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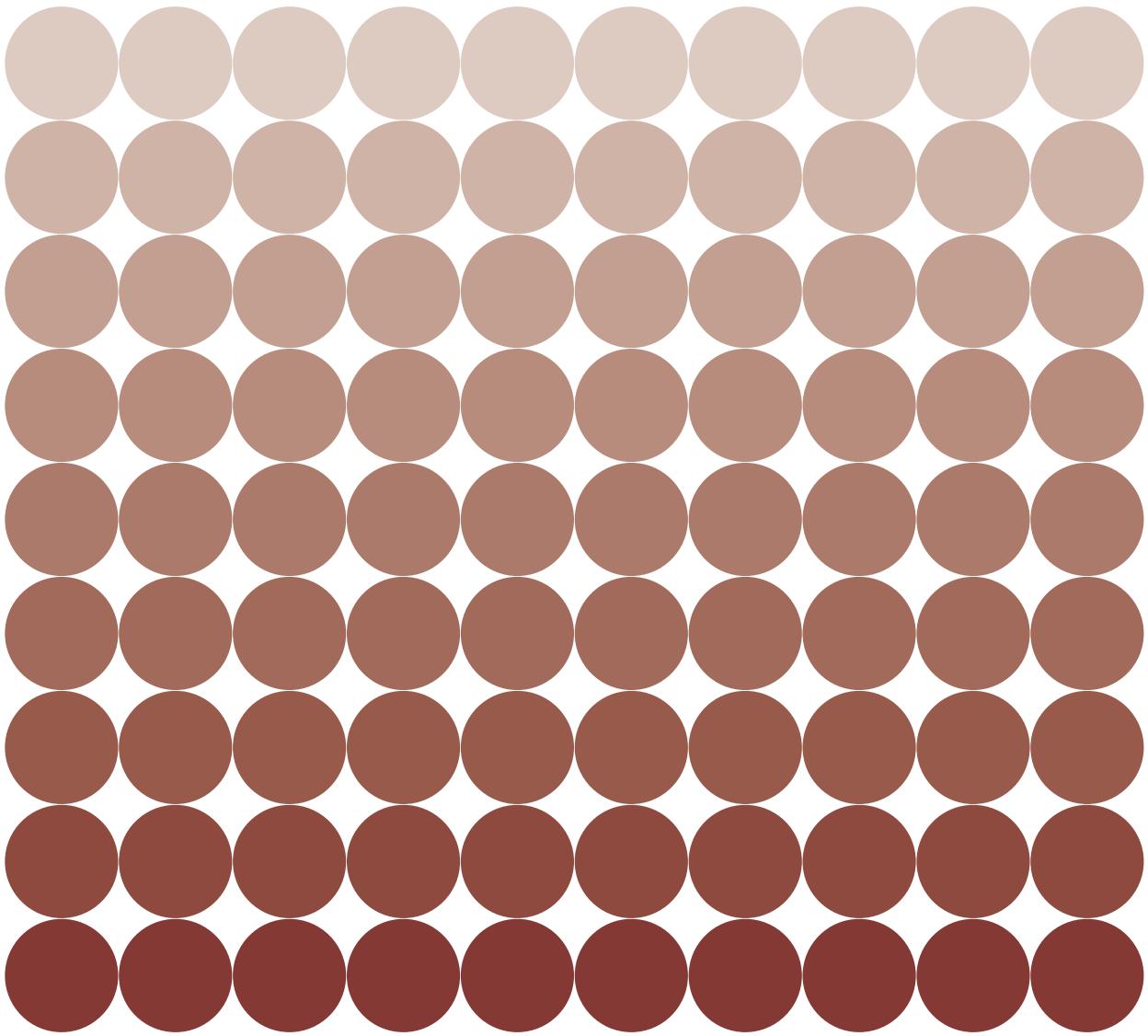
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November 2020

STRENGTHENING GLOBAL REGIMES

Addressing the Threat Posed by Chemical Weapons

IAN ANTHONY



STOCKHOLM INTERNATIONAL PEACE RESEARCH INSTITUTE

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Preface

The 1993 Chemical Weapons Convention is in many ways a model for global disarmament treaties. The commitment to the prohibition of chemical weapons that it demands from states parties is comprehensive, and the obligations in the Convention apply equally to all states without discrimination. The Convention is supported by far-reaching verification provisions.

The Convention has gone a long way to meeting its original goal of eliminating the risk of large-scale battlefield use of chemical weapons in a conflict between states. Chemical weapons can no longer be considered to be the ‘poor man’s atomic bomb’. However, the dynamics of armed conflict are changing, with the threat posed by chemical weapons changing in parallel. This is part of a larger change during the past decade as the world’s zone of peace has been shrinking after a period of progress; mechanisms created to contain and resolve conflict are under great strain.

The conflict in Syria is one example of how conflict has been changing, with civilians as the main targets of military action. The use of chemical weapons in Syria has been confirmed and does not follow the traditional pattern of combat between armed forces. The use of chemical weapons in cities has taken a psychological as well as physical toll on civilian populations. Chemical weapons have also been used by groups that carry out mass-impact terrorist attacks, and chemical agents with novel characteristics have been used in targeted attacks on politically exposed individuals. States on whose territory these attacks have taken place have concluded that they are attempted murders sponsored and conducted by foreign powers, leading to an escalating set of targeted sanctions and other tit-for-tat measures. An increase in the number of such attacks would quickly become a matter of even greater international concern.

At the global level, the growing tensions between major powers have become a persistent barrier to collective action. Chemical weapon disarmament has not been spared from this breakdown in cooperation. The failure to find agreement among major powers has had a negative impact on the major international institution—the Organisation for the Prohibition of Chemical Weapons—charged with overseeing chemical weapon disarmament. Without action to restore cooperation, there is a risk that the prohibition on chemical weapons will erode at exactly the time when the evolving patterns of use demonstrate how much it is needed.

This paper’s overview of the situation, analysis of trends and careful recommendations will be of interest to policymakers working on security and disarmament, as well as to everybody trying to understand and adapt to the changing nature of the threat posed by weapons of mass destruction.

Dan Smith
Director, SIPRI
Stockholm, November 2020

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Ian Anthony
Stockholm, November 2020

Summary

The 1993 Chemical Weapons Convention (CWC) can be seen as the most advanced disarmament agreement existing today given its comprehensive commitments and far-reaching verification procedures—and because 193 states are currently party to it. By 2023 the CWC is expected to have achieved the destruction of the enormous declared stockpiles of chemical weapons (CWs) accumulated during the cold war, but the threat environment is changing and the CWC needs to adapt in response.

Recent confirmed cases of CW use in conflict indicate that detecting chemical warfare agents in militarily significant quantities remains an important task. However, these cases have come in the context of internal conflicts involving both state and non-state armed actors, meaning that they have a dynamic that is different from the interstate conflicts the CWC was designed to address. The changing nature of conflict has therefore made attributing CW use more challenging.

There have also been a number of confirmed cases of CW use outside of a conflict in recent times. These have included targeted attacks on politically exposed persons, sometimes carried out with chemicals that are not listed as warfare agents in the CWC. As well as identification of the chemical agent used, this type of targeted attack requires both a political response and a criminal investigation.

