

LESS LETHAL SYSTEMS¹ AND THE APPROPRIATE USE OF FORCE²

Neil Corney

Omega Research Foundation, Bridge 5 Mill, 22A Beswick Street, Ancoats,
Manchester M4 7HR, UK

Introduction

The United Nations Basic Principles on the Use of Force and Firearms by Law Enforcement Officials (henceforth Basic Principles)³ encourage States to adopt less lethal weapons in order to enable a graduated response in the use of force and to offer a less injurious alternative to equipment currently in use.⁴

Whilst it is a testament to their centrality in policing that the Basic Principles are so often referred to, they have not kept pace with current policing practices, technologies or techniques. In the 20 years since the Basic Principles were adopted, less lethal technology has developed considerably. There has also been an increase in the number of companies manufacturing and trading such equipment and in their geographical spread into countries with weak or non-existent controls over product development, manufacturing quality or trade and export.

Not all the developments in the field have been positive. Far from “restraining the application of means capable of causing death or injury to persons”,⁵ certain items of equipment are inherently more injurious than existing alternatives and increase, not decrease, the risk of injury. For example, it is hard to imagine a legitimate use for ‘spiked batons’, manufactured and traded by a number of Chinese companies. Similarly, ‘explosive’ tear gas grenades, of Chinese origin, which led to a number of deaths and serious blast injuries when used against protestors by Thai police in 2008.

Other items of law enforcement equipment may, in general, offer a reduced force option, but can cause death or serious injury if used in inappropriate or illegitimate ways. Recent examples have occurred in both Egypt and Bahrain where a number of demonstrators were killed after being targeted at close range with tear gas grenades.

¹ We acknowledge here, but make no comment on, the controversy over usage of terms in this area of study.

² Omega Research Foundation gratefully acknowledges the part funding received for this research from the European Commission under the European Instrument for Democracy and Human Rights.

³ ‘Basic Principles on the Use of Force and Firearms by Law Enforcement Officials’
<http://www2.ohchr.org/english/law/firearms.htm>

⁴ Article 2 of the Basic Principles states that: “Governments and law enforcement agencies should develop a range of means as broad as possible and equip law enforcement officials with various types of weapons and ammunition... These should include the development of 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”

⁵ Article 2 of the Basic Principles, see above

Such developments are occurring at a time when the dominant paradigm is the ‘market based approach’, or self-regulation. This approach states that there is little need for regulation: companies are free to produce and promote any kind of less lethal technology, and market mechanisms will separate out the technologies that are safe and effective from those that are not. Technologies that are ineffective, pose excessive risks or are unnecessarily injurious will thus be weeded out with no need for State intervention.

However, an area such as policing technology cannot be left wholly to the market. Law enforcement agencies would not put their officers at risk by issuing them with untested lethal weapons or body armour. When it comes to less lethal technologies the cost of filtering out unacceptable technologies is not simply monetary, but could involve unacceptable human cost.

Clear and appropriate international standards on the selection and use of less lethal equipment are needed more than ever. This paper, based on preliminary findings of an Omega Research Foundation (Omega) project, sets out a standards based approach, encompassing the Basic Principles and other legal standards, as well as standards for the design, manufacture and testing of less lethal technologies and associated training courses.

Section 1 reviews relevant international standards and makes the case for the need to modernise and operationalize the Basic Principles for use in today’s policing contexts.

Section 2 describes a methodology - being developed by Omega for use by law enforcement agencies, prison authorities and detention monitoring bodies - to assess the compatibility of less lethal equipment with the Basic Principles, and to highlight the human rights risks associated with the technical aspects and modes of use of the equipment.

Section 3 begins to apply this methodology to policing equipment currently in use or on the market, and proposes that some should be deemed incompatible with international standards and thus unsuitable for use.

Most less lethal equipment is not incompatible *per se* with such international standards, but instead raises issues about the processes by which it is selected, tested, and deployed. The final section presents initial observations on how law enforcement agencies can select equipment, set guidelines for its use, enhance monitoring and introduce accountability.

