Contemporary development, promotion and use of remote control riot control agent delivery mechanisms: challenges for effective State regulation

M. Crowley

ABSTRACT
Although the use of riot control agents (RCAs) as a method of warfare is prohibited under the Chemical Weapons Convention (CWC); the employment of such toxic chemicals for law enforcement including domestic riot control purposes is permitted, provided they are used in “types and quantities” consistent with such purposes. This paper examines the challenges faced by States in ensuring effective regulation of development, trade and use of RCAs and associated delivery mechanisms in the light of ongoing technological and market developments.

The paper specifically examines the contemporary development, testing, production and promotion by a range of State and commercial entities of a wide variety of “remote control” RCA means of delivery - dissemination mechanisms incorporating automatic or semi-automatic systems where the operator is directing operation of the platform and/or RCA delivery device at a distance from the target. These include: indoor fixed installation RCA dispersion devices; external area clearing or area denial devices; automatic grenade launchers; multiple munition launchers; and delivery mechanisms on unmanned ground vehicles and unmanned aerial vehicles.

The paper examines the implications of the continuing development and promotion of an ever widening range of “remote control” RCA delivery mechanisms for existing State regulation, highlighting the potentially serious consequences for national, international and human security of inadequate controls, and presenting recommendations for the international community to address this issue through the development, adoption and implementation of collectively agreed international standards in this area.

1 Omega Research Foundation, Bridge 5 Mill, 22A Beswick Street, Manchester M4 7HR, UK; University of Bradford, Richmond Road, Bradford, BD7 1DP, UK
Dr Michael Crowley is Research Associate at the Omega Research Foundation and an Honorary Visiting Senior Research Fellow, Division of Peace Studies, Faculty of Social Sciences, University of Bradford.
1. INTRODUCTION
Riot control agents (RCAs) are potent sensory irritants, normally with relatively low lethality, that produce dose and time-dependent acute site-specific toxicity. The most widely used include 2-chlorobenzalmalononitrile (CS), 1-chloroacetoephene (CN), Oleoresin capsicum (OC) and N-Vanillylnonamide (pseudocapsaicin) (PAV). Their use as a “method of warfare” is absolutely prohibited under the Chemical Weapons Convention (CWC). The Convention, however, permits their employment for “law enforcement including domestic riot control purposes” provided they are used in “types and quantities” consistent with such purposes. Consequently, whilst CWC States Parties are prohibited from developing RCA munitions for use in armed conflict, they may manufacture, acquire and utilise delivery systems to disseminate appropriate “types and quantities” of RCAs for law enforcement.

In addition to considerations regarding permissibility under the CWC, all States intending to employ RCAs and associated means of delivery for law enforcement should ensure that they are fully compatible with relevant international human rights law and standards notably the United Nations (UN) Basic Principles on the Use of Force and Firearms by Law Enforcement Officials and the UN Code of Conduct for Law Enforcement Officials.

However, there is continuing ambiguity as to the nature and specification of those RCA means of delivery that are prohibited under the CWC and/or are in breach of human rights law and standards. This ambiguity has potentially dangerous consequences, allowing divergent interpretations, policy and practice amongst States to emerge. Of particular concern – given the current research and development of unmanned systems - are the implications for the regulation of “remote control” RCA means of delivery. These are dissemination mechanisms incorporating automatic or semi-automatic systems where the operator is directing operation of the platform and/or RCA delivery device at a distance from the target. Inadequate regulation of such “remote control” RCA means of delivery has potentially serious consequences, including:

**Proliferation to and misuse by non-State actors:** Current commercial availability of “remote control” RCA means of delivery, including for example via unmanned aerial vehicles (UAVs), raises the danger of their acquisition and (mis)-use by a range of non-State actors including armed opposition forces, unregulated private military and security companies, and terrorist organisations.

