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NGO Statement: Development and use of riot control agents and the weaponisation of CNS-acting chemicals

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Distinguished Delegates,

The Chemical Weapons Convention (CWC) prohibits use of riot control agents (RCAs) "as a method of warfare". However, from February 2022 until the present, there have been continuing reports of the repeated use of RCAs by Russian military forces against Ukrainian military forces as part of the ongoing armed conflict in that country. These reported attacks included use of drones to drop RCA grenades onto embedded Ukrainian forces. Russian military use of RCAs (and other toxic chemicals) against Ukrainian forces has been repeatedly raised by Ukraine and other CWC States Parties. Russia has denied such alleged use and has instead accused Ukraine of similar activities. At the request of Ukraine, the OPCW Technical Secretariat (TS) has undertaken three separate Technical Assistance Visits (TAV) to the country following alleged use of toxic chemicals as a weapon. The three OPCW TAV reports collectively recorded evidence of repeated RCA use including CS grenades dropped by drones upon Ukrainian military positions. The OPCW reports did not identify the perpetrator of these attacks.

Given the scale and seriousness of reported RCA use as a method of warfare in Ukraine, States Parties should dispatch an OPCW Fact-Finding Mission (FFM) to Ukraine to determine the facts and also establish an Investigation and Identification Team (IIT) to identify the perpetrator or perpetrators of such RCA use. The FFM-IIT report should be presented to CWC States Parties for appropriate collective action to end these continuing serious breaches of the CWC.

The CWC permits use of RCAs for "law enforcement including domestic riot control purposes," ⁴ but only provided they are used in "types and quantities" consistent with such purposes. ⁵ However, RCAs have been frequently misused by law enforcement officials for serious human rights violations, notably to restrict, intimidate, or punish those participating in

¹ OPCW, Chemical Weapons Convention, 1993, Article I.5

² See for example: OPCW, Compendium of correspondence shared by States Parties on Ukraine, [Which is compiled and regularly updated by the Technical Secretariat and is available on the OPCW website at https://www.opcw.org/sites/default/files/documents/2022/Compendium%20of%20correspondence%20shared%2 https://www.opcw.org/sites/document

³ OPCW Technical Secretariat, Report of the OPCW Technical Assistance Visit on the activities carried out in support of a request by Ukraine (TAV/04/24) S/2338/2024, 18 November 2024, 2025; OPCW Technical Secretariat, Report of the OPCW Technical Assistance Visit on the activities carried out in support of a request by Ukraine (TAV/05/24 AND TAV/01/25) S/2370/2025, 14 February 2025; OPCW Technical Secretariat, Report of the OPCW Technical Assistance Visit on the activities carried out in support of a request by Ukraine (TAV/02/25 AND TAV/03/25), S/2415/2025, 20 June 2025.

⁴ OPCW, Chemical Weapons Convention, 1993, Article II.9

⁵ OPCW, Chemical Weapons Convention, 1993, Article II.1.a.

public protest; and also in prisons, detention centres or police stations to ill-treat individuals. ⁶ A recurring medical concern has been their use in excessive quantities in confined spaces or in the open air where the targeted individuals or bystanders cannot safely and quickly disperse. In such situations, serious injury or death can result, including from the toxic properties of the chemical agents or from asphyxiation. ⁷ Building upon its work identifying chemicals that fulfil the definition of RCA⁸, the Scientific Advisory Board (SAB) should now be tasked with developing associated guidance as to quantities of identified RCAs that can safely and legitimately be employed in law enforcement. Such guidance should acknowledge relevant obligations under international human rights law, to ensure such RCA employment is proportionate, necessary, and does not endanger life or health.

The current situation could dramatically deteriorate as a result of contemporary development and marketing of systems capable of delivering significant amounts of RCAs over wide areas or extended distances, with consequent risk of their misuse in law enforcement for collective ill-treatment of crowds, or by military forces in armed conflict. 'Wide-area' RCA delivery mechanisms, include large capacity sprayers, water cannons, multi-barrel projectile launchers, and delivery mechanisms mounted on unmanned ground vehicles, and drones. ⁹ In its February 2023 report to the 5th Review Conference, the SAB voiced concerns over "continued development, testing, production, and promotion of diverse" 'wide-area' RCA delivery mechanisms. It warned that "the capabilities being developed increasingly resemble

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⁶ For illustrative cases see for example, *Lethal in Disguise 2: How Crowd-Control Weapons Impact Health and Human Rights*, Physicians for Human Rights/International Network of Civil Liberties Organizations (INCLO) in collaboration with the Omega Research Foundation, 22 March 2023; Amnesty International, *Global: Misuse of tear gas killing and injuring protesters worldwide – updated interactive website*, 30 May 2023; Crowley, M. *Chemical Control*, Palgrave Macmillan, London, UK, 2016, pp.50-80.