We propose that efforts at an international level are required to develop an ‘additional protocol’ to the Basic Principles in order to update them in light of recent and prospective technological developments. A mechanism of support and advice to State parties to enable appropriate less lethal systems to be selected and fielded should also be developed.

International standards

If the potential good of less lethal weapons is to be realised, then best practice in terms of selection, testing, piloting, evaluating as well as guidelines for use and accountability are crucial. General provision 3 of the Basic Principles recognises this and states that such weapons should be “*carefully evaluated* in order to minimize the risk of endangering uninvolved persons, and the use... *carefully controlled*” (emphasis added). However, this provision is often overlooked and those agencies wishing to fully implement it have little or no practical guidance on how it should be operationalized.

Similarly, whilst the Basic Principles set out ‘special provisions’ for the use of conventional firearms, they are less clear about how less lethal weapons should be used. It is not clear how less lethal weapons – from Taser to ‘rubber bullets’ - fit into its provisions, nor which, if any, of today’s technologies breach the spirit of its provisions. Those wishing to apply the Basic Principles to technologies in use today have a daunting task.

Other international obligations on States also impact on the operational use of less lethal systems. The UN Special Rapporteur on Torture⁶ has examined the use of, and trade in, law enforcement equipment, and has called upon States to:

“designate and prohibit the manufacture, transfer and use of certain forms of equipment “specifically designed for” or “which has no or virtually no, practical use other than for the purpose of” torture, or whose use is inherently cruel, inhuman or degrading” and;

“to suspend the manufacture, transfer and use of equipment whose medical effects are not fully known or whose use in practice has revealed a substantial risk of abuse or unwarranted injury.”

The Special Rapporteur’s calls have been re-iterated in resolutions adopted annually by the Third Committee of the UN General Assembly.⁷

⁶ UN Economic and Social Council Commission on Human Rights (2004) *Civil and political rights, including the questions of torture and detention. Torture and other cruel, inhuman and degrading treatment: Report of the Special Rapporteur on Torture, Theo van Boven* Sixty-first session 15 December 2004 E/CN.4/2005/62

⁷ United nations General Assembly 65th Session, Third Committee, 2 November 2010,

Two important means for implementing the above calls are enshrined in European and US legislation controlling the trade in certain law enforcement technologies. EC Regulation 1236/2005⁸, the so-called ‘torture regulation’, bans the import or export from the EU of certain items (eg. electric shock belts) and controls trade in other items (eg. PAVA). The US Bureau of Industry and Security implemented strengthened trade controls on ‘crime control items’ in July 2010. These ban the export from the US of a range of items (eg. thumbcuffs and spiked batons) and control the trade in a wide range of technologies, including restraints, ‘striking weapons’ and electrical devices.⁹ Thus trade controls can play an important role in controlling the proliferation, and potentially the use, of technologies which may be incompatible with the Basic Principles and other international standards.

Methodology

In order to translate such international obligations into practical policing action the Omega Research Foundation, in conjunction with police trainers, academics and human rights legal experts, is developing a framework within which to utilise medical, technical and legal expertise, as well as to analyse existing patterns of use and mis-use of less lethal systems. It integrates these into a human rights based approach, which highlights the *risks* associated with less lethal systems.

The framework has three components: the first assesses the extent to which the purpose of the equipment is compatible with international standards, including General Provision 2 of the Basic Principles and Article 33 of the Standard Minimum Rules for the Treatment of Prisoners, and a wider range of international human rights and humanitarian law standards.¹⁰ This flags up fundamental concerns about the objective that the equipment is intended or designed to achieve.

The second looks at equipment with a legitimate law enforcement function and assesses the risk that such equipment could facilitate excessive use of force. Many factors need to be examined including the facility to apply differentiated force and the reliability and predictability of the equipment. We examine related issues including: the nature and level of training required; the potential lethality of the weapon; the risk of arbitrary or unnecessary infliction of pain, injury and psychological impacts; and the ability to target the equipment accurately and apply discriminate force.