The Organisation for the Prohibition of Chemical Weapons (OPCW) has been adapting to the changing threat environment continuously. However, decisions taken at a Special Session of the States Parties to the CWC in 2018 created several new tasks. These tasks include the investigation of confirmed battlefield use of CWs in Syria with a view to identifying the perpetrators; the creation of a generic capability to investigate future allegations of CW use by state or non-state actors; and an assessment of how the verification regime of the CWC could adapt to changing threats.

This report examines how the OPCW has responded to the new tasks that states have instructed it to perform and makes several recommendations about possible future actions.

The OPCW already has significant internal assets to draw on when preparing for new tasks, and these are being organized in a coherent way. Additional resources are being created, notably a Centre for Chemistry and Technology (ChemTech Centre)—a valuable new asset that could be of help to the OPCW, to CWC states parties and to the chemical industry.

The OPCW cannot expect to escape from resource constraints in the difficult near-term economic environment confronting its members. However, CWC states parties must ensure that the OPCW retains sufficient staff with the training and experience to carry out its tasks.

The OPCW will not become a law enforcement agency but, to prepare for possible future investigations of alleged use leading to attribution, some additional resources are needed. The OPCW must be able to make law enforcement bodies aware of the technical resources it has at its disposal and how they could

contribute to an investigation. The OPCW must also be able to understand the needs of investigators and prosecutors and translate that knowledge into products and services of use to the law enforcement community.

The verification system of the CWC was designed to detect large-scale programmes to produce CWs for the armed forces of states. It was not designed to uncover small and well-hidden programmes, or to consider the potential of unusual CW delivery means. However, recent cases of confirmed use indicate that verification must adapt to meet these challenges.

In the light of these conclusions, the following five recommendations are offered for consideration:

1. The OPCW should start to plan on the basis that the new ChemTech Centre will become a focal point for an expanded network of laboratories and bring a wider spectrum of analytical tools and methods to bear on CW disarmament. To extend global expert engagement with research and innovations in chemistry relevant to the CWC, the centre should already conduct outreach to identify new chemical laboratories with which it should collaborate.
2. The OPCW should accelerate and expand the work to develop forensic science as an instrument to support CW disarmament in several ways: (a) through a dedicated programme to establish standard working methods and protocols that forensic laboratories who partner with the OPCW will use; (b) by harvesting the lessons learned from the use of forensic science in investigating incidents involving radioactive materials; and (c) by promoting a focused discussion of how chemical forensic science can be used in investigations that attribute confirmed cases of CW use.
3. The OPCW should organize a series of discussions that highlight the practical and legal aspects that need to be thought through in designing an attribution mechanism in order to pinpoint the main challenges and develop effective responses to them. The discussions should be designed to produce a clear understanding of what the OPCW can do (and is willing to do) in different scenarios of alleged CW use.
4. Investigations to identify the perpetrators of CW use should become a focus for national and regional exercises that link the CW expert community and the law enforcement community. The OPCW should expand its calendar of capacity building and training events to include exercises tailored to investigations.
5. The coalition of non-governmental experts that work to support the effective implementation of the CWC should organize a focused dialogue on the potential for complementary access to eliminate the risk of clandestine CW programmes with a small ‘footprint’. The dialogue would contribute to the discussion on a future verification system adapted to new threats.

Abbreviations

CSP	Conference of States Parties
CW	Chemical weapon
CWC	1993 Chemical Weapons Convention
DAT	Declaration Assessment Team
EU	European Union
FATF	Financial Action Task Force
FFM	Fact-finding mission
IAEA	International Atomic Energy Agency
IIIM	International, Impartial and Independent Mechanism
IIT	Investigation and Identification Team
INTERPOL	International Criminal Police Organization
ISIL	Islamic State in Iraq and the Levant
JIM	OPCW-UN Joint Investigative Mechanism
OECD	Organisation for Economic Cooperation and Development
OEWG	Open-ended Working Group
OIC	Independent International Commission of Inquiry on the Syrian Arab Republic
OPCW	Organisation for the Prohibition of Chemical Weapons
RRAT	Rapid Response and Assistance Team
SAB	Scientific Advisory Board
TWG	Temporary working group
UN	United Nations

1. Addressing the threat posed by chemical weapons: Accountability and disarmament

The 1993 Chemical Weapons Convention (CWC) is a comprehensive multilateral disarmament agreement.¹ With 193 states parties, the CWC represents a commitment by 98 per cent of the world's population to turn their backs on chemical weapons (CWs) in perpetuity. The obligations contained in the CWC fall equally on all states parties. There is no special status and there are no special rules for any state or group of states. The CWC includes far-reaching verification procedures to detect chemical warfare agents in militarily significant quantities, and extensive interaction with the chemical industry helps to ensure that technology is developed exclusively for peaceful uses.

The CWC has largely achieved the destruction of the enormous declared stockpiles of CWs accumulated during the cold war; the destruction of these stockpiles is expected to be complete by 2023. However, successfully eliminating large, declared CW programmes has not made the challenge of preventing CW use less complex. Since 2012, state or non-state actors have used CWs in Iraq, Malaysia, Russia, Syria and the United Kingdom. These recent confirmed uses of CWs underline the need for continuous attention to reducing the threat that they pose.

In July 2020 the Executive Council of the Organisation for the Prohibition of Chemical Weapons (OPCW)—the body charged with overseeing the implementation of the CWC—accepted the key findings of an investigation into CW use in Syria, including that ‘there are reasonable grounds to believe that the Syrian Arab Republic used chemical weapons’.² The Executive Council found that by direct implication, ‘the Syrian Arab Republic failed to declare and destroy all of its chemical weapons and chemical weapons production facilities’.³

The issues raised by the Syria CW file highlight some of the difficulties of sustaining international cooperation at a time of heightened geopolitical competition, even when no state party contests the objective of eliminating CWs. The annual Conference of States Parties (CSP) scheduled for 30 November to 4 December 2020 will have to decide how to respond to the Executive Council’s finding that Syria is in non-compliance with the CWC.

The way in which the CSP handles the Syria file, in particular, will have important repercussions for the CWC, and it will shape the thinking around how a global disarmament regime should address the (still unresolved) question posed by Fred Iklé in 1961: after detection—what?⁴

¹ Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction (Chemical Weapons Convention, CWC), opened for signature 13 Jan. 1993, entered into force 29 Apr. 1997.

² Organisation for the Prohibition of Chemical Weapons (OPCW), Executive Council, ‘Decision: Addressing the possession and use of chemical weapons by the Syrian Arab Republic’, EC-94/DEC.2, 9 July 2020, preamble, p. 2.

³ OPCW, Executive Council, EC-94/DEC.2 (note 2), para. 2.

⁴ Iklé, F. C., ‘After detection—what?’, *Foreign Affairs*, Jan. 1961.

The remainder of this chapter provides some background on the changing threat environment in the context of the use of CWs in armed conflict, specifically in Syria and Iraq, and the use of chemical agents in recent assassination attempts.