**Employment in armed conflict:** In previous conflicts, RCA means of delivery were employed to drive enemy combatants from entrenched, underground, enclosed or fortified positions; for subsequent area denial; to disable and incapacitate large numbers of combatants; or in conjunction with conventional arms as a “force multiplier”. More recently, a range of contemporary RCA means of delivery, including certain “remote control” devices have been promoted for use in counterinsurgency operations or urban warfare.

**Dissemination of weaponized toxic chemicals:** The Scientific Advisory Board of the Organisation for the Prohibition of Chemical Weapons (OPCW) has highlighted the “continued development, testing, production and promotion of diverse munitions systems capable of disseminating RCAs by remote control” and warned that “availability of such systems opens up the possibility that they could be filled intentionally with alternate types of chemicals including CWAs [chemical warfare agents] or CNS [central nervous system]-acting compounds.”

**Employment of inappropriate RCA means of delivery in law enforcement:** resulting in serious injury or death of bystanders as well as targeted individuals or groups. Such delivery mechanisms include those that can disperse RCAs in quantities or in circumstances that risk asphyxiating or poisoning the targets, such as through rapid cumulative delivery of very large numbers of RCA projectiles over wide areas, or dispersal of RCA from fixed installation devices in enclosed spaces. Further concerns relate to those delivery mechanisms that do not provide sufficient levels of

---

targetability or discrimination, potentially for example, as a consequence of the “remote” nature of operational control and consequent distance between the operator and the intended targets.

**Misuse to facilitate large scale human rights abuses:** including the blanket application of significant quantities of RCAs against large peaceful gatherings or demonstrations resulting in *en masse* infliction of cruel, inhuman or degrading treatment or punishment. RCA means of delivery could also be employed as a “force multiplier” in conjunction with firearms or other lethal force, making such force more deadly.

**Facilitate development and proliferation of autonomous weapons systems:** Continuing research and development of “remote control” RCA delivery mechanisms and unmanned systems more broadly may potentially contribute to the development, proliferation and use of fully autonomous weapons systems (AWS), i.e. unmanned systems with on-board computers, that once activated, can select and engage targets without further human intervention.

2. CONTEMPORARY “REMOTE CONTROL” RCA DELIVERY MECHANISMS

Ongoing investigations by the Omega Research Foundation and the University of Bradford have uncovered the development, production, possession or promotion by State or commercial entities in at least 16 countries of “remote control” RCA means of delivery since the coming into force of the CWC in 1997; the following case studies, illustrate some of the types of delivery systems of potential concern.7

2.1. Indoor RCA dispersion devices

Certain RCA dispersion devices have been developed for indoor installation, inside prisons, correctional centres, or other places of detention, or alternatively for building or area protection. The placement of such devices in confined spaces or poorly ventilated rooms, or their use in situations where prisoners, detainees, or other targets cannot leave the contaminated area rapidly due to limited exit routes, poses a risk of resultant build-up of toxic chemicals, potentially leading to serious injury or death by asphyxiation or toxic chemical poisoning. The employment of such devices in larger enclosed areas such as prison halls also has the potential to lead to injuries resulting from panic and stampedes.

2.1.1. TG Guard Security Protection System [United States]

The TG Guard Security Protection System is a fixed installation RCA dispersion device originally developed and promoted by Mace Security Systems (now Mace Security International Inc and Mace Tactical Solutions, LLC) for use in enclosed spaces, notably prisons.8 The TG Guard Security Protection System delivers “a powerful tear gas deterrent agent in powdered form” designed to move disruptive inmates out of an affected area without sending in correctional officers who could be harmed or taken hostage. 9 The system employs a “strategic arrangement of dispensers installed in ceilings or elevated fixtures”; dispenser placement and the amount of irritant agent discharged determining in which direction and in what manner the inmates move.10 According to another US company, NonLethal Technologies, Inc., that has promoted this system, “the basic TG Guard Control Unit can operate and discharge up to 25 tear gas Dispensers selectively ... [whilst]... larger facilities can use multiple Control Units and Dispensers to accommodate their security needs.”11 Each Dispenser can hold and instantaneously dispense 110 grammes of either “CS powder” or “OC irritant dust.”12

2.2. External area clearing or area denial devices

---


Chinese, French, and Israeli companies have developed and promoted a range of “less lethal” systems, including those delivering riot control agents, which appear to be intended to clear or ensure denial of specific outdoor areas. Whilst some appear to be for use by correctional or law enforcement officials, others appear to be intended for use primarily by military or security forces.