⁸ COUNCIL REGULATION (EC) No 1236/2005 of 27 June 2005 concerning trade in certain goods which could be used for capital punishment, torture or other cruel, inhuman or degrading treatment or punishment http://eur-lex.europa.eu/LexUriServ/site/en/oj/2005/l_200/l_20020050730en00010019.pdf

⁹ Revisions to the Commerce Control List To Update and Clarify Crime Control License Requirements RIN 0694–AE42, http://www.bis.doc.gov/news/2010/fr_07152010.pdf

¹⁰ for example the Convention Against Torture and the Code of Conduct for Law Enforcement Officials.

The third component assesses the extent to which the technical characteristics of equipment risk facilitating torture or cruel, inhuman, degrading treatment or punishment. Included are factors such as ease of use, portability and whether the equipment leaves marks or other forensic or tracing evidence.

A uniform assessment will be developed applicable to the full range of less lethal technologies in a wide variety of use situations. In particular, we examine the risks associated with the use of equipment in seven “flashpoints” that have been identified by previous research as times where use of force and risk of misuse / abuse is particularly likely to occur, from an initial encounter to final release or imprisonment:

- 1) Incident – planned or situational, i.e. crime scene / public order / a policing action
- 2) Arrest / Restraint of target
- 3) Transport to police post (which could take a long time / occur without scrutiny)
- 4) Detention
- 5) Interrogation
- 6) Judicial / Legal hearing / process
- 7) Detention – longer term or on remand

It can be seen that at each “flashpoint” a variety of law enforcement officials could be involved, including: military, para-military, police, security, judicial and prison officials as well as private providers. Often these actors operate under different systems, with separate research and support organisations, sometimes producing conflicting results or advice. We aim to view all these actors, as far as possible, in the same way, resulting in a system applicable to all.

It is also apparent that a wide variety of existing, near market, or ‘in development’, less lethal technologies could be, or are in practice, deployed. Analysis of reports from law enforcement agencies, human rights NGOs, media and detention monitors highlights that the full range of less lethal systems are used across the seven “flashpoints”, with resulting positive or negative outcomes.

The methodology is intended to quantify the range of risks associated with different technologies and their modalities of use. This includes, for example, the risk of the situation, the action, the technology and the outcomes for both user and target. Any point along the spectrum of use should be able to be quantified and steps suggested to manage, reduce or avoid potential risks, for example by seeking alternative technologies, developing more robust use guidelines, enhanced training, restricting the use of a technology etc.

Initial results of applying the methodology

When the methodology was applied to certain items of law enforcement equipment, a high level of risk in certain areas was revealed. In some cases the purpose of the equipment, or the risk that it posed, led us to conclude that it was incompatible with international standards. Such problematic technologies were found in all categories of equipment, from electro-shock to chemical irritants, indicating that all classes of less lethal systems need to be carefully assessed and evaluated:

Body-worn electric-shock devices:

Shock-belts, sleeves and stun-cuffs, encircle various parts of the subject's body (often the waist, but also legs, arms or wrists) and deliver an electric shock on activation by a remote control device. They do not act as a restraint *per se* even when the shock is activated, and potentially increase, not decrease, the amount of force used. This suggests their use is incompatible with the Basic Principles.

Furthermore, the activation of the device is dependent on the subjectivity of the controller, and can leave the wearer in a state of near-constant anxiety of activation and pain - which could amount to cruel or unusual punishment and be incompatible with the Convention Against Torture.

Stun batons / stun guns:

The efficacy and practical utility of such devices is questionable. As close contact devices, ineffective at countering long range threats, they present no legitimate tactical advantage over traditional batons. They are designed to deter by causing pain rather than incapacitating a target. The ease with which they can be used to inflict unnecessary pain presents a high risk of misuse potentially incompatible with international standards.

Analysis of law enforcement events where such items have been used highlights the risk that their use can amount to arbitrary or excessive use of force - as in the case of the stun batons used in the February 2010 protests in Yemen,¹¹ or present secondary risks. For example, an enquiry into the Tembisa station incident in South Africa, where 16 people were killed and 65 injured in a stampede that followed the use of stun batons, recommended that "*the use of electric batons be banned*" in South Africa¹².