⁷ See for example, Summerhill EM, Hoyle GW, Jordt SE, Jugg BJ, Martin JG, Matalon S, Patterson SE, Prezant DJ, Sciuto AM, Svendsen ER, White CW, Veress LA; ATS Terrorism and Inhalational Disasters Section of the Environmental, Occupational, and Population Health Assembly. An Official American Thoracic Society Workshop Report: Chemical Inhalational Disasters. Biology of Lung Injury, Development of Novel Therapeutics, and Medical Preparedness. *Ann Am Thorac Soc.* 2017 Jun;14(6):1060-1072. doi: 10.1513/AnnalsATS.201704-297WS, Physicians for Human Rights/INCLO *op. cit.*, (2023) Amnesty International (2023) *op. cit.*; Crowley, M. (2016) *op. cit.*, pp. 48-49 and pp. 72-75

⁸ OPCW Technical Secretariat, Office of Strategy and Policy, *Note by the Technical Secretariat, Declaration of riot control agents: advice from the Scientific Advisory Board*, S/1177/2014. OPCW, The Hague, 1 May 2014. See also Scientific Advisory Board, *Response to the Director-General's Request to the Scientific Advisory Board to consider which riot control agents are subject to declaration under the Chemical Weapons Convention*. SAB-25/WP.1. OPCW, The Hague, 27 March 2017.

⁹ Crowley, M. Drawing the Line: Regulation of 'Wide Area' Riot Control Agent Delivery Mechanisms under the Chemical Weapons Convention, University of Bradford/Omega Research Foundation, April 2013; Crowley, M. Tear Gassing by Remote Control: The Development and Promotion of Remotely Operated Means of Delivering or Dispersing Riot Control Agents, University of Bradford/Omega Research Foundation/Remote Control Project, December 2015; Crowley, M. Development and Hostile Use of Toxic Chemical Means of Delivery and Dispersal in: Crowley, M., Dando, M and Shang, L. (eds.) Preventing Chemical Weapons: Arms Control and Disarmament as the Sciences Converge, Royal Society of Chemistry, August 2018, pp.332-380; Crowley, M. Contemporary Development, Promotion and Use of Remote Control Riot Control Agent Delivery Mechanisms: Challenges for Effective State Regulation, the 10th European Symposium on Non-Lethal Weapons, 20-23 May 2019, Royal Military Academy, Brussels, Belgium; Crowley, M. and Dando M. Toxin and Bioregulator Weapons, Palgrave Macmillan, November 2022.

military equipment. These systems could be repurposed and filled with other chemicals," including chemical warfare agents, central nervous system-acting chemicals, and bioregulators. ¹⁰ States Parties should establish an OPCW process, with the appropriate involvement of the SAB, to determine those RCA delivery mechanisms that are prohibited under the CWC, and also develop guidance on appropriate use of permitted RCA delivery mechanisms for law enforcement.

Certain States have previously sought to weaponise a range of central nervous system (CNS)-acting chemicals, including pharmaceutical chemicals and bioregulators. Although their development and use for armed conflict was clearly prohibited under the CWC, certain States contended law enforcement use was not prohibited. The risk of such weapons development has grown given the contemporary rapid advances in relevant chemical and life sciences, particularly genomics, synthetic biology, medical pharmacology, and neuroscience, that could be harnessed for such ends. Crowley and Dando have examined these risks in a book published this week by the UK Royal Society of Chemistry¹¹ and call on the OPCW now to address this growing threat by building on the "Understanding" adopted at CSP-26 which "Decided that the aerosolised use of CNS-acting chemicals is understood to be inconsistent with law enforcement purposes as a 'purpose not prohibited' under the Convention." The "Understanding" is binding on all States Parties, and should be fully implemented by all States Parties. To facilitate its effective and consistent implementation by all States, guidance is needed including to define "CNS-acting chemicals" and provide an indicative list of chemicals of concern covered by the "Understanding". The Director General and TS, with the assistance of the SAB, should be tasked with developing such guidance. The TS should also be tasked with monitoring scientific and technological advances of potential of concern in this area. To aid this work, the Director General should establish an SAB TWG to study current developments concerning CNS-acting chemicals, as was recommended by the SAB in its report to the 5th CWC Review Conference.

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¹⁰ OPCW Review Conference, Report by the Director-General: Report of the Scientific Advisory Board on Developments in Science and Technology to the Fifth Special Session of the Conference of the States Parties to Review the Operation of the Chemical Weapons Convention, RC-5/DG.1, 22 February 2023, paragraph 80.

¹¹ Crowley, M. and Dando, M, Preventing Weaponization of CNS-acting Chemicals: A Holistic Arms Control Analysis, Royal Society of Chemistry, Croydon, UK, 24 November 2025.

¹² OPCW, Conference of States Parties, Decision: Understanding regarding the aerosolised use of central nervous system-acting-chemicals for law enforcement purposes, C-26/DEC.10. OPCW, The Hague, 1 December 2021.