The changing chemical weapons threat environment

Chemical weapons use in a conflict

While the number of deaths that can be attributed directly to CW use in Syria is not known, it has been established that hundreds of people were exposed to the nerve agent sarin during fighting in Ghouta, Syria, in August 2013.⁵ Following a direct, public appeal by Russian President Vladimir Putin for the United States to show restraint, Russia and the USA cooperated to address the issue without military action.⁶ The approach combined coercion and persuasion of Syria to eliminate its CWs and disarm. Failure to do so would have resulted in joint military action against Syria by France and the USA, while Russia brokered Syrian acceptance of a disarmament agreement under the auspices of the United Nations.⁷

Less than a month after the Ghouta attack, Syria agreed to join the CWC, which entered into force for Syria on 14 October 2013. On 14 September 2013 Russia and the USA agreed on a framework for elimination of Syrian CWs, and on 27 September the UN Security Council, in Resolution 2118, laid out the terms for disarmament cooperation.⁸

An extensive international coalition was mobilized to disarm Syria of CWs using a creative and cooperative approach. The disarmament was to ‘start immediately pending the formal entry into force of the Convention’ and was to be ‘conducted in the most rapid and safe manner’.⁹ The most dangerous weapons were destroyed at sea while a distributed network of partners disposed of lower-risk chemicals.¹⁰

Syria prepared, at short notice, a declaration of CWs as defined in the CWC (i.e. both the toxic chemicals and the munitions used to deliver them), along with the location of facilities for storage, production, mixing and filling, and research and development.¹¹ The OPCW Executive Council scheduled the elimination of the

⁵ United Nations, General Assembly and Security Council, Report of the United Nations Mission to Investigate Allegations of the Use of Chemical Weapons in the Syrian Arab Republic on the Alleged Use of Chemical Weapons in the Ghouta Area of Damascus on 21 August 2013, A/67/997-S/2013/553, 16 Sep. 2013.

⁶ Putin, V., ‘A plea for caution from Russia’, *New York Times*, 11 Sep. 2013; and US Department of State, Office of the Spokesperson, ‘Joint statements by Secretary of State John Kerry and Russian Foreign Minister Sergey Lavrov’, Media release, 12 Sep. 2013.

⁷ Bunker, R. J., *Contemporary Chemical Weapons Use in Syria and Iraq by the Assad Regime and the Islamic State* (Strategic Studies Institute, US Army War College: Carlisle, PA, Feb. 2019), pp. 7–8.

⁸ United Nations, General Assembly and Security Council, Framework for Elimination of Syrian Chemical Weapons, Annex to the Letter Dated 19 September 2013 from the Permanent Representatives of the Russian Federation and the United States of America to the United Nations Addressed to the Secretary-General, A/68/398-S/2013/565, 24 Sep. 2013; and UN Security Council Resolution 2118, 27 Sep. 2013.

⁹ OPCW, Executive Council, ‘Decision: Destruction of Syrian chemical weapons’, EC-M-33/DEC.1, 27 Sep. 2013, preamble, p. 2.

¹⁰ Hess, G., ‘Destroying Syria’s chemical weapons: Historic mission to eradicate toxic materials at sea is complete’, *Chemical Engineering News*, vol. 92, no. 34 (Aug. 2014).

¹¹ OPCW, Executive Council, EC-M-33/DEC.1 (note 9).

declared items for completion within approximately six months from the start of the operation.

The experience of disarming Syria seemed to validate the CWC as an effective instrument in conflict conditions as well as during peacetime. However, the body set up jointly by the OPCW and the UN to investigate CW use in Syria, the OPCW-UN Joint Investigative Mechanism (JIM), has attributed the use of sarin in Syria in 2014, 2015 and 2017 to Syrian government forces.¹² In April 2020 the first report from an Investigation and Identification Team (IIT) created in 2018 under the authority of the OPCW Director-General (discussed further in chapter 2) found ‘reasonable grounds’ to believe that the Syrian Air Force used CWs on at least three additional occasions.¹³

Syrian use of an undeclared stockpile of CWs after joining the CWC has put a spotlight on how to ensure that a declaration is complete, even if it is compiled under extraordinary conditions at very short notice. In 2018, states parties to the CWC asked the OPCW to bring forward proposals to enhance the capacity and tools available to the OPCW Technical Secretariat to strengthen implementation of the CWC verification regime.¹⁴

In a report from 2017, the JIM also attributed use of the chemical warfare agent sulphur mustard to the Islamic State in Iraq and the Levant (ISIL).¹⁵ In addition, other reports have indicated that US military personnel have been attacked with sulphur mustard by ISIL.¹⁶ The need to reduce the risk that CWs will be used in terrorist attacks has focused attention on identifying substances of concern beyond the list of traditional chemical warfare agents. The necessity of those substances being under tight control has promoted a dialogue among a range of international bodies that are part of the global anti-terrorism effort. For example, new cooperation channels have been opened between the disarmament and law enforcement communities.¹⁷

¹² OPCW-UN Joint Investigative Mechanism (JIM), Seventh Report of the Organisation for the Prohibition of Chemical Weapons—United Nations Joint Investigative Mechanism, Annex to the Letter Dated 26 October 2017 from the Secretary-General Addressed to the President of the Security Council, S/2017/904, 26 Oct. 2017. The OPCW-UN JIM was set up by the UN Security Council in 2015 to ‘identify to the greatest extent feasible individuals, entities, groups, or governments who were perpetrators, organisers, sponsors or otherwise involved in the use of chemicals as weapons, including chlorine or any other toxic chemical, in the Syrian Arab Republic where the OPCW FFM [Fact-Finding Mission] determines or has determined that a specific incident in the Syrian Arab Republic involved or likely involved the use of chemicals as weapons, including chlorine or any other toxic chemical’. UN Security Council Resolution 2235, 7 Aug. 2015, para. 5.

¹³ OPCW, Technical Secretariat, First Report by the OPCW Investigation and Identification Team Pursuant to Paragraph 10 of Decision C-SS-4/DEC.3 ‘Addressing the threat from chemical weapons use’, Ltamenah (Syrian Arab Republic), 24, 25 and 30 March 2017, S/1867/2020, 8 Apr. 2020, Executive summary, para. 3.

¹⁴ OPCW, Conference of States Parties (CSP), ‘Decision: Addressing the threat from chemical weapons use’, C-SS-4/DEC.3, 27 June 2018, para. 21.

¹⁵ OPCW-UN JIM, S/2017/904 (note 12).

¹⁶ Bunker (note 7), p. 4.

¹⁷ OPCW, Technical Secretariat, ‘Summary of the Conference on Countering Chemical Terrorism, OPCW Headquarters, The Hague, The Netherlands, 7–8 June 2018’, S/1652/2018, 16 July 2018.