¹¹ 'Yemen: security forces' violent suppression of protests condemned', 14 February 2011. Amnesty International

www.amnesty.org.uk/news_details.asp?NewsID=19251

¹² 'Joint Commission of enquiry into the background, circumstances and actions resulting in the death and injury of rail commuters at Tembisa Station on 31 July 1996', South African Government 1996.

Fixed installation chemical irritant sprayers:

Whilst different chemical irritants pose varying risks, firing tear gas in a confined space presents an elevated risk to those exposed receiving a hazardous overdose through being unable to escape its effects. Systems designed for permanent installation in prisons/correctional centres risk the use of force being indiscriminate, affecting inmates posing no physical threat to persons or property, thus breaching General provision 3 of the Basic Principles which states that weapons should “*minimize the risk of endangering uninvolved persons*”.

Pyrotechnic / long range tear gas grenades

Initial analysis of long range grenades reveal that they are inherently inaccurate and pose a high risk of impacting individuals, especially to vulnerable areas of the body such as the head. Pyrotechnic charges which burst the grenade and discharge the irritant pose additional risks if not adequately designed, or from direct injuries such as burns.

Spiked batons and other impact devices

Spiked batons, an unlikely addition to the policing arsenal, have been traded by Asian companies in the last 5 years. As an alternative to a traditional baton, this is a clear example of a technology which is incompatible with international standards. It is difficult to envisage any lawful or appropriate use for such an item. Other impact devices such as lead filled leather ‘slappers’, ‘billys’ or ‘saps’ present a high risk of arbitrary or punitive force with no legitimate tactical advantage over traditional batons.

Multi-projectile impact munitions

Multi-projectile devices are inherently inaccurate and pose a high risk of eye or skin penetration with risk of serious, permanent injury. There is a high risk of uninvolved bystanders being hit. As such their use is potentially incompatible with international standards.

These exceptions notwithstanding, our assessment found that most less lethal equipment is not incompatible *per se* with such international standards, but instead raises issues about the processes by which it is selected, tested, and deployed.

Selection of Less Lethal systems

At present the selection of less lethal systems by law enforcement agencies in different countries varies widely. A number do have a recognised process (although few, if any, are legally constituted) whereas those that have few resources to devote to the process either accept donated equipment or are subject to lobbying by manufacturers – both of which can result in unsuitable equipment being selected. We aim to survey a range of countries to gather best practice and formulate options to guide law enforcement agencies in developing robust selection practices.

UK

The UK's process of selecting and deploying less lethal systems has developed in light of experiences in Northern Ireland and the decision in 1999 to devote resources to provide less lethal alternatives to the police. Prior to this it was characterised by a lack of openness and transparency. The UK's methodology is now recognised as one of the best in the field, although problems do remain.

The UK has no statute law which specifies what weapons the police can or cannot use. Chief officers of the UK's 40+ police forces must 'have regard to' the Home Office's Code of Practice on police use of firearms and less lethal options, but are not legally bound by it. Chief Constables can circumvent the selection process and deploy 'unauthorised' equipment, but if they do so, must justify the decision and may be liable if a negative outcome arises. Such a case occurred in 2010 when a gunman was cornered by Northumbria police. A decision was taken to deploy the Taser X12 shotgun and Xrep rounds in an effort to incapacitate the gunman with less lethal force. However, the Xrep rounds had not undergone full testing or been approved by the Home Office and interim testing results would have indicated the rounds would not have been expected to be effective.

USA

Much excellent work has been done by a wide variety of government agencies, academic institutions, law enforcement agencies and manufacturers but there is conflicting coordination of efforts. This fragmented approach has led to multiple guidelines and an over-reliance on company produced product information and training materials. The lack of an independent and transparent process has resulted in many years of controversy surrounding the introduction of less lethal systems. However, many positive initiatives are taking place, including most recently by the National Institute of Standards and Technology / NIST to begin formulating standards for "electroshock weapons".

China

China has become supplier of choice to many of the countries once dominated by western companies. A different concept of 'less lethality' and lax manufacturing standards combined with an aggressive overseas sales policy has resulted in countries with poor or non-existent selection and testing procedures deploying inappropriate equipment. For example, in October 2008 Thai security forces fired Chinese tear gas grenades to disperse members of the anti-government protest movement (PAD). Two protestors were killed and many received serious blast injuries from the tear gas grenades, later found to contain RDX explosive.¹³ China has recently supplied law enforcement equipment to, amongst other countries, Nigeria, Uganda and Zimbabwe.