2.2.1. Sphinx area protection system [France]
According to the Lacroix company website, the Sphinx NT system combines “detection and reaction capabilities for area protection” of “camp, compound, FOB [forward operating bases], critical infrastructure, etc.” Lacroix claim that “Sphinx NT is fully compliant with the Ottawa Treaty, ensuring safe remote control (Man in the Loop) of arming and firing.” The Sphinx NT system is modular in nature and incorporates a wireless remote control & command function which can receive information from infra-red barrier sensors, remote snapshot cameras and seismic acoustic systems. The control and command function can then be employed to activate a variety of “less lethal” (including RCA) delivery mechanisms against those breaching the area perimeter, potentially including Sphinx launchers each capable of firing three Galix 80mm tear gas munitions weighing 1.5kg; land cougar launchers each capable of firing salvos of up to twelve 56mm tear gas grenades; and even an unmanned aerial vehicle equipped with an aero cougar launcher (as described on page 9) capable of deploying up to eighteen tear gas grenades.

2.3. Automatic and Multi-Barrel Launchers
Chinese and Russian companies have marketed automatic grenade launchers that can fire large numbers of RCA projectiles from a single barrel, whilst companies in Australia, China, France, India, Israel, South Korea, the Russian Federation and the US have developed multi-barrel launchers potentially capable of firing large salvos of RCA projectiles. Both types of launcher potentially enable users to indiscriminately deluge substantial numbers of people with RCAs in a very short period.

2.3.1. Vehicle Mounted 38mm and 64mm Automatic Grenade Launchers [China]

Figure 1: 38mm automatic grenade launcher, displayed by China Ordnance Equipment Research Institute at the Asia Pacific China Police 2014 Expo, Beijing, China, May 2014, © Robin Ballantyne/Omega Research Foundation

In 2012, China Ordnance Equipment Research Institute began to promote a vehicle mounted 38mm automatic grenade launcher and a 64mm automatic riot grenade launcher, both of which could be remotely controlled by an operator inside the vehicle, and were capable of firing tear gas grenades. These two weapon systems are designed to “cope with...”

---

15 Sphinx NT area protection system, Sphinx NT Effectors, Lacroix (undated) op.cit.
16 Sphinx NT area protection system, Sphinx NT Effectors, Lacroix,(undated) op.cit.; see also Etienne Lacroix Defense, Sphinx Perimeter Defence System, Brochure, distributed at Idex 2001, 18th – 22nd March 2001; Lacroix, Sphinx NT Area Protection System, brochure distributed at Eurosatory 2014, Paris, June 2014.
17 China Ordnance Equipment Research Institute, Undated Catalogue, Distributed at Asia Pacific China Police Expo 2012, (copy held by Omega Research Foundation).
(large-scale) mass events quickly and effectively”. The 38mm launcher has a maximum firing rate of 200 rounds per minute and a maximum effective range of at least 300 metres. The 68mm launcher has a maximum firing rate of 60 rounds per minute and a maximum effective range of 600 metres.

