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Weaponizing Tear Gas: Bahrain’s Unprecedented Use of Toxic Chemical Agents Against Civilians.

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Weaponizing Tear Gas: Bahrain’s Unprecedented Use of Toxic Chemical Agents Against Civilians

August 2012
About Physicians for Human Rights

Physicians for Human Rights (PHR) uses medicine and science to investigate and expose human rights violations. We work to prevent rights abuses by seeking justice and holding offenders accountable.

Since 1986, PHR has conducted investigations in more than 40 countries, including on:

- 1987 — Use of toxic chemical agents in South Korea
- 1988 — Iraq’s use of chemical weapons against Kurds
- 1988 — Use of toxic chemical agents in West Bank and the Gaza Strip
- 1989 — Use of chemical warfare agents in Soviet Georgia
- 1996 — Exhumation of mass graves in the Balkans
- 1996 — Critical forensic evidence of genocide in Rwanda
- 1999 — Drafting the UN-endorsed guidelines for documentation of torture
- 2004 — Documentation of the genocide in Darfur
- 2006 — US complicity of torture in Iraq, Afghanistan, and Guantánamo Bay
- 2009 — Human experimentation by CIA medical personnel on prisoners in violation of the Nuremberg Code
- 2011 — Violations of medical neutrality in times of armed conflict and civil unrest during the Arab Spring

PHR shared the 1997 Nobel Peace Prize

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Cover photo: Bahraini anti-riot police fire tear gas grenades at peaceful and unarmed civilians protesters, including a Shi’a cleric, in June 2012. http://www.youtube.com/watch?v=QxaulShdjgk.

Opposite: Bahraini boy displays one of several exploded tear gas canisters fired into his family’s house. Photo: Richard Sollom, PHR.
“[T]he evidence already assembled regarding the pattern of use of tear gas, as well as its toxicology, raises the question of whether its further use can be condoned under any circumstances... [T]here is an important role for the independent [health] professional: to study, document, analyze, and report on such hazards and to advise government on what does and does not carry an acceptable risk. If a weapon is found to present too serious a risk, it is then the responsibility of those in charge of public safety to decide on alternatives.”

Acknowledgements

This report was written by Richard Sollom, MA, MPH, Deputy Director at Physicians for Human Rights (PHR); and Holly Atkinson, MD, FACP, Past President of PHR, Assistant Professor of Medicine and Director of the Human Rights Program at Mount Sinai School of Medicine, Assistant Professor of Public Health at Weill Medical College of Cornell University; with assistance from Marissa Brodney, Program Associate at PHR. Policy recommendations were written by Hans Hogrefe, Chief Policy Officer at PHR, and Andrea Gittleman, JD, Senior Legislative Counsel at PHR. This report is based on research conducted by PHR in Bahrain on 7-12 April 2012.

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### Acronyms

<table>
<thead>
<tr>
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<th>Definition</th>
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<tbody>
<tr>
<td>BICI</td>
<td>Bahrain Independent Commission of Inquiry</td>
</tr>
<tr>
<td>CIDT</td>
<td>Cruel, inhuman, or degrading treatment</td>
</tr>
<tr>
<td>CWA</td>
<td>Chemical warfare agent</td>
</tr>
<tr>
<td>CWC</td>
<td>Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction</td>
</tr>
<tr>
<td>CS</td>
<td>α-Chlorobenzylidene malononitrile</td>
</tr>
<tr>
<td>CN</td>
<td>Chloracetophenone</td>
</tr>
<tr>
<td>CAT</td>
<td>Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment</td>
</tr>
<tr>
<td>CR</td>
<td>Dibenz (b, f)-1, 4-oxazepine</td>
</tr>
<tr>
<td>IACHR</td>
<td>Inter-American Commision on Human Rights</td>
</tr>
<tr>
<td>ICRC</td>
<td>International Committee of the Red Cross</td>
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<tr>
<td>ICCPR</td>
<td>International Covenant on Civil and Political Rights</td>
</tr>
<tr>
<td>ICESCR</td>
<td>International Covenant on Economic, Social and Cultural Rights</td>
</tr>
<tr>
<td>OC</td>
<td>Oleoresin capsicum</td>
</tr>
<tr>
<td>PAVA</td>
<td>Pelargonic acid vanillylamide</td>
</tr>
<tr>
<td>PCSI</td>
<td>Peripheral chemosensory irritant</td>
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<tr>
<td>PHR</td>
<td>Physicians for Human Rights</td>
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<tr>
<td>MENA</td>
<td>Middle East and North Africa</td>
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<td>RCA</td>
<td>Riot control agent</td>
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Executive Summary

The tiny Persian Gulf Kingdom of Bahrain still smolders amid ongoing civil unrest 18 months after protesters began calling for political reform. Governments in the region have resorted to lethal force or have precipitated outright civil war in response to the outcries for political reform and human rights in the context of the “Arab awakening.” Bahrain’s Sunni monarchy notably has silenced dissent and punished the opposition by rounding up doctors and peaceful protesters, torturing many of them, filing trumped-up charges, and imposing harsh prison sentences. The vicious crackdown in Bahrain has received global attention and warranted a special international commission of inquiry into Bahrain’s excessive use of force and human rights violations. Throughout this time, Physicians for Human Rights (PHR) has played a leading role in defense of our medical colleagues whose rights have been severely violated in Bahrain.

Less visible is the unusually relentless and indiscriminate campaign that Bahraini authorities have waged against the majority Shi’a population for more than 500 days by weaponizing toxic chemical agents—so called tear gas. In Bahrain, law enforcement officials have deployed this toxic agent to punish protesters, inflict suffering, and suppress dissent. Usually perceived by the public and security forces as a benign tool for crowd control, tear gas, especially when used in large quantities and in enclosed spaces, poses serious health risks and even causes death. Since February 2011, the Bahraini government has unleashed a torrent of these toxic chemical agents against men, women, and children, including the elderly and infirm.

Twenty-five years ago, PHR documented the deleterious and long-term health effects of tear gas used indiscriminately in South Korea against civilian protesters, including toxic pulmonary damage and death, as well as possible miscarriages. As physicians we were then compelled to question whether the further use of these toxic chemical agents could be condoned under any circumstances.

The extensive and persistent use of this so-called nonlethal chemical agent now in Bahrain—unprecedented in the 100-year history of tear gas use against civilians throughout the world—compels PHR once again to call the world’s attention to the known and still unknown serious health consequences of tear gas, including death. As human rights advocates and health professionals, we are ethically obligated to highlight the toxic and lethal effects of tear gas and its indiscriminate and illegal use in Bahrain.

Methods

This report’s findings are based on field research that PHR conducted in Bahrain (7-12 April 2012) to investigate excessive use of force by law enforcement officials since June 2011—the end of Bahrain’s state of emergency. The medico-legal team (Richard Sollom, MA, MPH and Holly Atkinson, MD) conducted 102 in-depth interviews with Bahrainis who reported human rights violations, corroborating eyewitnesses to these alleged events, civil society leaders, and government officials. Other forms of corroboration that PHR conducted or utilized in this study include: Physical examinations, evaluation of medical records, and review of radiographic, photographic, and video evidence. In addition, this report contains results from an analysis of 28 countries whose security forces have deployed toxic chemical agents against civilians in situations of civil unrest.
Findings

This report documents two interconnected means by which the Bahraini government unlawfully uses toxic chemical agents against civilians: (1) Government authorities have routinely violated every U.N. principle governing police use of force. (2) Bahraini law enforcement officials have also effectively transformed toxic chemical agents into weapons used to assail Shi’a civilians inside their homes and cars.

Bahraini government violates UN principles on the use of force during protests

While current international law allows governments to use some chemical agents for crowd control purposes, Bahraini law enforcement officials routinely violate every U.N. principle of their use. Specifically, PHR documents in this report that Bahraini authorities:

- Fail to exercise restraint before resorting to force;
- Use disproportionate force when responding to protesters; and
- Fail to minimize damage and injury to demonstrators.

Such unrestrained use of toxic chemical agents against civilians has caused superfluous—and sometimes life-threatening—harm to men, women, and children in Bahrain. Injured protesters whom PHR investigators examined suffered from blunt force trauma and lacerations to the head, torso, and limbs due to the impact of metal canisters being fired at them by law enforcement officials at close range.

Police hit one bystander in the head with a tear gas canister while he was walking near the site of a protest in Karanah, causing a fractured skull and intracranial hemorrhaging. “You’re lucky to have survived,” the doctor who performed the CT scan told this victim, “Others from the same injury have died.”

Bahraini government violates human rights law by weaponizing toxic chemical agents

Equally unprecedented is the Government of Bahrain’s transformation of toxic chemical agents into weapons used methodically to attack Shi’a civilians inside their homes and cars. Such unprovoked and flagrant assaults on families—who pose no threat to the safety of others—flout international human rights law and constitute torture, cruel, and inhuman treatment. Specifically, the report documents that Bahraini law enforcement officials:

- Subject men, women, children, vulnerable, disabled and elderly persons to torture, cruel, and inhuman treatment;
- Unlawfully enter families’ homes and destroy property;
- Intentionally commit acts that impair people’s health; and
- Discriminate against one religious sect by targeting Shi’a neighborhoods.

The weaponized toxic chemical agent attacks against Bahraini civilians are intentional—and may be official policy—because of the frequency of the attacks by officials throughout the police force and the lack of accountability for those who perpetrate the attacks.

Two sisters from Shela told PHR investigators that police shot tear gas canisters directly into their home on five separate occasions. On the second occasion, they reported police ripped protective covers off of the family’s air conditioners and pulled sealant away from the windows from the outside, before throwing tear gas canisters through a window and yelling,
“If you want freedom, come out to us.” They reported that in the third incident, police broke through the front door and threw a tear gas canister into their home.

PHR investigators also interviewed several members of a large family—ages 3 to 65—who were forced from their home after police stormed it, attempted to abduct a 15-year-old boy, and fired canisters containing toxic chemical agents into the house causing a 14-year-old girl to fall unconscious. Law enforcement officials then reportedly surrounded the exits, inhibiting escape.

Such attacks appear to discriminate against Bahrain’s Shi’a majority population. Preliminary analysis of data suggests that the majority of Shi’a neighborhoods (comprising 80% of all neighborhoods in Bahrain) have been exposed to toxic chemical agent attacks at least once per week since February 2011. Sunni-dominated neighborhoods have largely remained free from toxic chemical agent attacks.

**Bahrain’s misuse of toxic chemical agents endangers the health of civilians and causes severe and long-term pain and suffering**

Physicians for Human Rights warns that the ongoing 18-month siege and widespread use of toxic chemical agents against a civilian population has caused inestimable physical harm and will continue to inflict as yet unknown negative health effects among this population. Bahraini law enforcement officials’ persistent targeting civilians in enclosed spaces may lead to serious long-term health consequences, including miscarriages and severe respiratory distress resulting in premature death.

PHR spoke with two families who had family members who allegedly died from complications related to toxic chemical agent exposure. In both cases, deceased individuals were only exposed to toxic chemical agents in the privacy of their homes, and died despite treatment in the hospital. PHR met with relatives of Muhammad, a young asthmatic man from a Shi’a village, who died of acute respiratory failure following 25 days of hospitalization after exposure to toxic chemical agents. Muhammad’s family reported that he was routinely exposed to tear gas and sought medical care in private hospitals, but never told doctors about his severe adverse reactions to the gas for fear of being reported to authorities and sent to prison.

**Policy recommendations**

Countries like Bahrain that have so profoundly abused tear gas as a means to preemptively assault civilians should lose access to these toxic chemical agents. All other countries that have deployed these chemicals as per U.N. principles and with due respect for human life and dignity should reevaluate their use given the dangerous health consequences wrought by tear gas and should utilize these agents with extreme caution.

**To the Government of Bahrain:**

- End all attacks on civilians, including tear gas attacks on civilians and homes.
- Given the harmful effects of tear gas misuse in the country, suspend all use of tear gas until such time as the Government of Bahrain conducts a full and impartial investigation of the events detailed in this report, retrain the national security forces in the proper use of tear gas, and holds the perpetrators of excessive or improper use of force accountable. After such initial benchmarks are met, adhere to United Nations guidelines on the use of force and to the Bahraini penal code in order to stem future misuse of tear gas.
• Establish an independent body consisting of individuals familiar with human rights and legal norms regarding the use of force to investigate the deliberate misuse of toxic chemical agents in Bahrain.

• Disclose information about the varieties of toxic chemical agents used by law enforcement officials in Bahrain, given the disturbing evidence of the harmful effects of toxic chemical agents from PHR’s investigation as well as the BICI Report. This information will be important to the current treatment of exposed Bahraini citizens, and to drive future scientific research on the effects of all toxic chemical agents.

• Allow scientists, health professionals, and epidemiologists to conduct critical toxicological and survey research on the use and effects of tear gas in Bahrain.

To the international community:

• Suspend global exports of tear gas and its relevant precursor chemical agents to Bahrain until such time as the Government of Bahrain conducts a full and impartial investigation of the events detailed in this report, retrains the national security forces in the proper use of tear gas, and holds the perpetrators of excessive or improper use of force accountable.

• Convene an interdisciplinary group of health professionals, lawyers, law enforcement officials, and public health experts to draft guiding principles on the proper use of all toxic chemical agents, especially those classified as lachrymatory agents, and to determine whether the application and toxicity of certain lachrymatory agents necessitate re-classification under the Chemical Weapons Convention.

• Support scientific research into the health effects of tear gas, including research on the possible connection to miscarriage and/or genetic disorders as well as long-term respiratory sequelae of excessive exposure.

• Review international, regional, national, and local guidelines on tear gas use and ensure that they follow the parameters of the UN Guidelines on the Use of Force, including mechanisms for accountability for misuse.

To the United States:

• Continue to deny export licenses for tear gas to Bahrain until the Government of Bahrain adheres to UN Guidelines on the Use of Force regarding its tear gas use, investigates the weaponization of tear gas, and establishes accountability for law enforcement officials who use excessive force or otherwise violate the UN Guidelines.

• Revoke tear gas licenses for other countries that show warning signs of improper use of tear gas or other riot control items against peaceful civilians.

• As a matter of policy, ensure that all tear gas and related materials are listed on the State Department’s US Munitions List, given the fatal consequences of the improper use of tear gas.

• Provide stricter end-use monitoring of tear gas and related materials through the Department of Defense.

• Ensure that any military assistance to Bahrain comports with the Leahy Law and section 502(b) of the Foreign Assistance Act of 1961.

• Fully support international efforts to draft guiding principles on the proper use of all toxic chemical agents, and lead the international community in supporting scientific research on the health effects of these agents.
Methods and Limitations

This report’s findings are based on field research that Physicians for Human Rights conducted in Bahrain (7-12 April 2012) to investigate reported violations of medical neutrality and excessive use of force by law enforcement officials in Bahrain during the previous year. Extensive desk research (using Lexis-Nexis, ProQuest, and PubMed databases) supplemented this analysis. The PHR team was comprised of Richard Sollom, Deputy Director at PHR, and Holly Atkinson, Assistant Professor of Medicine and Director of the Human Rights Program at Mount Sinai School of Medicine, and Assistant Professor of Public Health at Weill Medical College of Cornell University.

The team conducted 102 semi-structured interviews with Bahrainis who reported human rights violations, corroborating eyewitnesses to these alleged events, civil society leaders, and government officials. To select these information-rich cases, field researchers conducted purposeful sampling to garner both cases that highlighted individual human rights violations (intensity sampling) as well as cases that described cross-cutting themes (heterogeneity sampling). Chain (or snowball) sampling was employed to locate corroborating witnesses, who were interviewed independently from the original source, for probative evidence. Other forms of corroboration that PHR conducted or utilized in this study include:

1. Physical examinations by a PHR physician of victims of reported human rights violations
2. Evaluation of medical records of victims of reported human rights violations
3. Visual verification of actual locations of reported human rights violations
4. Review of photographic, radiographic, and video evidence

Interviewees were deemed credible (and data from their testimony was included in this report) if they purported to witness the event, gave a consistent account of events following repeated probes, and reported events that coincided with dates and times of known events.

To ensure consistency, investigators followed a semi-structured interview format with probes detailing the who, what, why, when, where, and how a reported human rights violation took place. To allow for unanticipated issues to arise, investigators combined semi-structured questions with open-ended interviewing. Interviews were conducted in English or with Arabic interpreters and were held in private settings, often in the witnesses’ homes. In-depth interviews lasted between 60 and 90 minutes. PHR investigators obtained oral, informed consent from each participant following a detailed explanation of PHR, the purpose of the investigation, and the potential benefits and risks of participation. All interviews were made anonymous by removing identifying information from the interview record. An Ethics Review Board convened by PHR approved this study. To minimize the impact on their physical, mental, and social integrity, interviewees in this report are referred to under single-name pseudonyms, and some identifying information has been removed.