Towards a human rights based selection and accountability process

A robust and internationally applicable process for selecting and deploying less lethal systems is required. Areas necessary to be examined, and some suggestions for best practice, include:

Selection:

- Based on a needs/gap assessment and operational requirements, not what is simply available.
- Developed/reviewed by an independent body with appropriate scientific, legal, medical, law enforcement and human rights expertise.
- Fully independent of manufacturers, traders or law enforcement agencies promoting products.
- Legally constituted, transparent, accountable and with publicly available results.
- An ongoing process of review, evaluation and development.

Testing:

- Carried out by independent research organisations, not linked to manufacturer interests.
- Research, process and results should be published in peer reviewed scientific journals and be made freely and publicly available.
- Aim to give as complete analysis as possible of the system under study.
- Set minimum standards for performance that the product needs to meet.

The regime should at a minimum include tests for:

- Reliability, including reproducibility of critical attributes (voltage, velocity etc).
- Accuracy, precision and performance (including in a range of real-life situations).
- Life span of the equipment and consequences thereof.
- Chemical irritants/malodorants to undergo testing akin to that for approving new medicines,
- Medical effects.
- Social Impact Assessment and acceptability.

¹³ <http://www.time.com/time/world/article/0,8599,1847804,00.html> and Thailand's National Human Rights Commission <http://www.nhrc.or.th/ReportEvent25511007.pdf>

Deployment:

- Conduct pilot roll-out of system and strictly monitor and evaluate.
- Feedback findings to enhance selection process and identify weaknesses or poor/wrong assumptions as well as inform the setting of guidelines for use.
- Specialised equipment should be issued to a smaller number of specially trained officers.

Guidelines / Operational Procedures:

These should be soundly based on national, regional and international law, made publicly available (as opposed to *operational tactics* which can be kept confidential) and specify:

- When and under what authorisation equipment can be used.
- A clear chain of command and decision making for equipment use.
- Minimum training requirements required.
- Clear warnings to be given before use.
- Post incident follow up procedures.

Training should include:

- Regular conceptual and operational training on international human rights standards, including the absolute prohibition against torture and other cruel, inhuman or degrading treatment.
- Curriculum and programs should be independent of any commercial interests involved in the manufacture and marketing of such devices.
- Human rights concepts should be integrated into all training courses and be technology and situation specific, rather than as a separate course.
- Should aim to ensure users think of less lethal systems in a similar way as they would think of a firearm, ie weapons which are potentially lethal.
- Refresher training, including quick drills at beginning of shifts.
- Realistic but rigorous re-qualification requirements.
- Open and transparent materials, subject to independent scrutiny.
- Overseas training provision should be subject to export licensing law.

Monitoring and accountability:

- Record all uses of force including injuries to members of the public and police officers.
- Use of force reports with anonymized data should be made freely and publicly available.
- Periodic assessment of the extent to which the equipment has been used in keeping with the guidelines.
- Any misuse or breach of use guidelines should be investigated and effective and dissuasive sanctions implemented.
- Spot checks should be carried out on equipment to ensure it is continuing to meet the standards set.

Conclusion:

Whilst the use of lethal force and firearms by law enforcement agencies is, generally, well regulated and monitored, the use of less lethal systems has not been. Consequences include the potential loss of public confidence as well as the time and resources expended in investigating certain technologies post deployment.

We believe that a systematic approach, such as that outlined above, would more rapidly result in the most appropriate technologies reaching the law enforcement community. Manufacturers exceeding minimum standards would benefit from a lead position, law enforcement officials would trust that the best equipment has been provided and the public would know that fully independently tested and verified technologies are being used.

We propose that efforts at an international level are required to develop an ‘additional protocol’ to the Basic Principles in order to update them in light of recent and prospective technological developments. A mechanism of support and advice to State parties to enable appropriate less lethal systems to be selected and fielded should also be developed.