2.3.2. 38mm and 40mm Iron Fist [United States]

Figure 2: 38mm IronFist system, displayed by NonLethal Technologies Inc. at Milipol 2015, Paris, France, November 2015, © Robin Ballantyne/Omega Research Foundation

US manufacturer, NonLethal Technologies Inc., developed and currently markets the IronFist “less lethal 38mm weapon system with up to 36 barrels ... [intended] "to rapidly deploy a blanket of less lethal munitions into, or over, a hostile crowd." When the IronFist 36 barrel system is loaded with high capacity 10 inch CS rounds, each containing 10 mini-grenades, up to 360 CS mini-grenades can be fired from a single vehicle station. The IronFist system is designed to be hard-mounted on a wide range of land vehicles and marine vessels, or to permanent structures "such as prisons, government buildings, military base perimeters, or embassy compounds. According to the company, "the IronFist can be configured in several forms to fit any tactical vehicle, whether hard mounted directly to the roof in front of a hatch, mounted on a revolving turret with remotely controlled elevation capability, or mounted on a Remote Weapon Station." Iron Fist can also be fitted with 40mm rifled barrels capable of firing a range of 40mm low-velocity “less lethal” rounds or any 37/38–40mm “less lethal” rounds.

2.3.3. 37mm and 40mm VENOM systems [United States]

Combined Systems Inc (CSI) have developed a “family of high-capacity [37mm and 40mm] non-lethal grenade launchers” including the VENOM V3038 non-lethal tube launch munition system for use by military, security and police forces in a variety of scenarios including "escalation of force, determination of intent, crowd dispersal and area denial objectives. " The VENOM V3038 can be hard mounted on various land and marine vehicles and platforms, shields, tripods and remote weapons stations. The VENOM system is modular with up to 30 tubes that can launch a variety of munitions, individually or in salvos, delivering "non-lethal flash and sound, smoke obscuration, irritant, and blunt trauma effects. The individual RCA munitions include "Multi 7 Smoke rounds (each containing 7 projectiles) that can deliver a high payload of irritant (CS) ... up to a distance of 160 metres; and the super long range smoke round capable of delivering irritant (CS)... over a wide area from a distance of up to 450 metres.

---

18 China Ordnance Equipment Research Institute (undated catalogue) op. cit., pp. 8 and 13.
19 Ibid., p. 13.
21 The IronFist, NonLethal Technologies (2016) op. cit.
23 The IronFist, NonLethal Technologies (2016) op. cit.
24 The IronFist, NonLethal Technologies (2016) op. cit.
26 VENOM V3038 catalogue (undated) op. cit.
27 VENOM V3038 catalogue, (undated) op. cit.
2.4 Unmanned Ground and Aerial Vehicles

A significant contemporary technological and market trend has been the development and/or promotion by companies or State research bodies in a growing number of countries including China, France, Israel, Spain, South Africa, Turkey, the United Arab Emirates and the US, of unmanned ground vehicles (UGVs) or drones/unmanned aerial vehicles (UAVs) capable of carrying RCA spraying devices or RCA projectile launchers.

2.4.1. Modular Advanced Armed Robotic System (MAARS) [United States]

QinetiQ North America, Inc. (QNA) developed the Modular Advanced Armed Robotic System (MAARS) through “partnership with various agencies in the [US] Department of Defense.”28 It is remotely controlled by an operator who can be over 1 kilometre away29. As well as an M240B medium machine gun, MAARS incorporates a four-barrelled 40mm grenade launcher that can fire either 40mm high-explosive grenades or a range of less-lethal ammunition, including 40mm tear gas grenades.30 According to a November 2010 New York Times article, US Army Special Forces had bought six MAARS “for classified missions”, and the National Guard had requested “dozens more to serve as sentries on bases in Iraq and Afghanistan.”31 Although there have been no reports of its field deployment by the US military, MAARS has reportedly continued to be trailed and studied; for example in July 2016 by the US Marine Corps Warfighting Laboratory;32 and has been promoted by QNA on its website and at trade fairs.