Chemical weapons use outside of a conflict

In March 2018 the UK asked the OPCW to assist with the investigation into the use of a toxic chemical to poison three individuals in the city of Salisbury (a further two individuals were subsequently poisoned by the same chemical in the nearby town of Amesbury). The analysis in designated laboratories of environmental and biomedical samples collected by the OPCW demonstrated the presence of a toxic chemical in which impurities were almost absent.¹⁸ The name and structure of the toxic chemical were not published by the OPCW, but the Technical Secretariat report confirmed the findings of the British authorities that identified it as a nerve agent of the novichok family.¹⁹

In September 2018 the Crown Prosecution Service in the UK announced that the evidence collected justified criminal prosecution of two Russian citizens, who were charged with conspiracy to murder, attempted murder and the use and possession of a novichok agent contrary to the UK's 1996 *Chemical Weapons Act*. Given the nature of the chemical, the operational experience of the two Russian citizens and the motive to target the two Russian individuals poisoned, the British Government determined that 'there is no plausible alternative explanation for what happened in Salisbury than Russian state responsibility'.²⁰

Although the novichok used in the UK had characteristics of a chemical warfare agent, the family of chemical compounds to which it belongs was not listed in the Annex on Chemicals that forms part of the CWC at the time the incident took place. In November 2019 the CSP adopted two decisions to amend, for the first time, the Annex on Chemicals to the Convention. The decisions made novichoks as well as another family of chemicals with a similar biochemical basis for toxicity subject to the most stringent monitoring and controls laid down in the CWC.²¹

When Russian politician Alexei Navalny fell ill during a flight from Siberia to Moscow on 20 August 2020, he was first treated in a hospital in Omsk before being transferred to a hospital in Germany. While Russian doctors ruled out poisoning as the cause of Navalny's illness, the results of tests carried out in Germany led German Chancellor Angela Merkel to state on 2 September 2020 that Navalny, a Russian opposition politician, had been poisoned with a nerve agent 'identified unequivocally' as a novichok.²²

¹⁸ OPCW, Technical Secretariat, 'Summary of the report on activities carried out in support of a request for technical assistance by the United Kingdom of Great Britain and Northern Ireland (Technical Assistance Visit TAV/02/18)', S/1612/2018, 12 Apr. 2018, para. 11.

¹⁹ Wilson, P., '18 April update on the use of a nerve agent in Salisbury, Update by Peter Wilson, UK Permanent Representative to the OPCW, following the OPCW Technical Secretariat's assistance to the UK after the Salisbury attack', Speech at the OPCW Executive Council meeting, 18 Apr. 2018.

²⁰ Wilson (note 19). After the attack in the UK the Bulgarian authorities reopened a criminal investigation into a 2015 poisoning with certain similarities to the Salisbury case. Schwirtz, M., 'Bulgaria reopens poisoning case, citing possible link to Russia and Skripal attack', *New York Times*, 11 Feb. 2019.

²¹ Notman, N., 'Chemical weapons watchdog to add novichok agents to list of closely controlled substances', *Chemistry World*, 2 Dec. 2019. The use of novichok to cause deliberate harm was already prohibited under the CWC.

²² Rising, D. and Litvinova, D., 'Hospital: Russia's Navalny still in coma but improving', AP News, 28 Aug. 2020; and Stone, R., 'How German military scientists likely identified the nerve agent used to attack Alexei Navalny', *Science*, 8 Sep. 2020.

On 17 September the OPCW responded to a request for technical assistance from Germany by sending a team of experts from the Technical Secretariat to independently collect biomedical samples from Navalny for analysis by OPCW designated laboratories.²³ The OPCW identified a toxic chemical with similar characteristics to those added to the Annex on Chemicals to the Convention in November 2019, but with sufficient differences to conclude that this particular chemical was not listed.²⁴

On 1 October 2020 the OPCW Director-General received a request from Russia for a team of technical experts to assist their Russian counterparts with aspects of the Navalny case. The Director-General responded on 2 October that the OPCW was ready to send an expert team as soon as Russia clarified what type of expertise was being requested.²⁵

Laboratories in France and Sweden agreed with the German finding that biomedical samples taken from Navalny contained a military nerve agent from the novichok group.²⁶ On 7 October 2020 the foreign ministers of France and Germany issued a joint statement in which they noted their repeated calls on Russia ‘to fully investigate the circumstances of this crime and to account for the perpetrators. No credible explanation has been provided by Russia so far. In this context, we consider that there is no other plausible explanation for Mr Navalny’s poisoning than a Russian involvement and responsibility’.²⁷

In an incident with certain parallels to the novichok cases in the UK and Russia, in February 2017 a nerve agent, VX, which is one of the chemical warfare agents listed in Schedule 1 of the CWC’s Annex on Chemicals, was used in a fatal attack against an individual, later identified as Kim Jong Nam (eldest son of Kim Jong Il, the leader of the Democratic People’s Republic of Korea from 1994 until 2011), at the Kuala Lumpur airport in Malaysia.²⁸

The CWC was negotiated at a time when the primary concern was finding and eliminating militarily significant quantities of chemical warfare agents, not the targeted use of very small amounts to poison individuals. The efforts needed to release contaminated sites for public access following these events highlight the disruption and economic damage produced by even trace amounts of a highly toxic chemical.

²³ OPCW, ‘OPCW provides technical assistance to Germany regarding allegations of chemical weapons use against Alexei Navalny’, News release, 17 Sep. 2020.

²⁴ OPCW, Technical Secretariat, ‘Summary of the report on activities carried out in support of a request for technical assistance by Germany (Technical Assistance Visit TAV/01/20)’, S/1906/2020, 6 Oct. 2020, para. 5.

²⁵ OPCW, ‘OPCW responds to Russian Federation request regarding allegations of chemical weapons use against Alexei Navalny’, News release, 5 Oct. 2020.

²⁶ Deutsche Welle, ‘French, Swedish labs confirm Navalny poisoned with Novichok’, 14 Sep. 2020.

²⁷ German Federal Foreign Office, ‘Joint statement by the foreign ministers of France and Germany on the Navalny case’, Press release, 7 Oct. 2020.

²⁸ Malaysian Inspector General of Police, ‘Death of Korean national: Preliminary analysis report from the Chemistry Department of Malaysia’, Media release, 24 Feb. 2017; and Yeo, J., ‘Nerve agent VX used in Kim Jong-nam murder, Malaysia says’, *Korea Herald*, 24 Feb. 2017.

The organization of this report

Against this background, the next three chapters explore steps being taken to strengthen the global CW disarmament regimes. Confirmed use of CWs on the battlefield, in terrorist attacks and to poison politically exposed individuals were all drivers of a decision to convene a Special Session of CWC states parties in June 2018.

The second chapter considers the decisions taken at the Special Session in more detail, including the first report of the IIT that was released to the public on 8 April 2020. The third chapter examines the steps taken to create an effective generic capability to investigate CW use that would be available anywhere on the request of a CWC state party. This chapter also considers whether there are signs that a more systematic approach to providing accountability for CW use is beginning to emerge. The final chapter draws conclusions from the earlier assessments and makes a number of recommendations.

2. Identifying the perpetrators of chemical weapons use in Syria

Responding to confirmed use of CWs in the Syrian conflict has become the most controversial and divisive of the issues confronting the OPCW.