By its nature this study is subject to limitations in duration, scope, and access. The April 2012 field investigation was relatively short in duration as the research team’s travel was limited; the Government of Bahrain only permitted investigators to enter the country for a five-day period. The Government of Bahrain has withheld key data that would contribute to full analysis of all reported violations throughout the country, such as information on types of toxic chemical agents with severe and possibly lethal effects used on civilian populations. Notwithstanding these limitations, the study produced sufficient firm data on which to make informed recommendations.

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Background

Bahraini protesters calling for political and economic reform began to march on the streets of Bahrain’s capital Manama in early 2011. Mostly young and Shi’a, they planned their first demonstration for 14 February. Inspired by recent protests in Egypt and Tunisia, Bahraini protesters camped in Pearl Square, the nation’s symbolic center. These unarmed citizens peacefully called for a new constitution, an elected government, greater authority for Parliament, greater political freedom, and the elimination of discrimination by minority Sunnis in the ruling class against the majority Shi’a population.

Patterns of toxic chemical agent misuse in Bahrain

The Bahraini government responded to protests with violence and minimal concessions. In response to the unrest, government law enforcement officials attacked unarmed protesters with toxic chemical agents, rubber bullets, and birdshot. In the first days of the protests, several people died and dozens were wounded. As protests continued, Bahrain’s law enforcement officials began to use toxic chemical agents routinely against civilians. In April 2011, PHR investigators documented cases where Bahraini forces launched toxic chemical agents in enclosed spaces, including homes.

In March 2011, the King of Bahrain declared a three-month state of emergency as pro-democracy protests spread. Even under a state of emergency, which authorized Bahrain’s armed forces in closed spaces, including homes.

3. This report uses the terms demonstration, protest, and assembly interchangeably.
5. Michael Slackman, Bahrain Takes the Stage With a Raucous Protest, New York Times, 15 Feb. 2011, http://www.nytimes.com/2011/02/16/world/middleeast/16bahrain.html. The Pearl Roundabout, found in the center of capital city Manama, is surrounded by the Bahrain Central Market, Marina, Pearl and City Center Roundabout and the A’раб Al Lulu [Pearl Towers] apartment complex, which is named after the Pearl Monument (no longer standing). The Pearl Monument contained six dhow “sails” reaching skyward [representing the Gulf Cooperation Council’s six member nations], which joined together to hold a pearl at the top [signaling Bahrain’s history of pearl cultivation].
8. Id.
13. See Barbara Surk and Reem Khalifa, Bahrain’s King Declares State of Emergency, The Washington Times,
forces to “take necessary steps to restore national security,” international law prohibits governments from restricting the ‘non-derogable’ right to life and the right to be free from torture and cruel, inhuman or degrading treatment. Bahrain’s state of emergency was lifted, moreover, on 1 June 2011; all of the rights violations PHR documents in this report occurred after June 2011.

Bahrain established the Royal Independent Investigation Commission (later known as the Bahrain Independent Commission of Inquiry) in June 2011 to investigate alleged gross human rights violations in response to the February and March 2011 protests, as reports of excessive use of toxic chemical agents against civilians mounted. The commission later found that anti-riot police used toxic chemical agents disproportionately to disperse protesters, but since that pronouncement, police officers’ approach to dealing with protesters appears to have become even less restrained.

Manufacturers of toxic chemical agents deployed in Bahrain

Toxic chemical agent canisters in Bahrain appear to come from at least four main manufacturers: Brazilian company Condor Non-Lethal Technologies, US-based Nonlethal

A Bahraini man displays an exploded canister of CS gas which was shot into his house. Photo: Richard Sollom, PHR

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18. See Do No Harm: A Call for Bahrain to End Systematic Attacks on Doctors and Patients, supra note 11, at 16.
Condor Non-Lethal Technologies has stated that while it does supply weapons to more than 35 countries, including some in the Arab world, it never exported weaponry to Bahrain. Although Condor would not reveal its clients for reasons of commercial competitiveness, the company noted that troops from at least five different countries in the region were operating inside Bahrain (possibly with Condor-made toxic chemical agents) at the request of the Bahraini government. At the time of this writing, the Brazilian government has yet to report on alleged exports of Condor’s toxic chemical agents to Bahrain.

In February 2012, the group “Anonymous” hacked the website of US-based company Combined Systems Inc., which exports riot-control equipment to armies around the world. The company has yet to address allegations that it has been a primary riot control agent (RCA) supplier to MENA governments embroiled in the Arab Spring. Although Combined Systems Inc. refuses to comment on whether it exports toxic chemical agents to Bahrain, sources have documented the use of canisters bearing its logo in Egypt.

Governments are the arbiters of whether products such as chemical agents are exported to other countries; they have the responsibility to grant or deny export licenses for various products.

**History and development of toxic chemical agents**

**Definition and origins.** Tear gas is a term used to refer to a group of toxic chemical agents that disable people exposed to them by irritating the lungs, skin, or eyes. These agents are also called lachrymatory agents, peripheral chemosensory irritants (PCSI), riot control agents and harassing agents, and qualify as “less-lethal” weapons. Toxic lachrymatory chemical agents induce incapacitation by irritating the respiratory system, mucous membranes, skin or eyes.
agents are among the most commonly used types of riot control agents. At least 15 chemicals have been used worldwide as harassing agents, with CS gas being the most commonly used by law enforcement for crowd control. PHR uses the term “toxic chemical agents” instead of tear gas in this report to underscore the toxicity of these chemicals. “Tear gas,” implying that these chemical agents merely cause tearing, is a misnomer.

Precursors to today’s lachrymatory riot control agents may have been used against civilian populations as early as 1912, and militaries employed toxic lachrymatory agents as weapons for the first time in 1914. Some of the chemicals used in today’s riot control agents, however, evolved from chemical weapons developed as early as the 1800s. CS gas was identified as a lachrymatory agent in 1928 and was weaponized in the mid-1950s. The letters “CS” stand for the initials of B.B. Corson and R.W. Stoughton, American chemists who discovered the properties of the chemical in 1928. Toxic lachrymatory agents and other chemical warfare agents (CWAs) were used extensively throughout both World Wars I and II. The United States used CS gas on the battlefield for the first time during the 1960s Vietnam War.


Facts about Riot Control Agents, supra note 33.

Howard Hu, et al., Tear Gas – Harassing Agent or Toxic Chemical Weapon?, 262 JAMA 660 (4 Aug. 1989). Among these chemicals are CA gas, which was one of the first toxic chemical lachrymatory agents used and is now obsolete, and CN gas, which was discovered in 1869 and has been replaced largely by CS gas. USAF Institute for National Security Studies, Nonlethal Weapons: Terms and References, INSS Occasional Paper 15, 25 (1996), available at http://www.usafa.edu/df/inss/OCWP/cwp15.pdf.

CS gas is known scientifically as o-chlorobenzylidene malononitrile with a molecular formula of C8H7ClN2. When combined with other agents, it can be easily dispersed. B.L. Danto, Medical problems and criteria regarding the use of tear gas by police, 8 Am J Forensic Med Pathol 317, 319 (1987); Jay P Sanford, Medical aspects of riot control harassing agents, 27 Annu Rev Med. 421, 423 (1976).


Ethylbromacetate, a strong lachrymatory agent, was developed in 1858 and later became the first “combat gas” of World War I. The chemical chloracetone largely replaced ethylbromacetate in 1914. An even more potent lachrymator, xylyl bromide, was first used in 1915. Eric Croddy, Chemical and Biological Warfare: A Comprehensive Survey for the Concerned Citizen 118 (2001).

French authorities used Ethylbromacetate to control violent mobs and incapacitate criminals. Id.

The French army reportedly launched grenades containing the substance Ethylbromacetate at the German army. Id.

The invention of chlorine, one of the earliest recognizable chemical weapons, is attributed to the Swedish chemist Carl Scheele in 1774. Office of The Surgeon General, Department of the Army, United States of America, Medical Aspects of Chemical and Biological Warfare 10 (1997), available at http://www.opas.org.br/ambiente/quimicos/fulltex/armas/textos/chebio/chebio.pdf#page=24. British chemist John Davey created phosgene, a choking agent nearly ten times as toxic as chlorine, in 1812. Together with chlorine, phosgene was responsible for more deaths in WWI than any other chemical agent. Scientists in both Germany and the United Kingdom created sulphur mustard (SM) in 1860. Invented explicitly as a weapon of mass destruction, SM was the earliest form of mustard gas. Ladislaus Sznitcz, History of chemical and biological warfare agents, 214 Toxicology 167, 174-175 (2005), available at http://www.sciencedirect.com/science/article/pii/S0300483X05002829.


Oxford English Dictionary, supra note 44; Medical problems and criteria regarding the use of tear gas by police, supra note 38, at 319.

Initially, CWAs were available only to countries with advanced chemical industries; however, by the end of the century they were produced and used by countries with less-developed industries as well as terrorist organizations. James A. Romano, Jr., et al., Chemical Warfare Agents: Chemistry, Pharmacology, Toxicology, and Therapeutics 627 (James A. Romano Jr. et al. eds., 2d ed. 2008).

Non-Lethal Weapons as Legitimizing Forces?, supra note 45, at 25.

However, countries continued to develop and stockpile chemical and biological weapons following WWI and throughout the 20th century. The need for comprehensive international standards regulating the use and development of chemical weapons became apparent, especially following countries’ abuse of many different chemical agents both for use in combat during war and against their own civilians.

In 1997, the Chemical Weapons Convention (CWC) effectively prohibited the use of chemical and biological weapons in warfare, and promoted disarmament. The CWC, however, allows law enforcement officials to use some chemical agents during periods of peacetime or civil unrest. The convention calls permissible chemicals “riot control agents” and stipulates that these agents must have effects which disappear shortly after exposure. Lack of state consensus at the time of the CWC’s drafting may explain why the Convention does not forbid use of chemical agents by law enforcement personnel. It has been suggested that domestic regulation of chemical agents did not take precedence and therefore was unable to be resolved.

Global use. Within the past year and a half, governments of Arab Spring countries including Bahrain, Egypt, Libya, Syria, Tunisia, and Yemen have deployed toxic chemical agents against civilians. Other governments that have recently deployed toxic chemical agents against civilians.

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51. Examples include abuse of chemical agents in Vietnam by the United States and Iraq by Iraq as well as their use against civilians by the Iraqi government and Japanese terrorists. Chemical Warfare Agents: Chemistry, Pharmacology, Toxicology, and Therapeutics, supra note 47, at 628-630; History of chemical and biological warfare agents, supra note 43, at 172.
53. As party to the Chemical Weapons Convention, Bahrain is permitted to employ certain toxic chemicals for, inter alia, purposes of scientific and medical research; protection against chemical weapons; military purposes that do not rely on toxic chemicals as agents of warfare; and law enforcement including domestic riot control purposes. Id., at art. 2.9(a)-(d).
54. “Riot Control Agent” means: Any chemical not listed in a Schedule, which can produce rapidly in humans sensory irritation or disabling physical effects which disappear within a short time following termination of exposure.” Chemical Weapons Convention, supra note 52, at art. 2.7.
against their civilian populations include Chile, Honduras, Israel, Panama, Turkey, and Uganda. Such tactics are not a new phenomenon. For decades governments have launched attacks against civilians with toxic chemical agents. Perhaps most similar to the Bahraini context, authorities in South Korea in 1987 used hundreds of thousands of canisters of toxic chemical agents over the course of two months (June and July) in the streets of Seoul to crush civilian uprisings. Just as in Bahrain, civilians exposed to high quantities of toxic chemical agents in South Korea suffered acute illnesses and severe health impairments; affected individuals went without medical attention for fear of police and government harassment.

Types of chemical riot-control agents and their effects

**o-Chlorobenzylidene malononitrile (CS, CS1, CS2).** The chemical CS remains the most commonly used lachrymatory riot control agent today. Symptoms of CS exposure include severe tearing, burning in the nose and throat, eye spasms, chest tightness, coughing, and wheezing among other signs of oral and respiratory distress. Scientists have also reformulated o-Chlorobenzylidene malononitrile (CS, CS1, CS2). The chemical CS remains the most commonly used lachrymatory riot control agent today. Symptoms of CS exposure include severe tearing, burning in the nose and throat, eye spasms, chest tightness, coughing, and wheezing among other signs of oral and respiratory distress. Scientists have also reformulated

62. Police in Chile used toxic chemical lachrymatory agents against more than 30,000 civilians protesting against a hydroelectric dam, and temporarily stopped using the chemical agents over concerns that these lachrymatory agents may lead to miscarriages. Latin America News Dispatch, *Chile Suspends Use of Tear Gas Amid Concerns Over Miscarriages*, 19 May 2011, http://latindispatch.com/2011/05/19/chile-suspends-use-of-tear-gas-amid-concerns-over-miscarriages/.


68. Tear Gas – Harassing Agent or Toxic Chemical Weapon?, supra note 37, at 660.


70. Id., at 4.

71. Short-term and long-term physical effects of exposure to CS spray, supra note 39, at 172-174.

72. Id., at 172; B Ballantyne and DW Swanston, *The comparative acute mammalian toxicity of 1-chloroacetophenone (CN) and 2-chlorobenzylidene malononitrile (CS)*, 40 Arch Toxicol 75, 76 (1978) http://www.springerlink.com/content/m17075801362u733/.
CS into the chemical agents CS1 and CS2, which increase both the severity and duration of tearing effects of CS. CS1 stays active when it settles onto the ground, re-aerosolizing when touched. CS1 can remain active for 14 days in an enclosed space, and about one week in open air [long after a given protest is over]. CS2, which is water-resistant, is so potent that wetting an exposed part of the body can re-activate the gas and regenerate the toxins. Chemicals in CS2 remain toxic for about one month after being released, although particles can remain active for two months or more (the chemicals are extremely potent, and water cannot wash them away). CS, like other toxic chemical agents, may be released through pressurized devices such as spray cans or guns, or explosive cartridges that release the toxic agent through a powder charge. Grenades may also release CS in aerosol form; aerosol CS has been known to cause blistering at close range.

Chloracetophenone (CN). The most toxic chemical lachrymatory agent currently available is chloracetophenone (CN), which irritates the skin and eyes more than CS. As a result, CS gas has generally replaced CN as a riot control agent in many countries, as it is thought to be less toxic—although Handheld Mace still contains a small percentage of CN. Though acute effects of exposure to CN are similar to effects of exposure to CS, CN has a greater potential to cause corneal damage, especially when cartridges have expired. The lachrymatory prop-

74. CS2 is blended with silicone-treated silica aerogel, which enables it to repel water. USAF Institute for National Security Studies, supra note 37, at 26.
75. Id., at 26.
76. U.S. Army Field Manual, supra note 73, at 6-2.
77. Id.
78. Id.
79. Id.; USAF Institute for National Security Studies, supra note 37, at 25.
83. "w-Chlorocetophenone has been shown to present a far greater cutaneous hazard than o-chlorobenzylidemalononitrile when applied directly to the skin." The cutaneous reactions produced by CS and CN when applied directly to the skin of human subjects, supra note 81, at 150. See also Lacrimating agents (CS and CN) in rats and rabbits, supra note 80, at 452.
84. Id. "Fatalities have occurred following intense, prolonged exposure to CN." Medical aspects of riot control (harassing) agents, supra note 81, at 426. Studies show that CS, when ingested or inhaled, is significantly less likely than CN to cause tissue damage. The comparative acute mammalian toxicity of 1-chloracetophenone (CN) and 2-chlorobenzylidene malononitrile (CS), supra note 72, at 75.
85. Chemical Mace contains 0.9% CN. USAF Institute for National Security Studies, supra note 37, at 25.
86. "The acute transient clinical effects of both CN and CS are quite similar..." Medical aspects of riot control (harassing) agents, supra note 81, at 424.
87. "If the CN cartridges are too old and the agent does not vaporize adequately, small solid particles may strike
erties of CN gas were discovered in Germany in 1869, and Japan may have been first to use CN gas on the battlefield. 88

Dibenz (b, f)-1, 4-oxazepine (CR). CR 89 is another toxic chemical agent and is at least five times more potent than CS. 90 British scientists developed CR gas in 1962. 91 Persons exposed to CR gas experience painful photophobia as well as a burning sensation that intensifies on damp skin. CR remains active in the environment for 60 days, at least as long as CS. 92 CR gas became known as "fire gas" in 1974 following its use in Northern Ireland, owing to the burning sensation it causes. 93

Oleoresin capsicum (OC) and pelargonic acid vanillylamide (PAVA). Law enforcement officers are also increasingly using pepper spray (OC or PAVA) 94 as a riot control agent (often instead of Chemical Mace), 95 which causes tearing and burning when sprayed directly into a person’s face as riot control agents. 96 The principal chemical in pepper spray is oleoresin capsicum (OC), which comes from the capsaicin in chili peppers. 97 PAVA is a synthesized capsaicin that, when directed at a person’s eyes, can reportedly cause more pain than CS gas. 98