2.4.2. Reconnaissance/Attack Armed UAV [China]

The Chinese company Shenzhen Portability & Precision Technology Co. Ltd promoted the Reconnaissance/Attack Armed UAV at the Eurosatory arms exhibition in Paris, France in June 2018. The UAV is capable of autonomous take-off and landing and can undertake planned routes. It has optical cameras and incorporates a “man in the loop” armed system capable of remotely individually launching a range of munitions including fifteen 38mm tear gas or smoke grenades, or alternatively fifteen 40mm antipersonnel grenades. With “combat loads” it can operate for a flight time of 17 minutes, with a maximum “combat height” of 300 metres above the targets and up to 3km from the operator.33

---

29 QinetiQ North America, MAARS Product Overview, op.cit.,p.1.
33 Marketing material providing details of the UAV were available on the Shenzhen Portability & Precision Technology Co. Ltd stall, Eurosatory 2018, Paris, France, June 2018.
2.4.3. Skunk Riot Control Copter [South Africa]
South African company, Desert Wolf, has developed and promoted the Skunk Riot Control Copter to “control unruly crowds without endangering the lives of the protestors or the security staff”. The UAV can be equipped with four high-capacity paintball barrels which can collectively fire “80 Pepper balls per second stopping any crowd in its tracks”; its “current hopper capacity of 4000 balls ... allows for real stopping power”. The UAVs can be “operated in formation by a single operator [employing] the Desert Wolf Pangolin ground control station”. In February 2019 a new variant of the Skunk Riot Copter was promoted at the IDEX 2019 International Defence Exhibition and Conference in Abu Dhabi. The UAV itself can be autonomous with a range of 5km and flying time of up to 25 minutes, whilst the weapon system is under human control. This version carries 16 “less lethal” grenades, each of which could be released individually. The system can carry smoke, (flash bang) stun, illumination flares and pepper grenades. The UAV incorporates a live video stream allowing the user a bird’s eye view of the situation, while the grenades are released manually from the remote portable control system.

2.4.4. ASV 100/150 Drones with Aero Cougar/Multiple Purpose Payload Launcher [France]
In November 2015, at the Milipol 2015 exhibition in Paris, the French UAV manufacturer, Aero Surveillance first publicly displayed its AS-100 and AS-150 drones with a new Aero Cougar/Multi-purpose Payload Launcher (the MPL 30). This launcher, developed in cooperation with SAE Alsetex of the Etienne Lacroix Group can deploy a range of payloads from several hundred metres, including up to eighteen 56mm tear gas grenades. According to Aero Surveillance, the system is designed for “law enforcement and homeland security” operations. UAVs employing the AeroCougar/MPL 30 can also potentially be employed as part of the Sphinx NT area protection system (see earlier).

35 Desert Wolf website (Undated) op.cit.
36 Ibid.
37 Ibid.
39 Ibid.
2.4.5. Cyclone riot control drone system [Israel]
The Israeli company, ISPRA, has developed and promoted the Cyclone riot control drone system on its website and at trade fairs.\textsuperscript{41} According to the company’s marketing materials, the Cyclone “provides police forces with less lethal munitions from drones – allowing maximum accuracy, real time control of riot situations and minimum injuries to civilians while maintaining distance between police forces and rioters.”\textsuperscript{42} The company promotes the use of this drone system “when a barrier or obstacle is separating between the parties” and states that “with several drones, a continuous presence over the rioters can be maintained, dispersing nonlethal ammunition and providing commanders with real-time video image of the situation on the ground.”\textsuperscript{43} The Cyclone system incorporates twelve “less lethal” submunitions and the total weight of the “pyrotechnic mixture” contained is 400+/- 20 grammes.\textsuperscript{44}

\textbf{Figure 5:} unmanned aerial vehicle with attached Multi-purpose launcher/Aero Cougar displayed by SAE Alsetex at Eurosatory 2016, Paris, France, June 2016, © Robin Ballantyne/Omega Research Foundation

\textbf{Figure 6:} Cyclone riot control drone system attached to a UAV, displayed by ISPRA at MILIPOL 2015, Paris, France, November 2015, © Robin Ballantyne/Omega Research Foundation


\textsuperscript{42} Ibid.


\textsuperscript{44} Ibid.
3. A TIPPING POINT FOR PROLIFERATION AND (MIS)USE?