The OPCW-UN JIM was terminated after Russia vetoed a draft resolution to extend its mandate beyond November 2017.²⁹ However, reports of the use of toxic chemicals as a weapon in Syria continued and included an allegation of CW use at Douma on 7 April 2018, which became the subject of a new fact-finding mission (FFM) based on an agreement between the OPCW Director-General and the Syrian Government. The mandate of the FFM was to determine whether there were reasonable grounds to believe that an incident of the kind alleged happened and, if so, to identify the CW used but not to attribute the use to any party.³⁰

For many CWC states parties it was unacceptable that the investigation of credible reports of the use of a CW could no longer (following the termination of the JIM) include attribution to any guilty party. In January 2018 France convened a meeting of 23 states to consider how they could work together ‘to provide useful information for current international investigations’ into CW use.³¹ The group formed the International Partnership against Impunity for the Use of Chemical Weapons, which has subsequently expanded to include 40 states as well as the European Union (EU). The group is focused on identifying legal and natural persons responsible for CW use and on supporting action to hold them to account, including through the use of targeted sanctions.³²

On 13 April 2018 France, the UK and the USA launched ‘precision strikes’ on targets ‘associated with the use of chemical weapons in Syria’. Whereas in 2013 (after the use of CWs at Ghouta) the threat of force was part of a collective effort to compel Syrian disarmament, the strikes in April 2018 were intended to degrade Syrian capability to use an illicit CW stockpile.³³

²⁹ UN News, ‘Security Council fails at fresh attempt to renew panel investigating chemical weapons use in Syria’, 17 Nov. 2017; and Security Council Report, ‘In hindsight: The demise of the JIM’, January 2018 Monthly Forecast, 28 Dec. 2017.

³⁰ OPCW, Technical Secretariat, Report of the Fact-Finding Mission Regarding the Incident of Alleged use of Toxic Chemicals as a Weapon in Douma, Syrian Arab Republic, on 7 April 2018, S/1731/2019, 1 Mar. 2019. This was the final report on the Apr. 2018 Douma incident, and it concluded that there were reasonable grounds to believe that the use of a toxic chemical as a weapon took place.

³¹ French Ministry for Europe and Foreign Affairs, ‘International Partnership against Impunity for the Use of Chemical Weapons: Adhesion of four States’, 17 Apr. 2018.

³² International Partnership against Impunity for the Use of Chemical Weapons, ‘Chemical weapons: no impunity!’, [n.d.]

³³ US Department of Defense, ‘Department of Defense press briefing by Pentagon chief spokesperson Dana W. White and Joint Staff Director Lt. Gen. Kenneth F. McKenzie Jr. in the Pentagon Briefing Room’, Transcript, 19 Apr. 2018.

The Fourth Special Session of the Conference of States Parties

On 29 May 2018, 11 countries wrote to the OPCW Director-General, requesting a special session of the CSP ‘as soon as possible’.³⁴ A meeting was convened at short notice against a background of escalating international sanctions and military action. The annual CSP was scheduled for November 2018, to be followed immediately by the Fourth Review Conference of the Convention. Some states parties felt that waiting for these meetings would allow more time to assess proposals and additional opportunities to build consensus around a course of action.³⁵ However, the countries requesting a special session pointed to the ‘unprecedented threat’ to the CWC posed by the use of CWs by state and non-state actors, and the need to find a collective response.³⁶

From 26 to 28 June 2018 the Special Session of the CSP (‘Special Session’) considered, among others, the following questions:

1. What did the confirmed use of CWs imply for the effectiveness of CWC verification measures?
2. Did the confirmed use of a toxic chemical with almost no impurities require a revision to CWC schedules of chemicals?
3. Could allegations of CW use be investigated and attributed using current mechanisms?
4. What mechanisms would be an adequate basis for attributing CW use?

The Special Session adopted—by voting—a decision entitled ‘Addressing the threat from chemical weapons use’ on 27 June 2018 (the June 2018 Special Session decision).³⁷ The decision was supported by 82 states parties, while 24 voted against its adoption.³⁸ The draft decision had been forwarded to the conference by the UK, with the support of 30 countries.³⁹

The June 2018 Special Session decision instructed the OPCW Technical Secretariat to put in place a mechanism for attribution of responsibility for CW attacks in Syria:

³⁴ OPCW, Executive Council, ‘Convening of a meeting of the Executive Council’, Note by the Director-General, EC-M-60/1, 30 May 2018, Annex 1, Note Verbale 036/2018, 29 May 2018, p. 3. The 11 countries were Australia, Bulgaria, Canada, France, Germany, Japan, New Zealand, Poland, Romania, the United Kingdom and the United States.

³⁵ OPCW, CSP, ‘Statement by HE Ambassador Venu Rajamony, Permanent Representative of the Republic of India to the OPCW at the Fourth Special Session of the Conference of the States Parties’, C-SS-4/NAT.44, 26 June 2018, p. 2.

³⁶ OPCW, Executive Council, EC-M-60/1 (note 34), Explanatory memorandum.

³⁷ OPCW, CSP, C-SS-4/DEC.3 (note 14).

³⁸ The 24 states that voted against the decision were Belarus, Bolivia, Botswana, Burundi, Cambodia, China, Eritrea, India, Iran, Kazakhstan, Laos, Myanmar, Namibia, Nicaragua, the Philippines, Russia, South Africa, Sudan, Syria, Tajikistan, Uganda, Uzbekistan, Venezuela and Viet Nam. OPCW, CSP, Report of the Fourth Special Session of the Conference of the States Parties, C-SS-4/3, 27 June 2018, para. 3.15.

³⁹ OPCW, CSP, C-SS-4/3 (note 38), para. 3.4.

[T]he Secretariat shall put in place arrangements to identify the perpetrators of the use of chemical weapons in the Syrian Arab Republic by identifying and reporting on all information potentially relevant to the origin of those chemical weapons in those instances in which the OPCW Fact-Finding Mission in Syria determines or has determined that use or likely use occurred, and cases for which the OPCW–UN Joint Investigative Mechanism has not issued a report; and . . . the Secretariat shall provide regular reports on its investigations to the Council and to the United Nations Secretary-General for their consideration.⁴⁰

To implement the decision, the OPCW Technical Secretariat established the above-mentioned IIT under the authority of the Director-General. The Director-General proposed continuity between the IIT and the UN mechanism that investigates alleged use of CWs in Syria—the International, Impartial and Independent Mechanism (IIIM), discussed in more detail in the last section of this chapter.⁴¹ This would partly re-establish the cooperation between the OPCW and the UN initiated by the JIM. The Director-General outlined plans to develop a sustainable and proportionate OPCW capability, building on past experience, to make independent, impartial, expert contributions to an investigation of any possible CW use.⁴²

The first report of the Investigation and Identification Team

The IIT issued its first report in April 2020. Because the language establishing the IIT's mandate in the June 2018 Special Session decision was vague, the IIT was careful to explain in its report how it had interpreted some of the key terms. It placed a particular emphasis on the term 'perpetrators'.⁴³ First, the IIT noted that the English term 'perpetrator' has both the specific meaning of a person guilty of criminal conduct and the more general meaning of a person who has performed a specific act. The IIT clarified that it could not establish criminal liability because it is not a judicial body.⁴⁴ Second, the IIT noted that its work should be considered as a continuation of efforts originating in the UN Security Council: the Special Session 'intended to avoid an overlap and to rather create continuity between the work of the IIT and that of the JIM'.⁴⁵ The UN efforts did not limit responsibility for CW use to those directly responsible for the delivery of a munition during a military operation.

Taking the above two points together, the IIT defined the term 'perpetrators' as 'all those who are directly or indirectly involved in the use of chemical weapons'.⁴⁶ The IIT underlined that the prohibition on the use of CWs had attained the status of a norm of international customary law in relation to both international and

⁴⁰ OPCW CSP, C-SS-4/DEC.3 (note 14), para. 10.