Medical hazards of exposure to toxic chemical agents

Longitudinal or population-based studies on the long-term effects of toxic lachrymatory agents on repeatedly exposed humans do not exist, because no government is known to have deployed toxic lachrymatory agents against a civilian population for an extended period of time. 99 Some tests, however, have shown that CS gas can damage chromosomes and change DNA, raising the potential of these agents to cause long-term carcinogenic 100 and deleterious reproductive effects, 101 as well as concerns about their long-term harmful effects on the cornea and cause damage. 102

88. Chemical and Biological Warfare, supra note 40, at 118.
89. CR can be dispersed as a 0.1% CR solution comprised of 80% propylene glycol and 20% water. USAF Institute for National Security Studies, supra note 37, at 25.
90. Id.
91. Id.
92. U.S. Army Field Manual, supra note 73, at 6-3.
93. USAF Institute for National Security Studies, supra note 37, at 25.
94. Chemical and Biological Warfare, supra note 40, at 118.
95. USAF Institute for National Security Studies, supra note 37, at 27.
96. OC does not vaporize or emit fumes capable of incapacitating wide-reaching groups of people. U.S. Army Medical Research Institute of Chemical Defense, supra note 82, at 157.
97. Chemical and Biological Warfare, supra note 40, at 118.
98. Chemical and Biological Warfare, supra note 40, at 118.
101. Physicians for Human Rights spoke to physicians in the Gaza Strip in the 1980s, who reported some 40 cases of intra-uterine fetal birth. “All these cases were among women who noticed the absence of fetal movement
pulmonary system following inhalation.\textsuperscript{102} In addition, these toxic chemical agents can cause severe burns including (1) chemical burns resulting from direct contact with CS; (2) contact burns from touching the CS canisters; and (3) flame burns, when a grenade explodes too close to an individual.\textsuperscript{103} It has also been suggested that CS inhalation may cause breathing complications, such as laryngospasm that can complicate operative procedures.\textsuperscript{104}

If a person exposed to toxic chemical agents leaves the saturated area quickly, symptoms of exposure can dissipate within 15 minutes, but can also last for hours.\textsuperscript{105} This has led proponents of toxic chemical agent use to argue that when used properly, chemical riot control agents are nonlethal and therefore safe.\textsuperscript{106} Toxic chemical agents are often used improperly, however, and scientists and law enforcement agencies alike have found that these agents can lead to fatalities\textsuperscript{107} when employed indiscriminately and with disproportionate force.\textsuperscript{108}

According to one recent study published by the Federation of American Scientists, incapacitating chemical agents authorized for crowd control purposes might prove fatal for 10% of those exposed.\textsuperscript{109}
Toxic chemical agent vapors accumulate in low areas\textsuperscript{110} and do not disperse easily when canisters are detonated in confined spaces. As a result, health effects of exposure to these toxic chemical agents in confined spaces may be both prolonged and more severe.\textsuperscript{111} Consistent exposure to high doses of riot control agents in enclosed spaces has been shown to cause acute lung damage\textsuperscript{112} and death.\textsuperscript{113}

Repeated exposure to toxic chemical agents may lead to increased sensitization such that subsequent exposures can result in increased health complications.\textsuperscript{114} Exposure to toxic chemical agents at close range increases the potential for toxic chemical substances to enter bodily tissues, which can compromise and inflame immune systems and cause chronic symptoms.\textsuperscript{115} Various factors affect the impact of toxic chemical agents on an individual, including whether the gas is delivered in solution or aerosol form, the length of exposure, temperature of surroundings, humidity (high temperature and humidity increase skin reactions\textsuperscript{116}), age, and whether the exposed person has other diseases.\textsuperscript{117}

In light of the severe detrimental health impacts noted by the Bahrain Independent Commission of Inquiry and this report, it is crucial that Bahraini authorities publicly identify which types of toxic chemical agents they use against civilians to allow further medical research and development of specific usage guidelines.\textsuperscript{118} Bahraini officials have not responded to PHR’s request for a list of toxic chemical agents the government deploys and their concentrations.\textsuperscript{119}

\begin{footnotesize}
\begin{enumerate}
\item D. Hank Ellison, Handbook of Chemical and Biological Warfare Agents 405 (CRC Press ed, 2d ed. 2008).
\item “When used at higher levels, in confined spaces and/or for prolonged duration, there is a greater potential for the toxicity to escalate.” U.S. Army Medical Research Institute of Chemical Defense, supra note 82, at 168.
\item Histologic findings included “pulmonary vascular congestion, accompanied in severe cases by focal hemorrhages and edema.” Medical Hazards of the Tear Gas CS, supra note 105, at 237.
\item “In enclosed places, prolonged exposure to the resulting high dosages of RCAs can kill or disable personnel and can cause serious physiological reactions.” U.S. Army Field Manual, supra note 73, at 6-1. See CW Chung & AL Giles Jr., Sensitization of guinea pigs to alpha-chloroacetophenone (CN) and ortho-chlorobenzylidene malono-nitrile (CS), tear gas chemical, 109 J Immunol. 284, 284 (1972) http://www.jimmunol.org.ezproxy.bu.edu/content/109/2/284.long; Tear Gas—Harassing Agent or Toxic Chemical Weapon?, supra note 37, at 661. But cf. Medical problems and criteria regarding the use of tear gas by police, supra note 46, at 320, which found that CS has a safety factor of 2,600, meaning that “2,600 times as much as is required to affect humans would be required to be fatal.”
\item “Persons sensitized by a previous contact with CN or other tear gas ingredient may develop serious complications on a second encounter…” Sensitization of guinea pigs to alpha-chloroacetophenone (CN) and ortho-chlorobenzylidene malono-nitrile (CS), supra note 113, at 291. Sensitization may be more readily produced and more severe with repeated exposure to CN. Lacrimating agents (CS and CN) in rats and rabbits, supra note 80, at 452.
\item Tear gas chemicals, especially CN may enter into the tissues of eyes or bones of human victims who are fired upon at close ranges and may generate severe immunologic responses if the chemical is released continuously. Some of the chronic clinical symptoms of such victims might have been due to immunologic inflammatory reactions.” Sensitization of guinea pigs to alpha-chloroacetophenone (CN) and ortho-chlorobenzylidene malono-nitrile (CS), supra note 113, at 291.
\item Even when used appropriately tear gas can induce severe contact dermatitis, especially if the victim develops an allergic reaction. NS Penneys, RM Israel, and SM Indgin, Contact dermatitis due to 1-chloroacetophenone and chemical mace, 281 N Engl J Med 413, 413-415 (1969). Symptoms are also exacerbated in hot or humid weather. Tear Gas—Harassing Agent or Toxic Chemical Weapon?, supra note 37, at 661.
\item Symptoms of RCA exposure depend on both dose and duration of exposure. Pre-existing asthma and underlying cardiac disease has been shown to exacerbate toxicity. When released as an aerosol, particles can accumulate and cause corneal abrasions when they penetrate the eye. U.S. Army Medical Research Institute of Chemical Defense, supra note 82, at 155, 163-165. The very young and very old may face a greater risk of negative health effects due to toxic chemical agent exposure. Elspeth Worthington & Patrick A Nee, CS exposure-clinical effects and management, 16 Accid Emerg Med 168, 168-170 (1999) http://emj.bmj.com/content/16/3/168.full.pdf+html. See also CL Punte, et al., Exposures to orthochlorobenzylidene malononitrile, 6 Arch Environ Health 366, 366-74 (1964). One study determined that a 4-month year old died from pneumonia developed after exposure to CS gas. Sungmin Park & Samuel T. Giannona, Toxic Effects of Tear Gas on an Infant Following Prolonged Exposure, 123 Arch Pediatr Adolesc Med. 245, 245-246 (1972).
\item Interview with key informant no. 11, in Bahrain (8 Apr. 2012).
\item PHR requested this information when investigators met with Bahraini Ministry of the Interior officials on 11 April 2012.
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Weaponizing Tear Gas

Bahraini government violates UN principles on the use of force during protests

Analysis from PHR’s April 2012 investigation in Bahrain reveals that Bahraini law enforcement officials routinely deployed excessive force while using riot-control agents against civilian protesters.120 Specifically, PHR concludes that Bahraini police (1) failed to exercise restraint121 before resorting to force; (2) used disproportionate force122 when responding to protesters; and (3) failed to minimize damage and injury to demonstrators.123 Based on this analysis, Physicians for Human Rights concludes that such unrestrained use of toxic chemical agents against a civilian population has caused gratuitous—and sometimes life-threatening—harm to men, women, and children in Bahrain.

Bahraini law enforcement officials use preemptive and excessive force

All 32 eyewitnesses exposed to toxic chemical agents whom PHR interviewed reported that law enforcement officials failed to employ gradations of force when confronting peaceful demonstrators.124 Police reportedly used force preemptively125 to disperse peaceful gatherings. This preemptive action contravenes UN guidelines, which mandate that law enforcement officials begin with nonviolent means before using force or firearms.126 For example, riot police routinely accost peaceful protesters and immediately use force to disperse participants before engaging in dialogue or other nonviolent tactics.127

One eyewitness reported that while participating in a small demonstration alongside approximately 50 other people in his Shi’a village in February 2012, scores of police wearing dark blue uniforms arrived at the scene, split into three groups, and suddenly, without warning, began to attack the

120. United Nations best practices on the use of force state the importance of employing non-violent means before resorting to use of force; exercising restraint and proportionality; minimizing damage and injury; ensuring that the injured receive assistance and medical aid; ensuring that relatives of the injured are notified; and promptly reporting deaths to officials, among other measures. U.N. Basic Principles on the Use of Force, supra note 108, art. 5(a)-(d), 6. PHR’s findings are corroborated by findings of the Bahrain Independent Commission of Inquiry, which found that “The usual practice of PSF units was to use excessive amounts of tear gas to disperse protesters.” BICI Report, supra note 20, at ¶ 1091.

121. “Whenever the lawful use of force and firearms is unavoidable, law enforcement officials shall…exercise restraint in such use” U.N. Principles on the Use of Force, supra note 108, at art. 5(a). UN best practice also requires law enforcement agencies to restrain the application of means causing death or injury to persons. Id., at art. 2.

122. “Whenever the lawful use of force and firearms is unavoidable, law enforcement officials shall… act in proportion to the seriousness of the offense and legitimate objective to be achieved” Id., at art. 5(a).

123. “Law enforcement officials shall...minimize damage and injury, and respect and preserve human life” Id., at art. 5(b).

124. “Law enforcement officials, in carrying out their duty, shall, as far as possible, apply non-violent means before resorting to the use of force and firearms. They may use force and firearms only if other means remain ineffective or without any promise of achieving the intended result.” Id., at art. 4. See also U.N. Code of Conduct for Law Enforcement Officials, supra note 1, at art. 3.


126. Before law enforcement officials resort to force, they must attempt to use non-violent means, such as physical presence, dialogue, communication of information, and de-escalation of conflict when dealing with peaceful assemblies. Policy on Formed Police Units in United Nations Peacekeeping Operations, 9, DPKO Ref. 2009.32 (effective 1 Mar. 2010).

crowd with tear gas canisters, bird shot, and sound bombs. According to this eyewitness, the police made no attempt to communicate first with any of the protesters.\\footnote{128}

This and 15 other eyewitness testimonies PHR received indicate that law enforcement officials routinely fail to warn civilians of their intent to use force,\\footnote{129} which contravenes UN guidelines.\\footnote{130}

**Bahraini law enforcement officials use excessive and disproportionate force**

Bahraini riot police not only fail to exercise restraint when confronting demonstrators, they also overwhelm peaceful protesters with disproportionate force exceeding the “minimum extent necessary” to disperse unlawful assemblies.\\footnote{131} All 16 demonstrators whom PHR investigators interviewed reported that law enforcement officials routinely fire inestimable numbers of grenades containing toxic chemical agents at civilians who demonstrate peacefully.

*A young man from Saar named Ali reported that immediately after a large number of riot police arrived at a nonviolent demonstration in his village on 28 January 2012, they shot volley after volley of tear gas canisters directly at the group of some 50 protesters. He heard the explosions come from behind. White low-hanging clouds of toxic smoke then appeared and were so thick he couldn’t see. Ali suddenly collapsed, blood streaming from his head where he had been hit by a canister.\\footnote{132}

The King of Bahrain’s own Commission of Inquiry found that “in the events of February/March 2011 and subsequent events in many situations,”\\footnote{133} “[police] units resorted to the disproportionate use of tear gas for the dispersion of protesters. On many occasions, the number of tear gas canisters fired at protesters was disproportionate to the size of the demonstration and the number of participants.”\\footnote{134}

In using excessive amounts of toxic chemical agents against demonstrators, Bahraini law enforcement officials violate best practices, which dictate that any chemicals deployed should only contain the minimum that fulfills the purpose—“namely to minimize a person’s capacity for resistance without unnecessarily prolonging their discomfort.”\\footnote{135} Those survivors of chemical agent attacks whom PHR interviewed reported debilitating short-term symptomatology and long-term sequelae from exposure to toxic chemical agents.

PHR met with former Miami (Florida, US) Chief of Police John Timoney,\\footnote{136} whom the Bahraini Ministry of Interior hired in December 2011 to advise law enforcement officials on crowd-control tactics.\\footnote{137} Timoney has publicly defended the government’s use of toxic chemical
agents “to create distance between gangs of rioters that have been ... assaulting police officers with Molotov cocktails and also with bricks, nails, and other things.”

This advisor stated that police are authorized to respond with force to defend themselves against imminent threat of death or serious injury, but Timoney did not acknowledge that such force must be tempered and directed proportionally at those who pose a grave threat. The International Committee of the Red Cross (ICRC) warns that when law enforcement officials resort to practices that extend beyond the powers and authorities granted to them by the law, the distinction between them and criminal offenders can no longer be made.

One non-peaceful demonstrator whom PHR interviewed reported that riot police had first attacked a group of peaceful demonstrators of which he was a part, before he attacked the riot police. Another eyewitness reported to PHR that he had burned the first and second digits of his right hand while attempting to throw back an exploded canister containing a toxic chemical agent that law enforcement officers had fired at him. The BICI did document times in which protesters have endangered law enforcement officials’ lives by throwing Molotov cocktails, and no demonstrator has the right to attack law enforcement officials with incendiary devices. However, as previously noted, law enforcement officials must in response only deploy the minimal amount of force necessary to subdue or apprehend a violent protester. Such disproportionate use of force excessively harms individuals and violates UN guidelines.

Bahraini law enforcement officials fail to minimize harm

Failure to minimize damage and injury to demonstrators constitutes a third means by which Bahraini law enforcement officials deploy excessive force. Analysis of PHR findings shows that law enforcement officials who fired toxic chemical agents at assemblies without adhering to principles of proportionality and restraint caused unnecessary injury to civilians—demonstrators and bystanders alike.

PHR investigators interviewed 16 survivors who reported that Bahraini riot police fired canisters containing toxic chemical agents directly at civilians, often aiming hand-held launchers at their targets’ upper bodies and heads.

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139. “Law enforcement officials shall not use firearms against persons except in self-defence or defence of others against the imminent threat of death or serious injury, to prevent the perpetration of a particularly serious crime involving grave threat to life, to arrest a person presenting such a danger and resisting their authority, or to prevent his or her escape, and only when less extreme means are insufficient to achieve these objectives. In any event, intentional lethal use of firearms may only be made when strictly unavoidable in order to protect life.” U.N. Principles on the Use of Force, supra note 108, at art. 9.

140. “Proportional” refers to the seriousness of the offense and the legitimate objective to be achieved. Id., at art. 5(a).

141. Objectives must be “legitimate” and the use of force must be “proportionate to the seriousness of the offense.” Id.


143. Interview with key informant no. 18, in Bahrain (9 Apr. 2012).

144. The Bahrain Independent Commission of Inquiry documented instances in which protesters threw rocks and Molotov cocktails at police. BICI Report, supra note 20, at ¶ 234, 258, 531.

145. Recourse to potentially lethal force “may only be made when strictly unavoidable in order to protect life.” U.N. Principles on the Use of Force, supra note 108, at art. 9.

146. “Whenever the lawful use of force and firearms is unavoidable, law enforcement officials shall ... [m]inimize damage and injury, and respect and preserve human life.” Id., at art. 5(b).