Whilst the widespread deployment of “remote control” RCA means of delivery for law enforcement has not, to date, been documented, there are media reports that certain military, security or police forces or correctional services including those in China45, India46, Israel47, South Africa,48 Turkey49, the United Arab Emirates50 and the United States51 have sought to develop or acquire a range of such delivery mechanisms. Furthermore, there have been reports that certain non-State actors including private security companies and mining corporations have also explored acquisition of such RCA delivery mechanisms.52

We may, however, now be at a tipping point – where proliferation, use and misuse may be beginning. A troubling indication of what could lie ahead was first witnessed in Israel from March 201853, and most notably during the response by Israeli security forces to widespread Palestinian protests marking the “Great March of Return”, particularly on the border between Gaza and Israel. In addition to the use of standard hand-thrown and weapon-launched tear gas projectiles and grenades, the Israeli forces employed a variety of commercially available drones – including some that were specifically designed for RCA delivery whilst others were adapted for delivery of RCAs in an ad hoc manner54. These drones were documented flying above the crowds and dropping tear gas projectiles onto people below, and in some cases were reportedly misused against peaceful protestors, bystanders and journalists.55

4. CONCLUSIONS AND RECOMMENDATIONS

Research undertaken by Bradford University and the Omega Research Foundation has documented the development, testing, production and promotion by a range of State and commercial entities of a wide variety of “remote control”

49 Hurst, L./Newsweek (7th April 2015) op.cit.
52 Kelion, L. /BBC News (18th June 2014) op.cit.
53 In first, Israel uses drones to drop tear gas on Gaza protesters — report, Times of Israel, 12 March 2018.
RCA means of delivery including: indoor fixed installation RCA dispersion devices; external area clearing or area denial devices; automatic grenade launchers; multiple munition launchers; delivery mechanisms on unmanned ground vehicles and unmanned aerial vehicles.

Certain types of such “remote control” RCA means of delivery may be appropriate for use in specific law enforcement situations provided they meet the CWC “types and quantities” restriction and are employed in conformity with the CWC and human rights standards; however, there is a risk that some of these “remote control” RCA means of delivery could also be readily misused in armed conflict or for human rights violations. Consequently, States should stringently regulate the trade and use of these types of “remote control” RCA means of delivery in order to prevent such misuse. Other types of “remote control” RCA delivery mechanism may be determined to be intrinsically inappropriate for any law enforcement purpose; such RCA delivery mechanisms would potentially breach the CWC, and their development, possession, promotion, transfer and use should be halted by States.

However, despite development and promotion of a range of “remote control” RCA means of delivery of potential concern, the Organisation for the Prohibition of Chemical Weapons (OPCW) (which comprises the 193 States Parties to the CWC) has not effectively addressed this situation to date. No OPCW policy making organ (PMO) [i.e. the Executive Council or the Conference of States Parties], has made any interpretative statements regarding application of the CWC in this area or issued guidance as to which types of “remote control” RCA means of delivery can be employed for law enforcement purposes and if so, under what circumstances, and with what constraints. It is, therefore, left to individual States Parties to interpret the scope and nature of their obligations in this area.

Failure to set clear boundaries in this area risks the introduction and misuse of inappropriate weapons by police, security, and military forces; the danger that such weapons will subsequently be employed for actions beyond law enforcement; and the threat of their proliferation to other State and non-State actors. In addition to the detrimental consequences for human rights and human security, such developments could undermine the stability of the Chemical Weapons Convention itself.

4.1 Recommendations for the Organisation for the Prohibition of Chemical Weapons (OPCW)
Given the evident dangers arising from the unregulated production, proliferation and misuse of “remote control” RCA means of delivery, the OPCW should:

4.1.1. Conduct a review of the existing constraints, under relevant international law, upon the use of RCA means of delivery in law enforcement
Although the CWC allows the use of appropriate “types and quantities” of RCAs for “law enforcement purposes including domestic riot control”, the nature and scope of activities consistent with “law enforcement” have not been elaborated under the Convention, or by a relevant OPCW policy making organ. Consequently, the OPCW should institute a review by the Office of the Legal Advisor, of the existing constraints, under relevant international law (notably international human rights law), upon the use of RCAs and related means of delivery in law enforcement; and develop guidance on appropriate use.