⁴¹ OPCW, Executive Council, 'Work of the Investigation and Identification Team established by Decision C-SS-4/DEC.3 (dated 27 June 2018)', Note by the Technical Secretariat, EC-91/S/3, 28 June 2019.

⁴² OPCW, Executive Council, 'Progress in the implementation of Decision C-SS-4/DEC.3 on Addressing the Threat from Chemical Weapons Use', Report by the Director-General, EC-90/DG.14, 7 Mar. 2019.

⁴³ OPCW, Technical Secretariat, S/1867/2020 (note 13), section 2, pp. 9–16.

⁴⁴ OPCW, Technical Secretariat, S/1867/2020 (note 13), para. 2.5.

⁴⁵ OPCW, Technical Secretariat, S/1867/2020 (note 13), para. 2.7.

⁴⁶ OPCW, Technical Secretariat, S/1867/2020 (note 13), para. 2.8.

non-international armed conflict. Responsibility could attach not only to states, but also to individuals under the authority of states if national authorities failed to investigate or punish them. Responsibility could also attach to individuals or entities not acting under the lawful authority of any state—non-state actors as defined in UN Security Council Resolution 1540.⁴⁷

The April 2020 report also noted that the IIT should be used only in instances where the FFM determines, or has determined, that use or likely use occurred and where the JIM has not reached a conclusion on attribution on the case in question.⁴⁸ Therefore, there could be no confusion about whether the IIT (and therefore the OPCW) was intruding into cases where the UN Security Council was actively engaged; rather the IIT was operating in the space that the Security Council had abandoned.

As a practical matter there were 33 incidents eligible for IIT investigations within the limited resources at the disposal of the OPCW.⁴⁹ The IIT established criteria to guide its investigations based on relevance and feasibility, taking account of the severity of the incident, the reliability of the information available from the FFM that determined use of CWs had occurred, and the type of chemical substance detected. On this basis, the IIT prioritized nine incidents and noted that, of these nine, it would begin with three that took place at Ltamenah on 24, 25 and 30 March 2017.⁵⁰ These three incidents, which were the subject of the IIT's first report, were mentioned specifically in the June 2018 Special Session decision and appeared connected in a cluster (see below).⁵¹

Shaping the framework for attributing the use of chemical weapons

The June 2018 Special Session decision achieved a comfortable majority, but 24 CWC states parties voted against it. Some states that voted against the decision were motivated by a political imperative to defend the Syrian Government against allegations at all costs. Russia still does not recognize the 2018 Special Session decision, nor do some of its supporters (e.g. Cuba, Iran, Sudan and Venezuela), and this position carries over into any discussion or document that includes references to the decision, including the discussion of the OPCW budget. China also continues to argue that creating the IIT was a mistake because, in its view, the decision had the effect of driving CWC states parties apart rather than bringing them together.⁵² Other states found the use of an ad hoc mechanism to identify

⁴⁷ OPCW, Technical Secretariat, S/1867/2020 (note 13), paras 2.12–2.16.

⁴⁸ OPCW, Technical Secretariat, S/1867/2020 (note 13), para. 3.1, citing OPCW CSP, C-SS-4/DEC.3 (note 14), para. 10.

⁴⁹ OPCW, Technical Secretariat, S/1867/2020 (note 13), para. 3.2.

⁵⁰ OPCW, Technical Secretariat, S/1867/2020 (note 13), paras 3.3–3.7.

⁵¹ OPCW CSP, C-SS-4/DEC.3 (note 14), para. 9.

⁵² Chinese Ministry of Foreign Affairs, ‘Foreign Ministry Spokesperson Zhao Lijian’s regular press conference on April 9, 2020’, Media release, 9 Apr. 2020; and Permanent Mission of the People’s Republic of China to the United Nations, ‘Statement of the Chinese delegation at the thematic discussion on other weapons of mass destruction at the First Committee of the 74th Session of the UNGA’, New York, 23 Sep. 2019.

perpetrators of the use of CWs controversial for a variety of reasons (see below), while others disagreed with the procedure for adopting the decision.

The normal practice at the OPCW has been to take decisions by consensus, even if this extends the time needed to reach agreement. The risk that resorting to votes could undermine the consensus-based operation of the OPCW was a reason that India, for example, gave when explaining opposition to the June 2018 Special Session decision.⁵³ The move away from consensus could, it was argued, undermine the CWC in the long term by reducing the willingness of states to invest in compliance. This concern has subsequently been found to have some basis: the financing mechanism for the IIT has become a contentious issue in agreeing a budget for the OPCW.⁵⁴

Opponents of the June 2018 Special Session decision pointed to the lack of (a) time for assessment of proposals ahead of the Special Session; (b) clarity around the role of the OPCW in attribution; and (c) credibility of any finding on attribution. Each of these factors is discussed in turn below.

Lack of time for assessment

One of the arguments levelled against the June 2018 Special Session decision was the relatively short time available for discussion and assessment. As late as November 2017 states were working on the assumption that any allegations of CW use would be discussed in, and action taken by, the UN Security Council. The request for a Special Session was not made until 29 March 2018, less than three months before moving to a decision that had potentially far-reaching consequences for the work of the OPCW.

India was one country that argued against taking decisions at a Special Session on the basis that there had not been time for proper consultations to build support for any proposals.⁵⁵ Russia asserted that the CSP had ‘stepped outside the scope of its mandate’ by creating the IIT and that, if such a mechanism was needed, it should be created by using the process envisaged in the CWC for amending specific aspects of its activity.⁵⁶

Amending the CWC to provide an explicit mandate for the IIT would inevitably require a long process, assuming it could be achieved at all. Proponents of the decision argued that the OPCW already had a basis in the CWC to attribute responsibility.⁵⁷

The path chosen by the OPCW was pragmatic, finding a method to act quickly within an existing legal framework. Presenting the first report of the IIT in April 2020, the OPCW Director-General drew attention to the ‘unprecedented situation

⁵³ See e.g. OPCW, CSP, C-SS-4/NAT.44 (note 35), p. 2.

⁵⁴ Agence-France Presse, ‘Russia loses bid to block new Syria chemical weapons probe’, France24, 28 Nov. 2019.

⁵⁵ OPCW, CSP, C-SS-4/NAT.44 (note 35), p. 2.

⁵⁶ Russian Ministry of Foreign Affairs, ‘Statement by the Russian Foreign Ministry’, Statement no. 1242-28-06-2018, 28 June 2018.

⁵⁷ See e.g. OPCW, CSP, ‘Australia: Statement by HE the Hon Brett Mason, Permanent Representative of Australia to the OPCW, Fourth Special Session of the Conference of States Parties, 26–28 June 2018’, C-SS-4/NAT.29, 26 June 2018, p. 2.

that poses a direct threat to the Convention' and the 'mutually reinforcing and complementary character of the OPCW and the United Nations, and the frequent expressions in both The Hague and New York of the importance of those responsible to be held accountable'.⁵⁸

Lack of clarity over responsibility for attribution decisions

A second area of controversy was whether the somewhat vague language in the June 2018 Special Session decision altered the role of the OPCW Director-General in ways that could undermine the sovereignty of CWC states parties.