147. A U.N. human rights expert recently noted that “tear gas canisters should never be fired directly at demonstrators.” Special Rapporteur on the promotion and protection of the right to freedom of opinion and expression, Statement by the UN Special Rapporteur on the promotion and protection of the right to freedom of
One 20-year-old demonstrator told PHR that while he was attending a nonviolent rally, a policeman fired a tear gas canister at his head. He was immediately blinded and fell to the ground.148 PHR conducted a physical examination and reviewed this respondent’s medical records, which noted skull fractures and brain hemorrhaging.149

Another 15-year-old protester admitted that he had thrown small stones at a phalanx of riot police, saying he was “revenging all the people they have hurt.” In response, one official reportedly shot a canister containing a toxic chemical agent directly at this boy’s torso, severing a nerve in his upper right arm. Results from a physical examination PHR conducted revealed wounds highly consistent with the boy’s account, and review of his medical records corroborated his testimony.150

PHR further determined that Bahraini law enforcement officials failed to render aid and assistance to wounded protesters—as international guidelines require151—thus exacerbating injuries. Among 14 wounded demonstrators whom PHR investigators interviewed, none reported that law enforcement officials had come to their aid to render assistance, even when they were in need of emergency medical care. In fact, some demonstrators reported that Bahraini police fired on them and then proceeded to beat them after they had already been incapacitated.

PHR interviewed a young teenage boy who reported that he had been knocked unconscious after police fired a tear gas canister at his head. The boy’s family reported that police then surrounded him and kicked him while he lay unconscious and bleeding from an open head wound.152

During a demonstration of 20-30 people who were protesting police use of force at a funeral for a wounded demonstrator earlier that morning, some 20 riot police stormed them and aimed their tear gas launchers153 at the demonstrators, according to a teenage boy who had attended. He reported that one policeman fired a canister directly at his head, severely injuring his left eye. The boy collapsed on the ground and said that several police then ran over and began to kick him and beat him with batons while he lay bloodied on the street.154

Another means by which Bahraini law enforcement officials fail to minimize harm is by not allowing or providing clear and obvious corridors of escape when using toxic chemical agents for crowd dispersal.155 The Bahrain Independent Commission of Inquiry (BICI) documented this pattern by which police routinely blocked entrances to villages where protests took place, in order to prevent demonstrators from escaping once they began firing toxic chemical agents

148. Interview with key informant no. 73, in Bahrain (8 Apr. 2012).
149. The medical record noted “depressed fracture of left frontal bone and cerebral hemorrhagic contusion underneath with edema.” PHR’s physical exam revealed a 2.75-cm sutured laceration just inside the hairline in the left temporal region, ending in a circular, depressed region.
150. Interview with key informant no. 64, in Bahrain (7 Apr. 2012).
151. “Law enforcement officials must ... ensure assistance and medical aid are rendered to any injured or affected persons at the earliest possible moment” U.N. Principles on the Use of Force, supra note 108, at art. 5(c).
152. Interview with key informant no. 63, in Bahrain (7 Apr. 2012).
154. Interview with key informant no. 87, in Bahrain (10 Apr. 2012).
to disperse them. At no point should law enforcement officials corner crowds to create a perception of no escape, because this can escalate violence and maximize harm.

**Toxic chemical agent attacks endanger the health of bystanders and protesters**

PHR examined civilians who reported being injured by Bahraini law enforcement officials while exercising their right to freedom of assembly. Injured protesters whom PHR investigators examined suffered from (1) blunt force trauma and lacerations to the head, torso, and limbs due to the impact of metal toxic chemical agent canisters being fired at them; and (2) toxic reaction to exposure to chemical agents such as burning of the eyes, nose, and throat, chest tightness, shortness of breath, vomiting, and skin burns. In addition, a number of people have reportedly died from toxic chemical agent exposure in Bahrain, according to the United Nations.

**Blunt force trauma and lacerations.** Law enforcement officials cause severe blunt force trauma to civilians when they fire toxic chemical agent canisters directly at individuals at close range. Police hit one 27-year-old bystander in the head with a canister while he was walking near the site of a protest in Karanah, causing a fractured skull and intracranial hemorrhaging.

"You’re lucky to have survived," the doctor who performed this CT scan told this victim, "Others from the same injury have died." PHR investigators examined the CT scan, which corroborated this victim’s testimony.

PHR spoke with another bystander, a 13-year-old named Hadi, whom riot police struck in the head with a toxic chemical agent canister as he waited in line at a bakery near the site of an ongoing protest. Hadi reported that he turned to look over his shoulder after hearing a commotion behind him, and saw a group of 20 people run past him trailed by about 50 policemen dressed in blue uniforms and carrying black "safety" equipment. Just moments later, an officer standing approximately 15 meters away shot a tear gas canister at Hadi’s head, knocking him unconscious. PHR examined Hadi and documented a seven-centimeter healed laceration at the hairline of his right forehead as well as a circular depression in his skull roughly five centimeters in diameter, where an arterial pulse was clearly visible and the underlying soft tissue easily palpated. His wound was highly consistent with being struck by a cylinder-shaped object.

Peaceful demonstrators also received facial wounds when police launched toxic chemical agent canisters at heads.

When police reportedly shot a tear gas canister at Ali’s head, they hit him in the left eye, fracturing the bones around his eye and rupturing his eyeball. Doctors at Salmaniya Hospital performed two operations, one to stitch his open wounds and one to repair the broken bones around his eye socket.

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156. BICI Report, supra note 20, at ¶ 1091.
159. “Ballistic studies have shown that the gas jet alone generated by a commercial available blank or tear-gas cartridge possess the characteristics of a missile when fired at close range...” Lethal head injury due to tear-gas cartridge gunshots, supra note 80, at 45-51. Recently, Bahraini law enforcement officials injured prominent human rights activist Zainab al-Khawaja by shooting her in the leg with a toxic chemical agent canister "at close range.” Reem Khalifa, Bahrain witnesses: Activist hurt by gas canister, 28 Jun. 2012, AP, available at http://www.guardian.co.uk/world/feedarticle/10311414.
160. Interview with key informant no. 25, in Bahrain (10 Apr. 2012).
161. Id.
162. Interview with key informant no. 63, in Bahrain (7 Apr. 2012).
163. Interview with key informant no. 87, in Bahrain (10 Apr. 2012).
Ali reported that he has permanently lost use of his left eye. PHR examined Ali’s medical records, which corroborate his testimony.\textsuperscript{164}

**Symptomatology of exposure to toxic chemical agents.** In addition to wounds due to the impact of toxic chemical agent canisters, PHR investigators also documented severe tearing, burning eyes, throat irritation, chest tightness, shortness of breath, and vomiting in individuals exposed to toxic chemical agents.\textsuperscript{165} Because chemicals in toxic lachrymatory agents can destroy membranes of the throat, esophagus, and mouth, such vomiting can become dangerous.\textsuperscript{166} Even if an exposed person quickly leaves the chemical-saturated area, symptoms of exposure can last hours.\textsuperscript{167} It has been shown that hyperventilation, often induced by running, intensifies the effects of toxic chemical agents on the throat and lungs and slows recovery.\textsuperscript{168} Sustained exposure to toxic chemical agents can also burn skin and the cornea of the eye.\textsuperscript{169}

A physiotherapist reported that she developed shortness of breath, wheezing and severe coughing, turned red, and felt hot after being exposed to tear gas that was yellow in color. A doctor at private hospital treated her with Atrovent\textsuperscript{170} and Symbicort\textsuperscript{171}, but she reported having continued difficulty breathing at night and difficulty speaking for approximately two weeks.\textsuperscript{172}

PHR investigators received eyewitness reports that Bahraini police used toxic chemical agents of different colors, ranging from white and yellowish-beige to various shades of dark yellow and orange as well as blue. Local physicians and wounded demonstrators told PHR that symptoms varied based on the color of the gas, with some the lighter-colored gases provoking more tearing and skin irritation, while the dark yellow gas reportedly provoked little tearing but more severe symptoms, including chest tightness and coughing, nausea and vomiting, and loss of consciousness.\textsuperscript{173}

The cases in the above sections illustrate gradations of harm that result from Bahraini law enforcement officials’ excessive use of force. Failing to exercise restraint before resorting to violence, responding to demonstrators with disproportionate force, and failing to minimize harm have led to grave injuries among men, women, and children in Bahrain. These actions contravene established UN principles and international norms that the Bahraini government must uphold.

\textsuperscript{164} Ali’s medical records revealed the “upper and lower lids were shattered with full thickness multiple wounds. The left eye ball was ruptured. The globe was soft and exposed.” A CT scan revealed a fracture of the zygomatic arch with minimal displacement, fracture of all the walls of the maxillary sinus with haemosinus, and a 5 mm subdural hematoma in the left upper parietal region.

\textsuperscript{165} These symptoms are all recognized effects of toxic lachrymatory agent exposure. See Handbook of Chemical and Biological Warfare Agents, supra note 110, at 409. Dr. Holly Atkinson, author of this report suffered acute respiratory distress—including profound shortness of breath as well as severe coughing, which persisted intermittently for approximately four weeks—after 15 minutes’ exposure to toxic chemical agents during a protest in Bahrain in April 2012.


\textsuperscript{167} Medical Hazards of the Tear Gas CS, supra note 105, at 236.

\textsuperscript{168} Exposures to orthochlorobenzylidene malononitrile, supra note 117, at 366-74.

\textsuperscript{169} Medical Hazards of the Tear Gas CS, supra note 105, at 234-40.


\textsuperscript{172} Interview with key informant no. 74, in Bahrain (9 Apr. 2012).

\textsuperscript{173} Interviews with key informants no. 66, 67, 68, 74, 87 in Bahrain (7-10 Apr. 2012).
Legal obligations under UN guidelines on police use of force

Both national\textsuperscript{174} and international\textsuperscript{175} law ensure the right to peaceful assembly, and government authorities may only restrict this fundamental right in the interest of national security or public order.\textsuperscript{176} Although governments may limit this derogable right in accordance with national law and international obligations, they must adhere to rules and standards when dispersing crowds.\textsuperscript{177} The United Nations has established principles for such use of force,\textsuperscript{178} which must always be based on legality,\textsuperscript{179} necessity,\textsuperscript{180} proportionality,\textsuperscript{181} minimizing harm,\textsuperscript{182} and nondiscrimination.\textsuperscript{183} Moreover, law enforcement officials who violate these principles must be held accountable.\textsuperscript{184}

**Legality.** Law enforcement officials are obliged to fulfill their duties to uphold the law and protect citizens.\textsuperscript{185} Bahrain’s Constitution permits civilians to hold peaceful meetings, gatherings, and processions, which law enforcement officials are obliged to permit and protect.\textsuperscript{186} According to Bahrain’s penal code, when groups of five or more persons assemble—specifically with the intent to cause a riot—law enforcement officials may disperse them.\textsuperscript{187}

\textsuperscript{174} “Public meetings, parades, and assemblies are permitted under the rules and conditions laid down by law, but the purposes and the purposes and the means of the meeting must be peaceful” Constitution of the Kingdom of Bahrain, supra note 13, at art. 28(b).

\textsuperscript{175} “The right of peaceful assembly shall be recognized.” International Covenant on Civil and Political Rights art. 21, 16 December 1966, 999 U.N.T.S. 171 [acceded 20 Sep. 2006] [hereinafter ICCPR].

\textsuperscript{176} “No restrictions may be placed on the exercise of this right other than those imposed in conformity with the law and which are necessary in a democratic society in the interests of national security or public safety, public order ... protection of public health or morals or the protection of the rights and freedoms of others.” Id., at art. 21.

\textsuperscript{177} “Governments and law enforcement agencies shall adopt and implement rules and regulations on the use of force and firearms against persons by law enforcement officials.” U.N. Principles on the Use of Force, supra note 108, at art. 1. See also U.N. Code of Conduct for Law Enforcement Officials, supra note 1, at art. 1.

\textsuperscript{178} PHR adopts its definition of “use of force” from the International Association of Chiefs of Police and U.S. Department of Justice, as the “amount of effort required by law enforcement to compel compliance by an unwilling subject.” US Department of Justice, Review of the Department of Justice’s Use of Less-Lethal Weapons (2009), http://www.justice.gov/oig/reports/plus/e0903/final.pdf.

\textsuperscript{179} “Law enforcement officials shall at all times fulfill the duty imposed upon them by law, by serving the community and by protecting all persons ... consistent with the high degree of responsibility required by their profession.” U.N. Code of Conduct for Law Enforcement Officials, supra note 1, at art. 1.

\textsuperscript{180} “Law enforcement officials, in carrying out their duty, shall, as far as possible, apply non-violent means before resorting to the use of force and firearms. They may use force and firearms only if other means remain ineffective or without any promise of achieving the intended result.” U.N. Principles on the Use of Force, supra note 108, at art. 4. See also U.N. Code of Conduct for Law Enforcement Officials, supra note 1, at art. 3, which states, “Law enforcement officials may use force only when strictly necessary and to the extent required for the performance of their duty.”

\textsuperscript{181} “Whenever the lawful use of force and firearms is unavoidable, law enforcement officials shall: [a] Exercise restraint in such use and act in proportion to the seriousness of the offense and legitimate objective to be achieved”. U.N. Principles on the Use of Force, supra note 108, at art. 5(a). See also U.N. Code of Conduct for Law Enforcement Officials, supra note 1, at art. 3.

\textsuperscript{182} “[L]aw enforcement officials shall respect and protect human dignity and maintain and uphold the human rights of all persons.” U.N. Principles on the Use of Force, supra note 108, at art. 3. See also U.N. Code of Conduct for Law Enforcement Officials, supra note 1, at art. 2.

\textsuperscript{183} “In time of public emergency ... the States Parties to the present Covenant may take measures derogating from their obligations under the present Covenant to the extent strictly required by the exigencies of the situation, provided that such measures are not inconsistent with their other obligations under international law and do not involve discrimination solely on the ground of race, colour, sex, language, religion or social origin.” [emphasis added] ICCPR supra note 175, at art. 4(1).

\textsuperscript{184} “Governments shall ensure that arbitrary or abusive use of force and firearms by law enforcement officials is punished as a criminal offence under their law.” U.N. Principles on the Use of Force, supra note 108, at art. 7.

\textsuperscript{185} “Law enforcement officials shall at all times fulfill the duty imposed upon them by law, by serving the community and by protecting all persons against illegal acts, consistent with the high degree of responsibility required by their profession.” U.N. Code of Conduct for Law Enforcement Officials, supra note 1, at art. 1.

\textsuperscript{186} “Public meetings, parades and assemblies are permitted under the rules and conditions laid down by law, but the purposes and means of the meeting must be peaceful and must not be prejudicial to public decency.” Constitution of the Kingdom of Bahrain, supra note 13, at art. 28(b).

\textsuperscript{187} “If one of the public authority officers finds that 5 persons or more have demonstrated with the intent of
**Necessity.** Before using force, law enforcement officials must exercise restraint and always begin with nonviolent means when confronting assemblies.188 Dialogue and mediation must first be employed.189 Police should also respond to protesters nonviolently by wearing defensive vests and helmets and by using shields and nonlethal instruments, thus decreasing the need to use weapons of any kind.190 Law enforcement officials should plan in advance for the progressive use of force and avoid unnecessary escalation of violence.191 Before employing force, police must warn civilians of their intent to use force, and then make every effort to determine that demonstrators have heard and understood these warnings.192

**Proportionality.** Law enforcement officials are obligated to use the minimum level of force necessary to disperse a crowd.193 When law enforcement officials are faced with serious threats, they may employ less-lethal weaponry.194 Police may only use such weapons, however, if the use of force is preceded by [a] nonviolent tactics, [b] clear warnings that officials intend to use force, and [c] efforts to determine that demonstrators have heard and understood these warnings.195 Only when a situation has escalated to present an imminent deadly threat should law enforcement officials apply proportional and reasonable use of lethal force.196

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187. [“Law enforcement officials shall identify themselves as such and give a clear warning of their intent to use force, police must warn civilians of their intent to use force, and then make every effort to determine that demonstrators have heard and understood these warnings.” U.N. Principles on the Use of Force, supra note 108, at art. 4.]


189. Governments and law enforcement agencies should be equipped with self-defensive equipment such as shields, helmets, bullet-proof vests and bullet-proof means of transportation, in order to decrease the need to use weapons of any kind.” U.N. Principles on the Use of Force, supra note 108, at art. 2. See also U.N. Trainer’s Guide on Human Rights for the Police, supra note 155, at 96, 114.

190. “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 that would allow for a differentiated use of force and firearms. 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.” U.N. Principles on the Use of Force, supra note 108, at art. 2. See also U.N. Trainer’s Guide on Human Rights for the Police, supra note 155, at 96, 114.

191. “[L]aw enforcement officials shall identify themselves as such and give a clear warning of their intent to use firearms, with sufficient time for the warning to be observed, unless to do so would unduly place the law enforcement officials at risk or would create a risk of death or serious harm to other persons, or would be clearly inappropriate or pointless in the circumstances of the incident.” U.N. Principles on the Use of Force, supra note 108, at art. 10. See also U.N. Policy on Formed Police Units, supra note 126, at 9.

