventually international, standards and instruments regulating trade in this area. All States should join the Alliance for Torture Free Trade, endorse its Political Declaration and work to promote a UN process to establish international controls in this area.

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ⁱⁱ United Nations, Basic Principles on the Use of Force and Firearms by Law Enforcement Officials, adopted by the Eighth UN Congress on the Prevention of Crime and the Treatment of Offenders in Havana, Cuba (27 August - 7 September 1990).

ⁱⁱⁱ UN Basic Principles (1990) op.cit. Principle 2.

^{iv} UN Basic Principles (1990) op.cit. Principle 3.

^v See for example Omega Research Foundation, Manufacture, trade and use of “tools of torture” in the Council of Europe, June 2018; Omega Research Foundation, Tools of torture and repression in South America: use, manufacture and trade, June 2016; Amnesty International and the Omega Research Foundation, Tackling the trade in tools of torture and execution technologies, ACT 30/6998/2017, September 2017.

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^{viii} Raphaely, C. Leeuwkop Max C: Inmates claim abuse and torture, turn to courts for relief, Daily Maverick, 22 August 2014, <http://www.dailymaverick.co.za/article/2014-08-22-leeuwkop-max-c-prison-inmates-claimabuse-and-torture-turn-to-courts-for-relief/#>. VroFE1LeLWO (accessed 4 March 2019).

^{ix} Amnesty International, Hotspot Italy, How EU’s flagship approach leads to violations of refugee and migrant rights, EUR 30/5004/2016, October 2016, p. 18, <https://www.amnesty.org/en/documents/eur30/5004/2016/en/>

^x European Committee for the Prevention of Torture and Inhuman or Degrading Treatment or Punishment (CPT), CPT Standards, “Substantive” sections of the CPT’s General Reports, CPT/Inf/E (2002) 1 - Rev. 2015, p. 111; European Court of Human Rights, Case of Anzhelo Georgiev and Others v. Bulgaria, judgment of 30 September 2014, paragraph 76.

^{xi} See for example: CPT, Report to the Lithuanian Government on the visit to Lithuania carried out by the CPT from 27 November to 4 December 2012, 4 June 2014.

^{xii} On 31 July 1996, 16 railway commuters died and 80 others were seriously injured during a mass stampede of people at Tembisa Station in Johannesburg, South Africa. A government appointed committee investigated the tragedy and in August 1996 issued a report which stated that: “*The direct and most immediate cause of the disaster at Tembisa Station on 31 July 1996 is the improper and persistent prodding and shocking of commuters with electric batons by private security guards... in a cruel and inhumane manner... the private security guards used the electric shock batons for crowd control purposes when in fact the batons are patently inappropriate for that purpose*” Amnesty International, *The Terror Trade Times, Focus on Africa*, October 1999, ACT 31/02/99.

^{xiii} Report of the Committee against Torture, UN Doc. A/55/44 (2000), para. 180(c).

^{xiv} CPT, 20th General Report, CPT/Inf (2010)28, 26 October 2010, para. 74.

^{xv} Omega Research Foundation/Institute for Security Studies, “Compliance through pain: Electric shock equipment in South African prisons”, policy brief 86, June 2016.

^{xvi} See Omega Research Foundation, “Use of body-worn electric shock in US State prisons”, <https://omegaresearchfoundation.org/case-studies/use-body-worn-electric-shock-us-state-prisons>

^{xvii} Pilkington, E. Human rights body calls on US school to ban electric shocks on children, The Guardian, 18 December 2018, <https://www.theguardian.com/us-news/2018/dec/18/judge-rotenberg-center-electric-shocks-ban-inter-american-commission-human-rights> (accessed 6 March 2019).

^{xviii} See also: Fortin, J. To Control Inmates, Some Counties Try the Threat of Electric Shock, New York Times, 12 March 2018, <https://www.nytimes.com/2018/03/12/us/electric-shock-inmates.html> (accessed 4 March 2019);

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^{xix} https://www.washingtonpost.com/local/public-safety/former-md-judge-sentenced-for-ordering-electricalshock-for-defendant/2016/03/31/56e31728-f752-11e5-a3ce-f06b5ba21f33_story.html accessed 2 may 2017.

^{xx} ABC News, Video Shows Maryland Judge Ordering Deputy to Stun Defendant, 4 April 2016, <https://abcnews.go.com/US/video-shows-maryland-judge-ordering-deputy-stun-defendant/story?id=38129308> (accessed 4 March 2019).

^{xxi} ABC News, (4 April 2016) op.cit.

^{xxii} UN Committee against Torture, Concluding observations on the fifth periodic report of the United Kingdom of Great Britain and Northern Ireland, UN doc. CAT/C/GBR/CO/5, 24 June 2013, para. 26.

^{xxiii} Ibid.

^{xxiv} Human Rights Watch, “Ukraine: Excessive Force Against Protesters,” 3 December 2013, available at <https://www.hrw.org/news/2013/12/03/ukraine-excessive-force-against-protesters> (accessed 30 July 2018).

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^{xxvi} Ibid.

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^{xxx} Organisation of American States, Inter-American Convention to Prevent and Punish Torture, Adopted at Cartagena de Indias, Colombia, on 9 December 1985, fifteenth regular session of the OAS General Assembly.

^{xxxi} Council of Europe Commissioner for Human Rights, Memorandum on maintaining public order and freedom of assembly in the context of the "yellow vest" movement in France Strasbourg, CommDH(2019)8, 26 February 2019, <https://rm.coe.int/commdh-2019-8-memorandum-france-en/1680932f57> (accessed 4 March 2019), paragraphs 15 & 16.

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