In explaining its vote against the decision, India emphasized this issue, stating:

While the Convention gives primacy and oversight to the Executive Council and the Conference of States Parties over the functioning of the Technical Secretariat, this decision will grant the Director-General, as an individual, unprecedented and unchecked powers. This opens itself to partisan use of the institution of the Director-General.⁵⁹

In 2019 India reaffirmed that the role of the IIT should be clarified to make plain that the OPCW Director-General 'must at all times remain accountable to the EC [Executive Council] and function in accordance with the provisions of the Convention'.⁶⁰

The first report of the IIT explained how the OPCW Technical Secretariat interpreted the task of attribution, in particular emphasizing that 'the IIT is not a judicial body with the authority to assign individual criminal responsibility, nor does the IIT have the authority to make final findings of non-compliance with the Convention'.⁶¹ When presenting the first report, the OPCW Director-General noted that 'it is up to the Executive Council and the Conference of the States Parties to decide the next steps'.⁶²

The OPCW has not argued that attribution of responsibility is a verdict on guilt; instead it appears to view the IIT as a next step from fact-finding to determining whether there is sufficient evidence to merit a continuation of proceedings focused more specifically on one or more identified perpetrators.

Lack of credibility of an attribution finding

At the Special Session in June 2018 some states expressed doubt about the mandate given to the IIT because of fears that it would never be possible to produce a

⁵⁸ OPCW, 'Director-General's statement on the first report by the OPCW Investigation and Identification Team', News release, 8 Apr. 2020, p. 3.

⁵⁹ Indian Ministry of External Affairs, 'Explanation of vote by India on the draft decision by UK on "Addressing the Threat from Chemical Weapons Use" at the Fourth Special Session of the Conference of the States Parties (27 June 2018)', 27 June 2018, para. 6.

⁶⁰ OPCW, Executive Council, 'Statement by Ambassador Venu Rajamony, Permanent Representative of India to the OPCW at the 91st Session of the Executive Council', 9 July 2019, p. 6.

⁶¹ OPCW, Technical Secretariat, S/1867/2020 (note 13), Executive summary, p. 2. The point was also stated at paras 1.7, 2.5 and 2.21.

⁶² OPCW (note 58), p. 4.

credible attribution.⁶³ The cases being investigated by the IIT took place some time ago and, as discussed below, earlier reports by the UN and the OPCW attributing CW use to the Syrian Government were subjected to unrelenting criticism, particularly by Russia. Taking into account the controversies surrounding the 2018 Special Session, it was a foregone conclusion that any attribution finding would be the object of stern scrutiny by states that opposed the creation of the IIT.

In its first report the IIT recognized the challenge of collecting information. The IIT has no powers to compel states to provide information or witnesses to come forward with testimony. The Syrian Government does not recognize the legitimacy of the IIT and has refused to assist it, and the OPCW investigations have relied on the cooperation and assistance of other states and other actors.⁶⁴

The sources of information to which the IIT did have access included information obtained from open sources, FFM^s and the archives of the JIM. The IIT also conducted new interviews with 20 persons of interest, including witnesses to the incidents of alleged use. States that were willing to help the IIT provided information, including videos and documents. OPCW designated laboratories and a number of forensic institutes provided sample analysis as well as chemical forensic analysis. In addition, the IIT requested expert data, reports and analyses of, for example, munitions, medical reports and satellite imagery.⁶⁵

Without questioning the professionalism of the IIT staff, some national law enforcement professionals have stressed the difficulty of determining attribution.⁶⁶ Russia has gone further and has challenged almost all aspects of the work that has been undertaken.⁶⁷ In particular, Russia has questioned the inclusion of testimony from ‘White Helmets’ (i.e. the Syrian Civil Defence, a volunteer search-and-rescue organization) in information-gathering, going to great lengths to challenge all aspects of White Helmet engagement—including bringing individuals to the OPCW to expose what Russia regards as ‘fake news’.⁶⁸

The UN and the OPCW have also been subjected to a public campaign with the objective of casting doubt on the validity of attribution findings or discrediting them completely.⁶⁹ The IIT attribution findings have been attacked on the grounds that genuine cases of CW use have been wrongly attributed and that alleged incidents of CW use were staged events that never took place.⁷⁰

⁶³ See e.g. OPCW, CSP, ‘Statement by HE Ambassador Haifa Aissami Madah, Permanent Representative of Venezuela to the OPCW at the Fourth Special Session of the Conference of States Parties’, C-SS-4/NAT.53, 7 June 2018.

⁶⁴ OPCW, Technical Secretariat, S/1867/2020 (note 13), pp. 19–21.

⁶⁵ OPCW, Technical Secretariat, S/1867/2020 (note 13), para. 4.2.

⁶⁶ South African official, Interview with author, 1 Nov. 2019.

⁶⁷ Van de Beek, E., ‘Rising tensions within the OPCW’, *Diplomat Magazine*, 15 Nov. 2019.

⁶⁸ Permanent Mission of the Russian Federation to the United Nations, ‘Statement by the Permanent Representative of Russia to the OPCW Alexander Shulgin at an Arria-formula meeting of UNSC member states “Implementation of UNSCR 2118: OPCW FFM Report on Douma”’, 20 Jan. 2020.

⁶⁹ Lucas, S., ‘Solving a mystery: The deadly chemical attack on Syria’s Douma and a new document’, EA WorldView, 12 June 2019.

⁷⁰ The allegations are examined in Bellingcat Investigation Team, ‘Chemical weapons and absurdity: The disinformation campaign against the White Helmets’, 18 Dec. 2018.

In the first report by the IIT a large amount of the text is devoted to describing the methods of investigation in detail. The report includes six technical annexes that explain how the IIT conducted investigations. In addition, each specific incident of alleged CW use is described in a separate section that takes account of a range of potential explanatory scenarios. The IIT considered allegations that incidents were staged as well as the theory that attacks could have been carried out by ‘rogue’ units outside the chain of command. The report explained the basis on which these scenarios were rejected.⁷¹

The IIT is open about the problems faced in conducting investigations and transparent about the methodology used. For example, although the mandate of the IIT included attributing CW use to specific individuals ‘to the greatest extent feasible’, the team was not able to identify those responsible with the necessary degree of certainty. The standard of proof applied by the IIT to identify perpetrators was ‘reasonable grounds’.⁷² Reasonable grounds were considered to exist if the established facts and known circumstances were sufficient to allow ‘an ordinarily prudent person to reasonably believe that an individual or entity was directly or indirectly involved in the use of chemicals as a weapon’; that is, that ‘under this degree of certainty, an objective observer would reasonably conclude that a violation was committed’.⁷³ The IIT pointed out that this is not a finding of guilt but can be compared to the standard of proof used as a basis for lawful arrest, consistent with the generally recognized approach for imputing conduct in other international legal processes.⁷⁴

After detection—what?

An attribution of CW use is not an end in itself, and some opponents of the decision to create the IIT considered it to be a ‘pyrrhic victory’ for its supporters because it is unlikely that any finding would be followed by collective enforcement action.⁷⁵ Unless an attribution finding can be translated into an effective enforcement action, the June 2018 Special Session decision runs the risk of jeopardizing fact-finding—an aspect of the OPCW work that states parties value—with very little in the way of tangible reward.