192. “Law enforcement officials, in carrying out their duty, shall, as far as possible, apply non-violent means before resorting to the use of force and firearms. They may use force and firearms only if other means remain ineffective or without any promise of achieving the intended result.” U.N. Principles on the Use of Force, supra note 108, at art. 4.

193. “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.” Id., at art. 3. See also the U.N. Formed Police Units approach to addressing escalating threat levels, which states that at a “Serious” threat level law enforcement may use a “[s]how of force and, where all other means of peaceful de-escalation have failed, use of force in a reasonable and proportional manner, using only less-lethal means and weapons”. U.N. Policy on Formed Police Units, supra note 126, at 9.

194. “Law enforcement officials shall identify themselves as such and give a clear warning of their intent to use firearms, with sufficient time for the warning to be observed.” U.N. Principles on the Use of Force, supra note 108, at art. 10. See also Policy on Formed Police Units in United Nations Peacekeeping Operations, 9, DPKO Ref. 2009.32 (effective 1 Mar. 2010); U.N. Principles on the Use of Force, supra note 108, at art. 10.

Minimizing harm. When police do resort to the use of force to disperse demonstrators, UN guidelines require that they minimize damage and injury, respect and preserve human life, ensure that assistance and medical aid reach affected persons at the earliest possible moment, and make sure that friends and relatives of the injured are notified.197

Nondiscrimination. The principle of nondiscrimination is fundamental to all human rights. When a government declares a state of emergency (as did Bahrain from 15 March to 1 June 2011), it may limit citizens’ right of assembly. In doing so, however, the government may not discriminate on the ground of race, color, sex, language, religion, or social origin.198

Accountability. The Government of Bahrain must hold law enforcement officials accountable under its penal code, which codifies these international principles.199 Bahrain’s penal code mandates jail time for any law enforcement official who infringes on a person’s freedom by using force or threat, or causes severe bodily harm.200 UN principles also indicate that the arbitrary or abusive use of force should be punished as a criminal offense.201 According to UN guidelines, law enforcement officials are obliged to report any civilian injuries or deaths promptly to their superiors.202 Superior officers are then obliged to report these incidents to the proper administrative and judicial authorities.203 These authorities must hold commanding officers responsible when they fail to suppress unlawful use of force among police they supervise,204 and any civilian affected by unlawful use of police force must have access to independent, judicial review.205 Finally, under the UN guidelines, no law enforcement officer should be disciplined for refusing an order to use excessive force.206 The guidelines state that the Bahraini government should not invoke exceptional circumstances, including political instability or public emergency, to justify any departure from these principles.207

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197. "Whenever the lawful use of force and firearms is unavoidable, law enforcement officials shall ... ensure that relatives or close friends of the injured or affected person are notified at the earliest possible moment.” U.N. Principles on the Use of Force, supra note 108, at art. 5(d).

198. ICCPR supra note 175, at art. 4(1).

199. "Governments shall ensure that arbitrary or abusive use of force and firearms by law enforcement officials is punished as a criminal offence under their law.” U.N. Principles on the Use of Force, supra note 108, at art. 7.

200. “A prison sentence shall be the penalty for any person who ... deprives [another] in any illegal manner of his freedom ... [i]f the act is accompanied by ... bodily harm or acts of physical or mental torture.” Bahrain Penal Code, supra note 187, at art. 357.


202. “Where injury or death is caused by the use of force and firearms by law enforcement officials, they shall report the incident promptly to their superiors” U.N. Principles on the Use of Force, supra note 108, at art. 6.

203. “In cases of death and serious injury or other grave consequences, a detailed report shall be sent promptly to the competent authorities responsible for administrative review and judicial control.” Id., at art. 22.

204. “Governments and law enforcement agencies shall ensure that superior officers are held responsible if they know, or should have known, that law enforcement officials under their command are resorting, or have resorted, to the unlawful use of force and firearms, and they did not take all measures in their power to prevent, suppress or report such use.” Id., at art. 24.

205. “Persons affected by the use of force and firearms or their legal representatives shall have access to an independent process, including a judicial process.” Id., at art. 23.

206. “Governments and law enforcement agencies shall ensure that no criminal or disciplinary sanction is imposed on law enforcement officials who, in compliance with the Code of Conduct for Law Enforcement Officials and these basic principles, refuse to carry out an order to use force and firearms, or who report such use by other officials.” Id., at art. 25; “Obedience to superior orders shall be no defence if law enforcement officials knew that an order to use force and firearms resulting in the death or serious injury of a person was manifestly unlawful and had a reasonable opportunity to refuse to follow it. In any case, responsibility also rests on the superiors who gave the unlawful orders.” Id., at art. 26.

207. “Exceptional circumstances such as internal political instability or any other public emergency may not be invoked to justify any departure from these basic principles.” Id., at art. 8.
Bahraini government violates human rights law by weaponizing toxic chemical agents

Analysis from PHR’s April 2012 investigation in Bahrain reveals that Bahraini law enforcement officials routinely attack civilians inside their homes with toxic gas. The frequency of the routine attacks on civilians as well as the lack of accountability for officials who commit such attacks implies intent on the part of law enforcement to use toxic chemical agents as a weapon against peaceful civilians. Such unprovoked and flagrant attacks against families—who pose no threat to the safety of others—flout international human rights law. Specifically, Bahraini law enforcement officials

1. subject men, women, and children, including vulnerable disabled and elderly persons, to torture or cruel, inhuman, or degrading treatment;
2. unlawfully enter families’ homes and destroy property;
3. intentionally committed acts that impair people’s health; and
4. discriminate against one religious sect by targeting Shi’a neighborhoods.

Based on in-country research, PHR warns that the ongoing 18-month siege and targeted use of toxic gas against a civilian population have caused inestimable physical harm and will continue to inflict as yet unknown negative health effects among this population.

Bahraini law enforcement officials attack civilians inside their homes and destroy property

Based on key informant interviews and firsthand observations, Physicians for Human Rights determined that Bahraini law enforcement officials continue to launch unprovoked toxic chemical agent attacks against nonviolent Shi’a men, women, and children, including the elderly and disabled in their homes and cars.

A Bahraini woman shouts at riot police firing tear gas Saturday, April 7, 2012, in the market area of downtown Manama
Photo: AP Photo/Hasan Jamali
Two sisters from Shela told PHR investigators that police shot tear gas canisters directly into their home on five separate occasions. On the second occasion, they reported police ripped protective covers off of the family’s air conditioners and pulled sealant away from the windows from the outside, before throwing tear gas canisters through a window and yelling, “If you want freedom, come out to us.” They reported that in the third incident, police broke through the front door and threw a tear gas canister into their home. They do not know why they were targeted.

PHR investigators also interviewed several members of a large family—ages 3 to 65—who were forced from their home after police stormed their home, attempted to abduct a 15-year-old boy, and fired canisters containing toxic chemical agents into the house causing a 14-year-old girl to fall unconscious. Law enforcement officials then reportedly surrounded the exits, inhibiting escape.

Family members reported that friends and extended family had gathered in their home on 5 April 2012 around 10:00 p.m. The grandfather stepped outside to investigate a commotion, as a demonstration was taking place in their village that evening, and the family had taken in some peaceful demonstrators who had fled. The elderly man noticed that a man outside wearing civilian clothes put on a mask to cover his face. He reported that the masked man turned suddenly and ran toward him, barging past him through the front door into the foyer of his home, where a boy aged 15 was standing. The masked man reportedly started to drag the teenager out of the house, when several older men in the living room jumped up to come to the teenager’s rescue. They pulled the boy back into the house and slammed the front door. The masked man began banging and kicking the door, and then reportedly shot a tear gas canister through the kitchen window just to the left of the door. As one woman of the house related, “We heard the shatter of the glass in the kitchen, but didn’t realize there was a tear gas bomb in the house.”

Family members reported to PHR that when the first floor of the house became engulfed in a cloud of toxic gas, a second tear gas canister exploded in the living room. Family members scrambled to a “safe room” in the house, which they had constructed due to ongoing toxic chemical agent attacks in their village, but mounting tear gas levels prevented them from staying inside. Family members testified that they then realized police had encircled the house, shooting tear gas canisters through windows into the kitchen, living room, a back storage room, and the “safe room” while blocking doors and escape routes. “The entire house was overwhelmed with clouds of tear gas,” one family member told PHR. One young boy jumped from a staircase landing window above the front door, while other family members carried outside a 14-year-old girl who had fallen unconscious. Eventually, everyone in the house managed to escape and sought refuge nearby. A neighbor reportedly told the family later that the police forces shooting tear gas canisters were overheard saying, “Just shoot them with a shotgun.”

The PHR team inspected this house—still vacated at the time—four days after the incident occurred. PHR investigators found toxic chemical agent canisters on the roof and inside the home on the first floor. Windows were broken throughout the house. Despite the open windows, toxic fumes from the chemical agents remained inside.

208. Interviews with key informants no. 68, 69, in Bahrain (8 Apr. 2012).
209. Id.
210. Interviews with key informants no. 70, 71, 72 in Bahrain (8 Apr. 2012).
the home. Upon entering the home, both PHR investigators developed burning of the face and eyes, tearing, coughing, and headaches within about two minutes of exposure.

Highlighting the frequency with which many Bahraini families are exposed to harassing agents in residential areas, PHR investigators visited one home in which residents provided “guest gas masks” to visitors exposed to toxic chemical agents in and around the home.

“We’ve been exposed to tear gases almost every day,” said one resident of a Shi’a neighborhood. “We’ve had canisters shot in the house, on the doorstep, and on the roof. We’ve had so many attacks, I can’t count the number of times. You don’t need to go outside to smell the ‘tear gas.’”

PHR documented the presence of hundreds of toxic chemical agent canisters in Shi’a villages and in people’s homes. Bahraini law enforcement officials are also frequently seen on video211 firing chemical agents into homes.

Bahraini law enforcement officials launch toxic chemical agents at civilian vehicles

In addition to targeting civilians in their homes, law enforcement officials also launch toxic chemical agent canisters as weapons at civilians in their vehicles. PHR interviewed civilians who posed no imminent threat to police or public safety while in their cars, but who were nonetheless targeted by police.

PHR spoke with Mohammad, a 32-year-old man whom police reportedly attacked with tear gas while in his car. Mohammad reported that while he was driving near the site of a protest, police shot a tear gas canister straight through his car window, which hit Mohammad in the head. Two more tear gas canisters were then fired into the back of his car. Mohammad reported that tear gas filled his vehicle and within 30 seconds, he had blurred vision and began vomiting. Mohammad kept driving while sticking his head out the window until a group of local residents pulled Mohammad out of the car. They took him immediately to a private hospital where a doctor stitched Mohammad’s wounds.

PHR examined Mohammad and confirmed the presence of a healed laceration approximately two centimeters long at the hairline above the left temple, corroborating his testimony. 212

Another interviewee reported that police officers had fired toxic chemical agent canisters at his car as he fled a peaceful protest that he had helped organize.

Abdullah reported that between 3:00 and 5:00 p.m. on 13 February 2012, he was alone in his vehicle when police fired tear gas at his car from a bridge over Budaiya Highway. Abdullah saw white smoke enter the car through the vents. He immediately had difficulty breathing, and his eyes and nose began to burn. With the windows rolled down, Abdullah managed to stay in his car for approximately two minutes while driving to safety, before he escaped from the car.213

The blatant misuse of toxic chemical agents, the frequency with which weaponized toxic chemical agent attacks occur, the targeted nature of the attacks, and the lack of solid accountability mechanisms for perpetrators of these attacks imply intentionality on the part of Bahraini law enforcement. The intentional infliction of such targeted violence on Shi’a individuals and families results in adverse health effects. Because toxic chemical agents become

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212. Interview with key informant no. 78, in Bahrain (9 Apr. 2012).

213. Interview with key informant no. 20, in Bahrain (9 Apr. 2012).
even more dangerous weapons when used in confined spaces, the Bahraini government has threatened individuals’ safety and even their lives with their misuse of toxic chemical agents.

**Bahrain’s misuse of toxic chemical agents causes severe and long-term pain and suffering**

Bahraini law enforcement officials’ persistent targeting civilians in enclosed spaces may lead to serious long-term health consequences including (1) miscarriages (clinical spontaneous abortions), (2) severe respiratory distress resulting in premature death, and (3) a projected rise in asthma among the population. In confined or enclosed spaces, high concentrations of chemical agents are hazardous and can be lethal. Scientific literature also suggests that some toxic lachrymatory agents may be responsible for genetic mutations and possibly deformities.

**Miscarriage.** PHR investigators interviewed seven women—from villages that have been repeatedly exposed to toxic chemical agents—who reported having had miscarriages, six of them during their first trimester. All seven women reported they had miscarried just weeks after heavy exposure to toxic chemical agents in and around their homes. PHR investigators were able to examine five of the seven women’s sonograms and medical records, which corroborated their testimonies. Two of the women were not able to procure their medical records.

Local medical professionals also reported to PHR that they had begun to associate miscarriage with women’s exposure to toxic chemical agents. One obstetrician/gynecologist said that she had seen an increase in miscarriages—especially in the first trimester—in her practice at a private hospital in a predominately Shi’a community exposed to toxic chemical agents. Two other female physicians, who live in neighborhoods regularly saturated with toxic chemical agents, also reported an increase in miscarriages among their patients; one physician exposed to toxic chemical agents reported she herself had recently developed abnormal menstrual periods and suspected a miscarriage.

A nurse who works at Salmaniya Hospital told PHR investigators, “There are many, many miscarriages. We believe the miscarriage rate has increased, although there is no quantitative evidence. What I want to know is: What is this gas...and what will be the future complications?”

214. Scientists can project concentrations of chemical lachrymatory agents that would be deadly for 50% of healthy adults, and have determined that the center of gas cloud after a single grenade explosion is approximately one fifth of that number. When toxic chemical agents are detonated in an enclosed space or in a cluster of several canisters, the concentration of toxins would be much higher. Chemical Warfare Agents: Chemistry, Pharmacology, Toxicology, and Therapeutics, supra note 47, at 361. Tear Gas – Harassing Agent or Toxic Chemical Weapon?, supra note 37, at 661.

215. “The possibility of long-term health consequences such as tumor formation, reproductive effects, and pulmonary disease is especially disturbing in view of the multiple exposures sustained by demonstrators and non-demonstrators alike in some areas of civilian unrest.” Tear Gas – Harassing Agent or Toxic Chemical Weapon?, supra note 37, at 662. Hu et al. also reported that in situations of high levels of CS exposure, heart failure, liver damage and death have occurred in adults. In animal studies, lung injury is the primary cause of death in subjects exposed to prolonged inhalation of CS. Histologic findings included “pulmonary vascular congestion, accompanied in severe cases by local hemorrhages and edema.” Id.

216. Handbook of Chemical and Biological Warfare Agents, supra note 110, at 403.

217. “[CS gas] is potentially genotoxic.... Some researchers have shown CS to be mutagenic.... Little is known regarding its potential for chronic pulmonary or genotoxic effects or for potential effects on reproduction.” Tear Gas – Harassing Agent or Toxic Chemical Weapon?, supra note 37, at 662.

218. For additional information indicating that exposure to toxic chemical agents may correlate with increased rates of stillbirth and miscarriage, see Physicians for Human Rights, The Casualties of Conflict, supra note 64, at 19.

219. Interview with key informant no. 84, in Bahrain (9 Apr. 2012).

220. Interview with key informant no. 83, in Bahrain (9 Apr. 2012).

221. Interview with key informant no. 67, in Bahrain (8 Apr. 2012).
Three of the seven women who had miscarriages told PHR that their doctors had asked them in which villages they lived immediately after informing them that their fetuses were not viable. All of the doctors communicated to these women that they had recently seen more miscarriages among women living in areas heavily exposed to tear gas compared with women living in neighborhoods not repeatedly exposed to the toxic chemical agent. One woman from Sitra\textsuperscript{222} who miscarried during her 11th week of pregnancy\textsuperscript{223} reported that the first question her doctor had asked her, after finding that her baby had no heartbeat, was whether there were problems related to “political unrest” in her village. Presumably, this doctor knew that political unrest in a village implied that toxic chemical agents would be omnipresent.

One woman questioned whether her exposure to tear gas was responsible for deformities of her fetus when she miscarried. The young woman from Sitra, who miscarried during her 12th week of pregnancy, told PHR that her fetus had deformities of the head and neck. She reported having no history of previous miscarriages, difficulties becoming pregnant, or history of familial genetic disorders.\textsuperscript{224}

Another woman told PHR that when she first discovered she was pregnant, she tried to use a gas mask while at home as she was concerned about the health of her unborn child. She said that using a gas mask proved impossible to do, however, given the need to communicate with her three young children. She miscarried in her seventh week of pregnancy.\textsuperscript{225}

A young woman interviewed by PHR reported that “many Bahraini women are suffering from the psychological effects of losing a baby and extreme fear. They are not able to speak out and they lack their medical records. The hospitals are not giving us the medical records to document the miscarriages and the birth defects that are happening, so I must speak out.”\textsuperscript{226}

**Respiratory failure and death.** PHR spoke with two families who had family members who allegedly died from complications related to toxic chemical agent exposure. In both cases, deceased individuals were only exposed to toxic chemical agents in the privacy of their homes, and died despite treatment in the hospital.