4.1.2. Develop a process for determining which RCA means of delivery are prohibited under the Convention:
The OPCW should develop criteria and a suitable process for determining which RCA means of delivery are inherently inappropriate for law enforcement purposes and would breach Article II.1 and/or Article I.5 of the CWC. The OPCW should subsequently develop a clarificatory document for CWC States Parties detailing those means of RCA delivery that are considered inherently inappropriate for law enforcement purposes. This should be reviewed regularly in an appropriate forum to determine whether additional items should be added in the light of developments in science and technology. Under the Convention, all States Parties would be prohibited from developing, producing, stockpiling, marketing, transferring or using such means of delivery. Subsequently, all CWC States Parties possessing any such prohibited means of RCA delivery would be required to declare such items to the OPCW and verifiably destroy them.

4.2 Recommendations for States deriving from human rights law and standards
Although the Chemical Weapons Convention is clearly applicable to the regulation of “remote control” RCA means of delivery, it is critical that the international community also examine and adhere to the constraints imposed upon these devices under international and regional human rights law and related standards. Consequently all States should:

4.2.1. Ensure effective national assessment of new weapons (including RCA means of delivery) to be employed in law enforcement; undertake subsequent monitoring and regulation of their trade and use:
In line with the recommendations of the UN Human Rights Council\textsuperscript{56} and the UN Special Rapporteur on extrajudicial, summary or arbitrary executions\textsuperscript{57}, all States should ensure that the selection and testing of all (lethal and “less lethal”) weapons developed or acquired for law enforcement (including RCA means of delivery) is carried out in each State by a legally constituted, independent, multidisciplinary and transparent panel of experts, free of direct commercial or law enforcement interests. This independent panel should:

- ensure that all weapons (whether developed or acquired) are not inherently of a nature to violate relevant international human rights law and standards; and,
- identify whether there are specific circumstances in which use of developed or acquired weapons may breach international human rights law and attendant standards (in the case of RCA means of delivery this would include situations where the quantity of RCA dispersed becomes hazardous to the health of the targeted individuals or groups, for example as a result of repeated use of multi-barrelled RCA munition launchers or the use of high capacity RCA dispersal devices in enclosed spaces), and restrict such use accordingly.

Furthermore, States should establish effective laws and regulations based upon international human rights standards to strictly control the use of all weapons (including RCA means of delivery) in law enforcement, and establish effective monitoring mechanisms to ensure such laws and regulations are adhered to, and kept under review. In addition, States should establish effective laws and regulation to control the trade in “remote control” RCA means of delivery, prohibiting any transfers of such goods that are likely to facilitate human rights violations.

4.2.2. Establish an international expert group to examine application of international human rights law to “less lethal” weapons

States should request a suitable body, such as the UN Human Rights Council, the Office of the UN High Commissioner for Human Rights, or the UN Office on Drugs and Crime, to develop guidance/procedures for evaluating the human rights compatibility or incompatibility of “less lethal” weapons and unmanned systems (including those for dispersing or delivering RCAs). If appropriate, the relevant body could also recommend constraints on the use of any “less lethal” weapons deemed compatible with human rights standards, and develop guidelines for monitoring and ensuring subsequent use is in accordance with human rights law.

\textsuperscript{56} UN, Human Rights Council, Resolution 25/38, The promotion and protection of human rights in the context of peaceful protests, A/HRC/RES/25/38, 11th April 2014, paragraph 15

\textsuperscript{57} UN General Assembly, Report of the Special Rapporteur on extrajudicial, summary or arbitrary executions, Christof Heyns, A/69/265/ 6th August 2014, paragraph 76.