Two sisters from Shela, for example, told PHR investigators how their father had died at age 55 following nearly daily exposure to tear gas in his home. The sisters explained that each time their father—who had a heart condition—was exposed to “tear gas,” he developed shortness of breath, turned reddish-purple, became dizzy, and at times became confused and disoriented. With each passing episode he became worse, they reported. On one occasion, police reportedly “bombarded” their house with tear gas canisters, shooting them into the house, onto the roof, and in the streets outside. After their father developed severe symptoms and said, “I feel like I’m going to die,” they carried him across the road and took him to Salmaniya Hospital. Their father died the following day. While the doctor reportedly told the sisters that their father had died from “breathing gas,” the death certificate attributes death to “septic shock and severe right-sided pneumonia.”\textsuperscript{227}

Bahraini law\textsuperscript{228} requires medical workers to report wounded protesters to the very law enforcement officials who have harmed them, thereby creating a conflict of dual loyalty wherein health professionals have competing obligations to their patients and the government.

\textsuperscript{222} Sitra is a predominantly Shi’a neighborhood that is routinely saturated with toxic chemical agents.

\textsuperscript{223} Interview with key informant no. 75, in Bahrain (9 Apr. 2012).

\textsuperscript{224} Interview with key informant no. 76, in Bahrain (9 Apr. 2012).

\textsuperscript{225} Interview with key informant no. 77, in Bahrain (9 Apr. 2012).

\textsuperscript{226} Interview with key informant no. 79, in Bahrain (9 Apr. 2012).

\textsuperscript{227} This individual was reportedly known to have had a heart condition and had previously had a “small stroke,” according to his daughters.

\textsuperscript{228} Bahrain’s Ministry of Health issued a “circular” to all private hospitals and clinics, according to a focus group of eight physicians PHR surveyed. This 31 January 2012 Government circular stated that private hospitals and clinics were now obligated to report to Government security authorities all incoming patients “with injuries due to suspected criminal activities and/or accidents irrespective [of] their causes. Violation of these requirements shall constitute collaboration with such activities and is criminalized by law.” See Physicians for Human Rights, Under the Gun: Ongoing Assaults on Bahrain’s Health System 4 (2012), http://physiciansforhumanrights.org/library/reports/under-the-gun-ongoing-assaults-on-bahrain's-health-system.html
As the above case illustrates, medical personnel are extremely reluctant to document their patients’ reported exposure to tear gas. As one doctor told PHR, he purposely omits writing in the medical record the patient’s history, cause of injury, or any other information related to excessive use of force by Bahraini law enforcement officials, to protect these patients and their families.

PHR also met with relatives of Muhammad, a young asthmatic man from a Shi’a village, who died of acute respiratory failure following 25 days of hospitalization after exposure to toxic chemical agents.

Muhammad’s family reported that he was routinely exposed to tear gas and sought medical care in private hospitals, but never told doctors about his severe adverse reactions to the gas for fear of being reported to authorities and sent to prison. Family members reported that police had fired tear gas canisters into their village, and particularly around their home, on an almost daily basis. On the day of his death, Muhammad left the hospital where he had been treated for respiratory problems due to tear gas exposure to visit his family, when he was exposed to yet another tear gas explosion in his village. That evening, he reportedly developed severe shortness of breath and returned to the hospital where he went into respiratory failure. Medics administered CPR, but failed to resuscitate him. Muhammad’s doctor reported to PHR investigators that his death certificate stated he died of cardiac arrest, secondary to severe pulmonary hypertension caused by “mediastinal mass.” The doctor then told investigators, “There was no indication in his chart that he had a mass, nor were there any studies to substantiate it. He was cyanosed and died of an acute respiratory failure.”

**Asthma.** Demonstrators as well as civilians who never participated in protests reported to PHR that they suffered from new symptoms, including persistent coughing, shortness of breath, chest tightness, and wheezing, all of which may indicate onset of asthma. Respondents told PHR investigators that they believed their ongoing respiratory distress was due to chronic contact with tear gas that they could not escape; others reported that symptoms continued long after exposure.

A specialist physician working with Bahrain’s Ministry of Health reported to PHR that the most common medical complications he currently treats relate to inhalation problems. He reported to PHR that he had recently seen a dramatic rise in asthma-like symptoms affecting people of all ages in Bahrain. Patients exhibiting respiratory distress, he reported, have not necessarily been involved in protests. For certain individuals, he noted that breathing in allergy-causing materials or “triggers” can lead to onset of asthma.

The injuries and attendant negative health effects that PHR documented are most probably not the result of exposure to toxic gas from having participated in protests or from having been a bystander to those assemblies where toxic chemical agents were used. Rather,
these cases illustrate the serious long-term harm that results from Bahraini law enforce-
ment officials’ persistent targeting of civilians with toxic chemical agents in enclosed spaces.
Miscarriages, severe respiratory distress resulting in premature death, an apparent rise in
asthma rates, and genetic mutations causing deformities represent some of the possible
health consequences that PHR predicts will become more prevalent in Bahrain as a direct
result of police violence. These actions contravene international human rights law, which the
Kingdom of Bahrain must uphold.

**Legal analysis of Bahrain’s human rights violations**

Based on extensive interviews and medical evaluations of wounded civilians and review of
their medical records, Physicians for Human Rights finds that Bahraini law enforcement of-
cials failed to respect and protect human dignity and maintain and uphold the human rights
of all citizens. Specifically, Bahraini law enforcement officials (1) subjected men, women,
and children, including vulnerable disabled and elderly persons, to torture or cruel, inhuman,
or degrading treatment; (2) unlawfully entered families’ homes and destroyed property; (3)
intentionally committed acts that impair people’s health; and (4) discriminated against one re-
ligious sect by targeting Shi’a homes and neighborhoods.

**Torture or cruel, inhuman, or degrading treatment.** The Bahraini government’s willful and
unrelenting attacks against Shi’a neighborhoods and homes with toxic chemical agents con-
stitute torture or cruel, inhuman, or degrading treatment as defined in international law. The
Convention Against Torture, to which Bahrain is a party, defines torture as “any act by which
severe pain or suffering, whether physical or mental, is intentionally inflicted on a person for...
any reason based on discrimination of any kind, when such pain or suffering is inflicted by or
at the instigation of or with the consent or acquiescence of a public official”. The weaponized
toxic chemical agent attacks against Bahraini civilians cause severe pain and suffering among
affected populations, including severe respiratory distress resulting in premature death as
well as possible connections to miscarriages or genetic mutations. The attacks are intension-
al—and may be official policy—because of the frequency of the attacks by officials throughout
the police force and the lack of accountability for those who perpetrate the attacks. Based
on interviews with those subjected to toxic chemical agent attacks, the attacks are meant to
intimidate the victims and are based on ethnic discrimination against the Shi’a community.
Lastly, the attacks documented were indeed perpetrated by law enforcement officials and not
independent civilians. The attacks violate Bahrain’s obligations under the Convention Against
Torture as well as the Bahraini Constitution, which outlaws physical or mental torture.

The weaponized toxic chemical agent attacks may also constitute cruel, inhuman, or degrad-
ing treatment (CIDT). While definitions of CIDT are debated by international legal experts, one
accepted definition of CIDT is an act that entails severe physical or mental pain or suffering.

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240. “In the performance of their duty, law enforcement officials shall respect and protect human dignity and
maintain and uphold the human rights of all persons.” U.N. Code of Conduct for Law Enforcement Officials,
*supra* note 1, at art. 2.

241. Convention Against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment, art. 1, 10 Dec.
and Political Rights which states: “No one shall be subjected to torture or to cruel, inhuman or degrading
treatment or punishment.” ICCPR *supra* note 175, at art. 7.

242. “No person shall be subjected to physical or mental torture, enticement or degrading treatment, and the law
shall provide the penalty for these acts. Any statement or confession shall be null and void if it is proved to
have been made under duress or enticement or degrading treatment or threat thereof.” Constitution of the
Kingdom of Bahrain, *supra* note 13, at art. 19(d).

243. Elements of Crimes for the ICC, Definition of torture as a war crime (ICC Statute, Article 8(2)(a)(ii) and (c)(i)).
The definition relates to the International Criminal Court, but other courts have referred to this language
when analyzing incidents of CIDT.
Manfred Nowak, former UN Special Rapporteur on Torture, explains that the application of CIDT is a relative concept and that outside a situation of detention, the prohibition of CIDT is subject to the proportionality principle. Excessive use of police force, for example, would constitute CIDT. The conduct and the powerlessness of the victim is part of Nowak’s examination of proportionality. The Bahraini law enforcement officials’ toxic chemical agent attacks on civilians in their homes violate the principle of proportionality; the harm of the attack is grossly imbalanced given the lack of security threat posed by many of the victims.

Case law supports the argument that weaponized misuse of toxic chemical agents may be cruel, inhuman, or degrading treatment. The European Court of Human Rights found that unwarranted spraying of pepper spray in an individual’s face subjected the victim to intense physical and mental suffering, given the health effects of the toxic chemical agent. The court concluded that the spraying amounted to inhuman and degrading treatment.

**Unlawful interference with privacy, family, home.** Every person has the right to be protected against arbitrary or unlawful interference with one’s privacy, home, or family, according to the International Covenant on Civil and Political Rights, to which Bahrain is a party. Bahrain’s Constitution also ensures the inviolability of one’s residence, which cannot be entered or searched without permission of the occupant. Bahrain’s penal code similarly prohibits anyone from unlawfully entering another person’s home, damaging someone’s property, or endangering another’s property by attempting to use explosives. Therefore, when Bahraini law enforcement officials intentionally target and shell homes with canisters containing toxic chemical agents, break into people’s residences, and destroy their property, as PHR documents in this report, the Government of Bahrain is in flagrant violation of its national and international obligations.

**Impairing health.** State obligations regarding the promotion of and respect for people’s right to health are minimal under international law, as states only pledge to progressively realize this right. When a government deliberately and knowingly impairs the health and well-being of its population by weaponizing toxic chemical agents and attacking their homes, however, it immediately erodes this fundamental right and inflicts long-term damage on people’s health. Bahraini law enforcement officials who brazenly fire toxic chemical agent shells into civilian homes.

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244. Manfred Nowak & Elizabeth McArthur, The Distinction Between Torture and Cruel, Inhuman or Degrading Treatment, 16 Torture 147, 149 (2006).
246. “No one shall be subjected to arbitrary or unlawful interference with his privacy, family, home or correspondence... Everyone has the right to the protection of the law against such interference or attacks.” ICCPR supra note 175, at art. 17.
247. “Places of residence shall be inviolable. They may not be entered or searched without the permission of their occupants except in the circumstances and manner specified by the law.” Constitution of the Kingdom of Bahrain, supra note 13, at art. 25.
248. “A prison sentence for a period of no more than six months or a fine of no more than BD 50 shall be the penalty for any person who enters an inhabited place, [or] a place intended for dwelling.... The penalty shall be imprisonment for no more than two years if the crime is committed at night or with the use of violence against persons or property or with the use of a weapon....” Bahrain Penal Code, supra note 187, at art. 361.
249. “A punishment of imprisonment or a fine, or either penalty, shall be inflicted upon every civil servant or officer entrusted with public service who has, as a result of his own failure, caused serious damage to some properties for which he is responsible for safekeeping as part of the duties of his office.” Id., at art. 200.
250. “A punishment of imprisonment for a period of not exceeding ten years shall be inflicted upon any person who willfully uses or attempts to use explosives in a manner that is likely to expose others’ property to danger.” Id., at art. 281.
flout the Bahraini Constitution, which grants the right to health to Bahraini citizens,251 and the International Covenant on Economic, Social, and Cultural Rights, to which Bahrain is a party.252

In addition, Bahrain’s penal code metes out severe punishment to anyone who endangers public health:

“Life or term imprisonment shall be the penalty for any person who exposes human lives or safety of the public to danger by placing materials, germs or other things in a water well or tank or anything that is intended for public use, that may cause death or serious damages [sic] to public health.”253

**Discrimination.** A government discriminates against a group of people when it singles out the group because of the race, religion, origin, language, or other status of the group’s members, and based on that status denies them any of the rights and freedoms to which they are entitled.254 Based on analysis of the patterns and frequency of toxic chemical agent attacks against homes and neighborhoods in Bahrain, Physicians for Human Rights concludes that the Government of Bahrain intentionally targets the Shi’a Muslim community,255 contravening the Bahraini Constitution256 and Bahrain’s international legal obligations.257 Preliminary analysis of data suggests that among approximately 65 Shi’a residential areas—roughly 80% of all neighborhoods in Bahrain—the majority of Shi’a neighborhoods have been exposed to toxic chemical agent attacks at least once per week since February 2011. Sunni-dominated neighborhoods have largely remained free from toxic chemical agent attacks.

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251. “Every citizen shall have the right to health welfare. The State shall care for public health and ensure means of prevention and treatment....” Constitution of the Kingdom of Bahrain, supra note 13, at art. 8.


254. “[T]he Committee believes that the term “discrimination” ... should be understood to imply any distinction, exclusion, restriction or preference which is based on any ground ... and which has the purpose or effect of nullifying or impairing the recognition, enjoyment or exercise by all persons, on an equal footing, of all rights and freedoms.” UN Human Rights Committee [HRC], CCPR General Comment No. 18: Non-discrimination, ¶ 7, 10 Nov. 1989, available at http://www.unhchr.org/refworld/docid/453883fa8.html.

255. Protests in Bahrain occur exclusively in Shi’a or mixed neighborhoods.

256. “People are equal in human dignity, and citizens shall be equal in public rights and duties before the law, without discrimination as to race, origin, language, religion or belief.” Constitution of the Kingdom of Bahrain, supra note 13, at art. 18.

257. “Each State Party to the present Covenant undertakes to respect and to ensure to all individuals within its territory and subject to its jurisdiction the rights recognized in the present Covenant, without distinction of any kind, such as race, color, sex, language, religion, political or other opinion, national or social origin, property, birth or other status.” ICCPR, supra note 175, at art. 2(1).
Policy Recommendations

To the Government of Bahrain:

• End all attacks on civilians, including tear gas attacks on civilians and homes.
• Given the harmful effects of tear gas misuse in the country, suspend all use of tear gas until such time as the Government of Bahrain conducts a full and impartial investigation of the events detailed in this report, retracts the national security forces in the proper use of tear gas, and holds the perpetrators of excessive or improper use of force accountable. After such initial benchmarks are met, adhere to United Nations guidelines on the use of force and to the Bahraini penal code in order to stem future misuse of tear gas.
• Establish an independent body consisting of individuals familiar with human rights and legal norms regarding the use of force to investigate the deliberate misuse of toxic chemical agents in Bahrain.
• Disclose information about the varieties of toxic chemical agents used by law enforcement officials in Bahrain, given the disturbing evidence of the harmful effects of toxic chemical agents from PHR’s investigation as well as the BICI report. This information will be important to the current treatment of exposed Bahraini citizens, and to drive future scientific research on the effects of all toxic chemical agents.
• Allow scientists, health professionals, and epidemiologists to conduct critical toxicological and survey research on the use and effects of tear gas in Bahrain.

To the international community:

• Suspend global exports of tear gas and its relevant precursor chemical agents to Bahrain until such time as the Government of Bahrain conducts a full and impartial investigation of the events detailed in this report, retracts the national security forces in the proper use of tear gas, and holds the perpetrators of excessive or improper use of force accountable.
• Convene an interdisciplinary group of health professionals, lawyers, law enforcement officials, and public health experts to draft guiding principles on the proper use of all toxic chemical agents, especially those classified as lachrymatory agents, and to determine whether the application and toxicity of certain lachrymatory agents necessitate re-classification under the Chemical Weapons Convention.
• Support scientific research into the health effects of tear gas, including research on the possible connection to miscarriage and/or genetic disorders as well as long-term respiratory sequelae of excessive exposure.
• Review international, regional, national, and local guidelines on tear gas use and ensure that they follow the parameters of the UN Guidelines on the Use of Force, including mechanisms for accountability for misuse.
To the United States:

- Continue to deny export licenses for tear gas to Bahrain until the Government of Bahrain adheres to UN Guidelines on the Use of Force regarding its tear gas use, investigates the weaponization of tear gas, and establishes accountability for law enforcement officials who use excessive force or otherwise violate the UN Guidelines.
- Revoke tear gas licenses for other countries that show warning signs of improper use of tear gas or other riot control items against peaceful civilians.
- As a matter of policy, ensure that all tear gas and related materials are listed on the State Department’s US Munitions List, given the fatal consequences of the improper use of tear gas.
- Provide stricter end-use monitoring of tear gas and related materials through the Department of Defense.
- Ensure that any military assistance to Bahrain comports with the Leahy Law and section 502(b) of the Foreign Assistance Act of 1961.
- Fully support international efforts to draft guiding principles on the proper use of all toxic chemical agents, and lead the international community in supporting scientific research on the health effects of these agents.
Appendix A

Select list of countries that have recently deployed toxic chemical agents against civilians

**CHILE**

Police routinely resorted to toxic chemical agents to disperse student protests across Chile from May to August 2011, as thousands of civilians assembled to demand educational and social reforms. Collectively, these protests became known as the “Chilean Winter,” named after the “Arab Spring.” Observers expressed concerns over excessive use of toxic chemical agents and police force in Chile, as violent clashes left hundreds of people injured and thousands of demonstrators arrested. The use of toxic chemical agents against youth in Chile is not unprecedented, but is reminiscent of crackdowns on student protests in 2006 and 2008.

**EGYPT**

Egypt’s use of toxic chemical agents during the unfolding 2011 Egyptian Revolution drew international attention, as media reported that government law enforcement officials used British-made and US-made toxic chemical agents to suppress pro-democracy demonstrations. Nationwide, occasionally violent protests leading up to the resignation of Hosni Mubarak as president in February resulted in hundreds of deaths as riot police met civilians with toxic chemical agents and excessive force. Riot police continued to generate criticism for repeatedly using toxic chemical agents against demonstrators, most notably during protests in June and renewed clashes in Tahrir Square in November 2011. Some physicians also argued that Egyptian law enforcement officials used a more powerful variation of toxic chemical lachrymatory agents that led to seizures and convulsions for those exposed.


264. Sarah Morrison and Bel Trew, *British-made tear gas was used on Egypt’s protesters*, The Independent, 4 Dec. 2011, [http://www.independent.co.uk/news/uk/home-news/britishmade-tear-gas-was-used-on-egypts-protesters-6272117.html](http://www.independent.co.uk/news/uk/home-news/britishmade-tear-gas-was-used-on-egypts-protesters-6272117.html).


BAHRAIN'S UNPRECEDENTED USE OF TOXIC CHEMICAL AGENTS AGAINST CIVILIANS

GREECE

Police officials’ use of toxic chemical agents to disperse demonstrations sparked by the Greek debt crisis received national and international criticism. In February 2012, police used toxic chemical agents against thousands of protesters, despite ongoing investigation by the Athens prosecutor into excessive use of police force. In 2008, Greek law enforcement officials used at least 4,600 tear gas capsules to quell demonstrations and riots in Athens.

HONDURAS

In February 2012, a devastating prison fire that killed at least 350 prisoners drew crowds of inmates’ relatives eager to enter the complex and reach their family members or access their remains. Police dispersed these relatives with toxic chemical agents, renewing concerns that national police in Honduras have a history of firing toxic chemical agents against civilians indiscriminately. Several cases of police abuse of toxic chemical agents were reported in 2010 and 2011, when several months of rallies drew tens of thousands of civilians who were unhappy about austerity cuts. In February 2012, police used toxic chemical agents against thousands of protesters, despite an ongoing investigation by the Athens prosecutor into excessive use of police force.

ISRAEL

International observers have expressed concerns over recent abuse of toxic chemical agents against demonstrators amid tension over Israeli settlements in the West Bank. In June 2011, a devastating prison fire that killed at least 350 prisoners drew crowds of inmates’ relatives eager to enter the complex and reach their family members or access their remains. Police dispersed these relatives with toxic chemical agents, renewing concerns that national police in Honduras have a history of firing toxic chemical agents against civilians indiscriminately. Several cases of police abuse of toxic chemical agents were reported in 2010 and 2011, when several months of rallies drew tens of thousands of civilians who were unhappy about austerity cuts. In February 2012, police used toxic chemical agents against thousands of protesters, despite an ongoing investigation by the Athens prosecutor into excessive use of police force.


References:


2012, a UN Special Rapporteur called attention to the Israeli Defense Forces’ use of toxic chemical agent canisters as projectiles that cause severe injury and death.282

LIBYA

In mid-February 2011, before Libyan unrest escalated into a full-fledged civil war, law enforcement officials killed and injured civilian protesters in Benghazi and elsewhere in the country using toxic chemical agents, batons, and live ammunition.283 International Criminal Court evidence suggested that authorities had planned to use toxic chemical agents and excessive force against civilians as soon as unrest began in neighboring Tunisia and Egypt in January 2011.284

MALAYSIA

The Malaysian government received international criticism for its use of toxic chemical agents in crackdowns on pro-democracy protests in April 2012.285 Tens of thousands of civilians assembled peacefully on 28 April to call for election reform,286 in a demonstration organized by opposition leaders as a follow-up to the 2007287 and 2011288 Bersih rallies (similarly broken up by police). An interim report by the Malaysian Bar Council established that the use of toxic chemical agents was indiscriminate and excessive,289 while media accounts documented dozens of injuries and hundreds of arrests.290

SOUTH KOREA

Authorities in South Korea in 1987 used hundreds of thousands of canisters containing toxic chemical agents over the course of two months (June and July) in the streets of Seoul to crush civilian uprisings.291 Civilians exposed to high quantities of toxic chemical agents suffered acute illnesses and severe health impairments; affected individuals went without medical


291. According to media sources, The Republic of Korea used 351,000 tear gas grenades and canisters in June 1987 alone. Use of Tear Gas in the Republic of Korea, supra note 69, at 1.
attention for fear of police and government harassment. Physicians for Human Rights reported following a July 1987 investigation that South Korea’s use of toxic chemical agents was indiscriminate, inhumane, and medically unacceptable because of lasting health repercussions.

**TUNISIA**

Tunisian law enforcement officials used toxic chemical agents against civilians throughout the 2010-2011 protests that inspired the Arab Spring, killing hundreds and injuring thousands. Protests continued despite the January 2011 resignations of President Ben Ali and Prime Minister Mohammed Gannouchi, during which time reports of improper use of toxic chemical agents increased. Law enforcement officials dropped a canister containing toxic chemical agents in a mosque in January 2011, and killed one foreign photographer after hitting him in the head with a toxic chemical agent canister at point blank range.

**TURKEY**

Turkish authorities have primarily targeted Kurdish minorities in the southeastern region of the country with toxic chemical agents in recent years because of ongoing protests against political restrictions. In March 2012, police used toxic chemical agents to violently disperse traditional Navroz celebrations that drew thousands of demonstrators. Several large Kurdish protests also took place throughout 2011, over the course of which police employed toxic chemical agents and arrested thousands. The Turkish Parliament met in April 2011 to discuss police use of the riot control agent, but supported use of toxic chemical agents despite ongoing criticism.

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292. Id.
293. Id., at 4.
304. Human Rights Watch, Letter to Turkish Prime Minister, Mr Erdogan, Regarding Human Rights Priorities for the New
UGANDA

Doubts about the fairness of the reelection process for President Museveni, now in his 26th year in office, inspired protests which escalated after the violent arrest of Uganda’s opposition leader in April 2011. For weeks, peaceful demonstrations in Kampala were met with excessive police force including indiscriminate use of toxic chemical agents in houses and against non-protesters. The incidents resulted in hundreds of injuries and arrests, as well as reported deaths. Despite apologies from Uganda’s Inspector General of Police, human rights organizations and donor nations condemned the crackdowns and called for further investigations.

YEMEN

Inspired by the Arab Spring, the Yemeni Uprising in 2011 drew tens of thousands of protesters to the capital in antigovernmental demonstrations. Protests grew in size when major tribes joined the movement in February 2011, but were met on several occasions with excessive force by the police, resulting in hundreds of injuries and some deaths attributed to toxic chemical agents. Evidence suggested that the toxic chemical agents used by security officials not only had expired, but also contained chemicals much more powerful than those usually used for crowd control.

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OTHER CASES of toxic chemical agent use against civilians in 2011/2012 include: Albania, Bolivia, Canada, Democratic Republic of Congo, Cote d’Ivoire, Georgia, Indonesia, Kuwait, Malawi, Oman, Panama, Peru, Sudan, Swaziland, and Syria.

325. Travel Alert: Panama, supra note 65.
## Appendix B

### Timeline of relevant events in Bahrain (2011-2012)

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>14 February 2011</td>
<td>Bahraini protesters call for a “day of rage,” demanding political and economic reform. Law enforcement officials kill one person and injure dozens.</td>
</tr>
<tr>
<td>17 February 2011</td>
<td>Hundreds of riot police attack protesters camped in Pearl Square with toxic chemical agents and rubber bullets. Law enforcement officials take over the square, killing five and injuring hundreds.</td>
</tr>
<tr>
<td>14 March 2011</td>
<td>The King of Bahrain calls on Arab Gulf states to send military support. Fifteen-hundred troops from Sunni Gulf states, two-thirds from Saudi Arabia, are deployed in Bahrain.</td>
</tr>
<tr>
<td>15 March 2011</td>
<td>The King declares a three-month state of emergency, giving the commander in chief of Bahrain’s military authority to disperse protests.</td>
</tr>
<tr>
<td>16 March 2011</td>
<td>Bahraini law enforcement officials attack protesters at Pearl Square and occupy Salmaniya public hospital, preventing injured demonstrators from receiving medical treatment and arresting doctors and wounded protesters.</td>
</tr>
<tr>
<td>9 April 2011</td>
<td>Bahraini law enforcement officials arrest Abdulhadi al-Khawaja, a prominent human rights activist, along with his two sons-in-law.</td>
</tr>
<tr>
<td>22 April 2011</td>
<td>PHR releases its report <em>Do No Harm: A Call for Bahrain to End Systematic Attacks on Doctors and Patients</em>, detailing violations of medical neutrality in Bahrain.</td>
</tr>
<tr>
<td>1 June 2011</td>
<td>Government of Bahrain lifts its state of emergency.</td>
</tr>
<tr>
<td>13 June 2011</td>
<td>Government of Bahrain puts 24 physicians and 24 nurses and paramedics on trial, accusing them of working with the opposition at Salmaniya hospital and hiding arms.</td>
</tr>
<tr>
<td>22 June 2011</td>
<td>A hybrid military court sentences eight opposition activists, including Abdulhadi al-Khawaja, to life in prison for plotting to overthrow the Government. Thirteen additional activists each receive a sentence ranging from two to 15 years in jail.</td>
</tr>
<tr>
<td>29 June 2011</td>
<td>King Hamad al-Khalifa establishes the Royal Independent Investigation Commission [later known as the Bahraini Independent Commission of Inquiry, or BICI] to investigate the events of February and March 2011.</td>
</tr>
<tr>
<td>8 July 2011</td>
<td>Political party Al-Wefaq pulls out of the parliament to protest the allotment of only 35 out of 300 seats to the Shī‘a majority.</td>
</tr>
<tr>
<td>31 August 2011</td>
<td>Fourteen-year-old Ali Jawad Ahmad dies from the impact of a toxic chemical agent canister fired at his head by law enforcement officials in Sitra. Tens of thousands protest.</td>
</tr>
<tr>
<td>Date</td>
<td>Event Description</td>
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</tr>
<tr>
<td>29 September 2011</td>
<td>A hybrid military court convicts 20 health professionals for allegedly using the Salmaniya Medical Complex for opposition activity; they receive sentences ranging from five to 15 years in jail.</td>
</tr>
<tr>
<td>5 October 2011</td>
<td>Bahrain’s attorney general orders a retrial of those medical professionals sentenced on 29 September.</td>
</tr>
<tr>
<td>23 November 2011</td>
<td>BICI releases its report, which confirms the Bahraini government’s use of torture on detainees and the excessive use of force against civilians.</td>
</tr>
<tr>
<td>31 December 2011</td>
<td>New Year’s Eve protests in Sitra result in the death of 15-year-old Sayed Hashim Saeed, whom law enforcement officials struck with two canisters of toxic chemical agents.</td>
</tr>
<tr>
<td>8 January 2012</td>
<td>PHR’s Richard Sollom is denied entry to Bahrain to observe the trial of the 20 medical professionals, despite possessing a valid five-year visa.</td>
</tr>
<tr>
<td>5 March 2012</td>
<td>Forty-five-day-old infant Yahya Yousif Ahmed dies reportedly due to complications from tear gas exposure, after law enforcement officials launch toxic chemical agents into her mother’s home eight times over the course of the pregnancy.</td>
</tr>
<tr>
<td>20 March 2012</td>
<td>United Nations expresses concern over Bahrain’s misuse of toxic chemical agents and the death of civilians, after receiving reports of over 30 possible toxic chemical agent-related deaths.</td>
</tr>
<tr>
<td>22 April 2012</td>
<td>Formula 1 Grand Prix takes place in Manama, despite intense protests against the event. Police reportedly shoot and kill one protester.</td>
</tr>
<tr>
<td>30 April 2012</td>
<td>Bahrain’s Appeals Court orders a retrial in civilian court for 21 opposition activists convicted by military court, including hunger striker Abdulhadi al-Khawaja.</td>
</tr>
<tr>
<td>21 May 2012</td>
<td>UN Human Rights Council holds its second Universal Period Review for Bahrain. The Bahraini delegation denies allegations of many well-documented human rights abuses. PHR releases its report Under the Gun: Ongoing Assaults on Bahrain’s Health System detailing impacts of Bahrain’s militarization and politicization of healthcare on the public health system.</td>
</tr>
<tr>
<td>14 June 2012</td>
<td>High Court of Appeals convicts 11 of the 20 medical professionals on trial for charges of illegal protesting and trying to overthrow the monarchy. The court acquits nine of the defendants.</td>
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</table>
Appendix C

UN Basic Principles on the Use of Force and Firearms by Law Enforcement Officials


Whereas the work of law enforcement officials is a social service of great importance and there is, therefore, a need to maintain and, whenever necessary, to improve the working conditions and status of these officials,

Whereas a threat to the life and safety of law enforcement officials must be seen as a threat to the stability of society as a whole,

Whereas law enforcement officials have a vital role in the protection of the right to life, liberty and security of the person, as guaranteed in the Universal Declaration of Human Rights and reaffirmed in the International Covenant on Civil and Political Rights,

Whereas the Standard Minimum Rules for the Treatment of Prisoners provide for the circumstances in which prison officials may use force in the course of their duties,

Whereas article 3 of the Code of Conduct for Law Enforcement Officials provides that law enforcement officials may use force only when strictly necessary and to the extent required for the performance of their duty,

Whereas the preparatory meeting for the Seventh United Nations Congress on the Prevention of Crime and the Treatment of Offenders, held at Varenna, Italy, agreed on elements to be considered in the course of further work on restraints on the use of force and firearms by law enforcement officials,

Whereas the Seventh Congress, in its resolution 14, inter alia, emphasizes that the use of force and firearms by law enforcement officials should be commensurate with due respect for human rights,

Whereas the Economic and Social Council, in its resolution 1986/10, section IX, of 21 May 1986, invited Member States to pay particular attention in the implementation of the Code to the use of force and firearms by law enforcement officials, and the General Assembly, in its resolution 41/149 of 4 December 1986, inter alia, welcomed this recommendation made by the Council,

Whereas it is appropriate that, with due regard to their personal safety, consideration be given to the role of law enforcement officials in relation to the administration of justice, to the protection of the right to life, liberty and security of the person, to their responsibility to maintain public safety and social peace and to the importance of their qualifications, training and conduct,

The basic principles set forth below, which have been formulated to assist Member States in their task of ensuring and promoting the proper role of law enforcement officials, should be taken into account and respected by Governments within the framework of their national legislation and practice, and be brought to the attention of law enforcement officials as well as other persons, such as judges, prosecutors, lawyers, members of the executive branch and the legislature, and the public.
General provisions

[1] Governments and law enforcement agencies shall adopt and implement rules and regulations on the use of force and firearms against persons by law enforcement officials. In developing such rules and regulations, Governments and law enforcement agencies shall keep the ethical issues associated with the use of force and firearms constantly under review.

[2] 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 that would allow for a differentiated use of force and firearms. 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. For the same purpose, it should also be possible for law enforcement officials to be equipped with self-defensive equipment such as shields, helmets, bullet-proof vests and bullet-proof means of transportation, in order to decrease the need to use weapons of any kind.

[3] 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.

[4] Law enforcement officials, in carrying out their duty, shall, as far as possible, apply non-violent means before resorting to the use of force and firearms. They may use force and firearms only if other means remain ineffective or without any promise of achieving the intended result.

[5] Whenever the lawful use of force and firearms is unavoidable, law enforcement officials shall:
   (a) Exercise restraint in such use and act in proportion to the seriousness of the offence and the legitimate objective to be achieved;
   (b) Minimize damage and injury, and respect and preserve human life;
   (c) Ensure that assistance and medical aid are rendered to any injured or affected persons at the earliest possible moment;
   (d) Ensure that relatives or close friends of the injured or affected person are notified at the earliest possible moment.

[6] Where injury or death is caused by the use of force and firearms by law enforcement officials, they shall report the incident promptly to their superiors, in accordance with principle 22.

[7] Governments shall ensure that arbitrary or abusive use of force and firearms by law enforcement officials is punished as a criminal offence under their law.

[8] Exceptional circumstances such as internal political instability or any other public emergency may not be invoked to justify any departure from these basic principles.

Special provisions

[9] Law enforcement officials shall not use firearms against persons except in self-defence or defence of others against the imminent threat of death or serious injury, to prevent the perpetration of a particularly serious crime involving grave threat to life, to arrest a person presenting such a danger and resisting their authority, or to prevent his or her escape, and only when less extreme means are insufficient to achieve these objectives. In any event, intentional lethal use of firearms may only be made when strictly unavoidable in order to protect life.
In the circumstances provided for under principle 9, law enforcement officials shall identify themselves as such and give a clear warning of their intent to use firearms, with sufficient time for the warning to be observed, unless to do so would unduly place the law enforcement officials at risk or would create a risk of death or serious harm to other persons, or would be clearly inappropriate or pointless in the circumstances of the incident.

Rules and regulations on the use of firearms by law enforcement officials should include guidelines that:

(a) Specify the circumstances under which law enforcement officials are authorized to carry firearms and prescribe the types of firearms and ammunition permitted;
(b) Ensure that firearms are used only in appropriate circumstances and in a manner likely to decrease the risk of unnecessary harm;
(c) Prohibit the use of those firearms and ammunition that cause unwarranted injury or present an unwarranted risk;
(d) Regulate the control, storage and issuing of firearms, including procedures for ensuring that law enforcement officials are accountable for the firearms and ammunition issued to them;
(e) Provide for warnings to be given, if appropriate, when firearms are to be discharged;
(f) Provide for a system of reporting whenever law enforcement officials use firearms in the performance of their duty.

Policing unlawful assemblies

As everyone is allowed to participate in lawful and peaceful assemblies, in accordance with the principles embodied in the Universal Declaration of Human Rights and the International Covenant on Civil and Political Rights, Governments and law enforcement agencies and officials shall recognize that force and firearms may be used only in accordance with principles 13 and 14.

In the dispersal of assemblies that are unlawful but non-violent, law enforcement officials shall avoid the use of force or, where that is not practicable, shall restrict such force to the minimum extent necessary.

In the dispersal of violent assemblies, law enforcement officials may use firearms only when less dangerous means are not practicable and only to the minimum extent necessary. Law enforcement officials shall not use firearms in such cases, except under the conditions stipulated in principle 9.

Policing persons in custody or detention

Law enforcement officials, in their relations with persons in custody or detention, shall not use force, except when strictly necessary for the maintenance of security and order within the institution, or when personal safety is threatened.

Law enforcement officials, in their relations with persons in custody or detention, shall not use firearms, except in self-defence or in the defence of others against the immediate threat of death or serious injury, or when strictly necessary to prevent the escape of a person in custody or detention presenting the danger referred to in principle 9.

The preceding principles are without prejudice to the rights, duties and responsibilities of prison officials, as set out in the Standard Minimum Rules for the Treatment of Prisoners, particularly rules 33, 34 and 54.
Qualifications, training and counselling

[18] Governments and law enforcement agencies shall ensure that all law enforcement officials are selected by proper screening procedures, have appropriate moral, psychological and physical qualities for the effective exercise of their functions and receive continuous and thorough professional training. Their continued fitness to perform these functions should be subject to periodic review.

[19] Governments and law enforcement agencies shall ensure that all law enforcement officials are provided with training and are tested in accordance with appropriate proficiency standards in the use of force. Those law enforcement officials who are required to carry firearms should be authorized to do so only upon completion of special training in their use.

[20] In the training of law enforcement officials, Governments and law enforcement agencies shall give special attention to issues of police ethics and human rights, especially in the investigative process, to alternatives to the use of force and firearms, including the peaceful settlement of conflicts, the understanding of crowd behaviour, and the methods of persuasion, negotiation and mediation, as well as to technical means, with a view to limiting the use of force and firearms. Law enforcement agencies should review their training programmes and operational procedures in the light of particular incidents.

[21] Governments and law enforcement agencies shall make stress counselling available to law enforcement officials who are involved in situations where force and firearms are used.

Reporting and review procedures

[22] Governments and law enforcement agencies shall establish effective reporting and review procedures for all incidents referred to in principles 6 and 11 (f). For incidents reported pursuant to these principles, Governments and law enforcement agencies shall ensure that an effective review process is available and that independent administrative or prosecutorial authorities are in a position to exercise jurisdiction in appropriate circumstances. In cases of death and serious injury or other grave consequences, a detailed report shall be sent promptly to the competent authorities responsible for administrative review and judicial control.

[23] Persons affected by the use of force and firearms or their legal representatives shall have access to an independent process, including a judicial process. In the event of the death of such persons, this provision shall apply to their dependents accordingly.

[24] Governments and law enforcement agencies shall ensure that superior officers are held responsible if they know, or should have known, that law enforcement officials under their command are resorting, or have resorted, to the unlawful use of force and firearms, and they did not take all measures in their power to prevent, suppress or report such use.

[25] Governments and law enforcement agencies shall ensure that no criminal or disciplinary sanction is imposed on law enforcement officials who, in compliance with the Code of Conduct for Law Enforcement Officials and these basic principles, refuse to carry out an order to use force and firearms, or who report such use by other officials.

[26] Obedience to superior orders shall be no defence if law enforcement officials knew that an order to use force and firearms resulting in the death or serious injury of a person was manifestly unlawful and had a reasonable opportunity to refuse to follow it. In any case, responsibility also rests on the superiors who gave the unlawful orders.
In accordance with the commentary to article 1 of the Code of Conduct for Law Enforcement Officials, the term “law enforcement officials” includes all officers of the law, whether appointed or elected, who exercise police powers, especially the powers of arrest or detention. In countries where police powers are exercised by military authorities, whether uniformed or not, or by State security forces, the definition of law enforcement officials shall be regarded as including officers of such services.

Appendix D

UN Code of Conduct for Law Enforcement Officials

Adopted by General Assembly resolution 34/169 of 17 December 1979

Article 1

Law enforcement officials shall at all times fulfill the duty imposed upon them by law, by serving the community and by protecting all persons against illegal acts, consistent with the high degree of responsibility required by their profession.

Commentary:

[a] The term “law enforcement officials” includes all officers of the law, whether appointed or elected, who exercise police powers, especially the powers of arrest or detention.
[b] In countries where police powers are exercised by military authorities, whether uniformed or not, or by State security forces, the definition of law enforcement officials shall be regarded as including officers of such services.
[c] Service to the community is intended to include particularly the rendition of services of assistance to those members of the community who by reason of personal, economic, social or other emergencies are in need of immediate aid.
[d] This provision is intended to cover not only all violent, predatory and harmful acts, but extends to the full range of prohibitions under penal statutes. It extends to conduct by persons not capable of incurring criminal liability.

Article 2

In the performance of their duty, law enforcement officials shall respect and protect human dignity and maintain and uphold the human rights of all persons.

Commentary:

[a] The human rights in question are identified and protected by national and international law. Among the relevant international instruments are the Universal Declaration of Human Rights, the International Covenant on Civil and Political Rights, the Declaration on the Protection of All Persons from Being Subjected to Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment, the United Nations Declaration on the Elimination of All Forms of Racial Discrimination, the International Convention on the Elimination of All Forms of Racial Discrimination, the International Convention on the Suppression and Punishment of the Crime of Apartheid, the Convention on the Prevention and Punishment of the Crime of Genocide, the Standard Minimum Rules for the Treatment of Prisoners and the Vienna Convention on Consular Relations.
Article 3
Law enforcement officials may use force only when strictly necessary and to the extent required for the performance of their duty.

Commentary:
(a) This provision emphasizes that the use of force by law enforcement officials should be exceptional; while it implies that law enforcement officials may be authorized to use force as is reasonably necessary under the circumstances for the prevention of crime or in effecting or assisting in the lawful arrest of offenders or suspected offenders, no force going beyond that may be used.
(b) National law ordinarily restricts the use of force by law enforcement officials in accordance with a principle of proportionality. It is to be understood that such national principles of proportionality are to be respected in the interpretation of this provision. In no case should this provision be interpreted to authorize the use of force which is disproportionate to the legitimate objective to be achieved.
(c) The use of firearms is considered an extreme measure. Every effort should be made to exclude the use of firearms, especially against children. In general, firearms should not be used except when a suspected offender offers armed resistance or otherwise jeopardizes the lives of others and less extreme measures are not sufficient to restrain or apprehend the suspected offender. In every instance in which a firearm is discharged, a report should be made promptly to the competent authorities.

Article 4
Matters of a confidential nature in the possession of law enforcement officials shall be kept confidential, unless the performance of duty or the needs of justice strictly require otherwise.

Commentary:
By the nature of their duties, law enforcement officials obtain information which may relate to private lives or be potentially harmful to the interests, and especially the reputation, of others. Great care should be exercised in safeguarding and using such information, which should be disclosed only in the performance of duty or to serve the needs of justice. Any disclosure of such information for other purposes is wholly improper.

Article 5
No law enforcement official may inflict, instigate or tolerate any act of torture or other cruel, inhuman or degrading treatment or punishment, nor may any law enforcement official invoke superior orders or exceptional circumstances such as a state of war or a threat of war, a threat to national security, internal political instability or any other public emergency as a justification of torture or other cruel, inhuman or degrading treatment or punishment.

Commentary:
(a) This prohibition derives from the Declaration on the Protection of All Persons from Being Subjected to Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment, adopted by the General Assembly, according to which: “[Such an act is] an offence to human dignity and shall be condemned as a denial of the
purposes of the Charter of the United Nations and as a violation of the human rights and fundamental freedoms proclaimed in the Universal Declaration of Human Rights [and other international human rights instruments].”

(b) The Declaration defines torture as follows:
“... torture means any act by which severe pain or suffering, whether physical or mental, is intentionally inflicted by or at the instigation of a public official on a person for such purposes as obtaining from him or a third person information or confession, punishing him for an act he has committed or is suspected of having committed, or intimidating him or other persons. It does not include pain or suffering arising only from, inherent in or incidental to, lawful sanctions to the extent consistent with the Standard Minimum Rules for the Treatment of Prisoners.”

(c) The term “cruel, inhuman, or degrading treatment or punishment” has not been defined by the General Assembly but should be interpreted so as to extend the widest possible protection against abuses, whether physical or mental.

Article 6
Law enforcement officials shall ensure the full protection of the health of persons in their custody and, in particular, shall take immediate action to secure medical attention whenever required.

Commentary:
(a) "Medical attention", which refers to services rendered by any medical personnel, including certified medical practitioners and paramedics, shall be secured when needed or requested.
(b) While the medical personnel are likely to be attached to the law enforcement operation, law enforcement officials must take into account the judgment of such personnel when they recommend providing the person in custody with appropriate treatment through, or in consultation with, medical personnel from outside the law enforcement operation.
(c) It is understood that law enforcement officials shall also secure medical attention for victims of violations of law or of accidents occurring in the course of violations of law.

Article 7
Law enforcement officials shall not commit any act of corruption. They shall also rigorously oppose and combat all such acts.

Commentary:
(a) Any act of corruption, in the same way as any other abuse of authority, is incompatible with the profession of law enforcement officials. The law must be enforced fully with respect to any law enforcement official who commits an act of corruption, as Governments cannot expect to enforce the law among their citizens if they cannot, or will not, enforce the law against their own agents and within their agencies.
(b) While the definition of corruption must be subject to national law, it should be understood to encompass the commission or omission of an act in the performance of or in connection with one’s duties, in response to gifts, promises or incentives demanded or accepted, or the wrongful receipt of these once the act has been committed or omitted.
(c) The expression "act of corruption" referred to above should be understood to encompass attempted corruption.
Article 8

Law enforcement officials shall respect the law and the present Code. They shall also, to the best of their capability, prevent and rigorously oppose any violations of them.

Law enforcement officials who have reason to believe that a violation of the present Code has occurred or is about to occur shall report the matter to their superior authorities and, where necessary, to other appropriate authorities or organs vested with reviewing or remedial power.

Commentary:

(a) This Code shall be observed whenever it has been incorporated into national legislation or practice. If legislation or practice contains stricter provisions than those of the present Code, those stricter provisions shall be observed.

(b) The article seeks to preserve the balance between the need for internal discipline of the agency on which public safety is largely dependent, on the one hand, and the need for dealing with violations of basic human rights, on the other. Law enforcement officials shall report violations within the chain of command and take other lawful action outside the chain of command only when no other remedies are available or effective. It is understood that law enforcement officials shall not suffer administrative or other penalties because they have reported that a violation of this Code has occurred or is about to occur.

(c) The term “appropriate authorities or organs vested with reviewing or remedial power” refers to any authority or organ existing under national law, whether internal to the law enforcement agency or independent thereof, with statutory, customary or other power to review grievances and complaints arising out of violations within the purview of this Code.

(d) In some countries, the mass media may be regarded as performing complaint review functions similar to those described in subparagraph (c) above. Law enforcement officials may, therefore, be justified if, as a last resort and in accordance with the laws and customs of their own countries and with the provisions of article 4 of the present Code, they bring violations to the attention of public opinion through the mass media.

(e) Law enforcement officials who comply with the provisions of this Code deserve the respect, the full support and the co-operation of the community and of the law enforcement agency in which they serve, as well as the law enforcement profession.
Appendix E

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Appendix F

Glossary

Biological weapon  "[1] Microbial or other biological agents, or toxins whatever their origin or method of production, of types and in quantities that have no justification for prophylactic, protective or other peaceful purposes; [2] Weapons, equipment or means of delivery designed to use such agents or toxins for hostile purposes or in armed conflict." 330

Chemical riot control agent  "Any chemical... which can produce rapidly in humans sensory irritation or disabling physical effects which disappear within a short time following termination of exposure." 331

Chemical warfare agent  "Chemical substances, whether gaseous, liquid or solid, which might be employed because of their direct toxic effects on man, animals and plants." 332

Chemical weapon  "[a] Toxic chemicals and their precursors, except where intended for purposes not prohibited under this Convention, as long as the types and quantities are consistent with such purposes; [b] Munitions and devices, specifically designed to cause death or other harm through the toxic properties of those toxic chemicals specified in subparagraph [a], which would be released as a result of the employment of such munitions and devices; [c] Any equipment specifically designed for use directly in connection with the employment of munitions and devices specified in subparagraph [b]." 333

Chemical Weapons Convention  International treaty aimed to prevent the stockpiling, retention and production of weapons of mass destruction. 334

Disproportionate  "Not acting in proportion to the seriousness of the offence and the legitimate objective to be achieved." 335

Lachrymator  "Any substance which causes irritation and copious watering of the eyes when it comes into contact with them [in the form of a gas, spray, dust, or the like]." 336

Law enforcement officials  "[A]ll officers of the law whether appointed or elected, who exercise police powers, especially the powers of arrest or detention." 337

Molotov cocktail  "A makeshift incendiary device for throwing by hand, consisting of a bottle or other breakable container filled with flammable liquid and with a piece of cloth, etc., as a fuse." 338

331. Chemical Weapons Convention, supra note 52, at art 2.7.
333. Chemical Weapons Convention, supra note 52, at art. 2.1.
334. Id., at art. 1.
335. U.N. Principles on the Use of Force, supra note 108, at art. 5[a].
336. Lachrymator, in Oxford English Dictionary, supra note 44.
337. U.N. Code of Conduct for Law Enforcement Officials, supra note 1, at art. 1[a].
Torture

“[A]ny act by which severe pain or suffering, whether physical or mental, is intentionally inflicted on a person for such purposes as punishing him for an act he or a third person has committed or is suspected of having committed, or intimidating or coercing him or a third person, or for any reason based on discrimination of any kind, when such pain or suffering is inflicted by or at the instigation of or with the consent or acquiescence of a public official or other person acting in an official capacity.” 339

Toxic chemical

“Any chemical which through its chemical action on life processes can cause death, temporary incapacitation or permanent harm to humans or animals.” 340

Use of force

“Amount of effort required by law enforcement to compel compliance by an unwilling subject.” 341

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341. US Department of Justice, Review of the Department of Justice’s Use of Less-Lethal Weapons, supra note 107, at i.