States that are not able to deploy their own national technical means have supported independent fact-finding to help them to navigate between mutually exclusive explanations of events put forward by major powers. However, fact-finding in Syria has taken place under a bilateral agreement between Syria and the OPCW Director-General. Once attribution is introduced into the terms of

⁷¹ OPCW, ‘IIT Coordinator’s remarks on the first report by the OPCW Investigation and Identification Team’, News release, 8 Apr. 2020.

⁷² OPCW, Technical Secretariat S/1867/2020 (note 13), p. 2.

⁷³ OPCW, Technical Secretariat S/1867/2020 (note 13), para. 2.18.

⁷⁴ OPCW, Technical Secretariat S/1867/2020 (note 13), para. 2.19.

⁷⁵ Indian official, Interview with author, 18 Sep. 2019.

reference for an FFM, no agreement with Syria is possible, which undermines the effectiveness of the mission.⁷⁶

In presenting the first IIT report, the Director-General directed it initially to the Executive Council of the OPCW and explained that it would then be provided to all OPCW member states (i.e. CWC states parties) and the UN Secretary-General. The Director-General emphasized that the report does not assign individual criminal responsibility or make a final finding on non-compliance with the CWC, and that the Executive Council and the CSP are responsible for deciding what action to take.⁷⁷

Response of the Executive Council to the IIT's first report

At the 94th Session of the Executive Council—its first meeting after the release of the IIT's report—members responded differently to its contents. Russia stated that the IIT's work ‘cannot be considered objective or professional’ and that the attribution of CW use to Syria was a pretext to interfere in the domestic affairs of that country.⁷⁸ The USA, along with a significant number of other states, suggested that the Executive Council should give the Syrian regime ‘a prescribed time frame to take certain actions in order to redress’ the non-compliance outlined in the IIT report and, in the case that the response proved unsatisfactory, the Executive Council should recommend that the CSP ‘take action’ based on the procedures laid out in the CWC.⁷⁹ Other proposals included making the issues raised in the IIT report another dimension in the continuous bilateral process between the OPCW and Syria, with the intention of resolving them through a process of engagement and dialogue.⁸⁰

Unable to achieve consensus, the Executive Council took a vote on adopting a decision addressing the possession and use of CWs by Syria.⁸¹ Twenty-nine states voted in favour of the decision, while three voted against and nine chose to abstain.⁸²

In the decision, the Executive Council requested Syria to accelerate the process of resolving outstanding questions about its CW arsenal, including a full and accurate declaration of weapons and CW-related facilities. The OPCW Director-General was instructed to report to the Executive Council on the status of Syrian compliance with the decision within 100 days of its adoption. Should Syria fail to redress the situation, the Executive Council should then recommend that the CSP

⁷⁶ South African official, Interview with author, 18 Sep. 2019.

⁷⁷ OPCW (note 58), pp. 4–5.

⁷⁸ OPCW, Executive Council, ‘Russian Federation: Statement by HE Ambassador A. V. Shulgin, Permanent Representative of the Russian Federation to the OPCW at the Ninety-Fourth Session of the Executive Council’, EC-94/NAT.40, 7 July 2020, p. 2.

⁷⁹ OPCW, Executive Council, ‘United States of America: Statement by Mr Thomas G. Dinanno, Senior Bureau Official and Deputy Assistant Secretary of State for Defence Policy, Emerging Threats, and Outreach, at the Ninety-Fourth Session of the Executive Council’, EC-94/NAT.37, 7 July 2020, p. 3.

⁸⁰ OPCW, Executive Council, ‘India: Explanation of vote on the draft decision “Addressing the Possession and Use of Chemical Weapons by the Syrian Arab Republic” at the Ninety-Fourth Session of the Executive Council’, EC-94/NAT.59, 9 July 2020.

⁸¹ OPCW, Executive Council, EC-94/Dec.2 (note 2).

⁸² TRT World, ‘Chemical weapons watchdog to take action on Syria sarin attacks’, 9 July 2020.

adopt a decision at its next session regarding ‘appropriate action with respect to the Syrian Arab Republic’ under paragraph 2 of Article XII of the CWC.⁸³

Article XII of the CWC states:

In cases where a State Party has been requested by the Executive Council to take measures to redress a situation raising problems with regard to its compliance, and where the State Party fails to fulfil the request within the specified time, the Conference may, *inter alia*, upon the recommendation of the Executive Council, restrict or suspend the State Party’s rights and privileges under this Convention until it undertakes the necessary action to conform with its obligations under this Convention.

Accordingly, the decision included an instruction, under Articles IV and V of the CWC, to the OPCW Technical Secretariat to:

conduct inspections, including where appropriate sampling and analysis, twice each year at two sites identified in the IIT report as directly involved in launching chemical weapons attacks—the Shayrat airbase and the Hama airbase of the Syrian Arab Republic—on dates to be determined by the Secretariat, with full and unfettered access to all areas, buildings and structures at these sites, including all rooms within buildings, as well as to their contents and to personnel; . . . [and to] conduct such inspections until the Council decides to cease them.⁸⁴

The instruction added that Syria was to facilitate and cooperate with the inspections.

Inspections are usually limited to sites declared by the inspected CWC state party unless the provision for a challenge inspection is invoked. Under Article XI of the CWC, every state party has the right to request an onsite challenge inspection of ‘any facility or location in the territory or in any other place under the jurisdiction or control of any other State Party for the sole purpose of clarifying and resolving any questions concerning possible non-compliance with the provisions of this Convention’. An instruction from the Executive Council to the Technical Secretariat to inspect named sites can be seen as a step towards creating a system of mandatory access for inspectors beyond the inspection regime envisaged in the CWC.

Criminal proceedings against individuals

A scenario that has not yet been tested is the response to attributing CW use to named individuals. Currently, there is no international criminal court with jurisdiction over war crimes committed in Syria. Syria is not a party to the 1998 Rome Statute, and the creation of an ad hoc court for Syria seems highly unlikely given the current political situation between the USA and Russia.⁸⁵ Hence, the prospect of any adjudication on the findings of the IIT in an international tribunal seems very slim indeed. Nonetheless, there may be other possible pathways for criminal proceedings against individuals.

⁸³ OPCW, Executive Council, EC-94/DEC.2 (note 2), paras 5–7.

⁸⁴ OPCW, Executive Council, EC-94/DEC.2 (note 2), para. 8.

⁸⁵ Rome Statute of the International Criminal Court (Rome Statute), opened for signature 17 July 1998, entered into force 1 July 2002, *United Nations Treaty Series*, vol. 2187 (2004).

The most likely scenario would be that the IIT will share its information and attributions with the IIIM, which was established by the UN General Assembly to assist in the investigation and prosecution of persons responsible for the most serious crimes under international law committed in Syria since March 2011.⁸⁶ The June 2018 Special Session decision instructs the IIT to provide information to the IIIM and to ‘any relevant investigatory entities’ established under the UN.⁸⁷

The IIIM’s mandate is to:

collect, consolidate, preserve and analyse evidence of violations of international humanitarian law and human rights violations and abuses and to prepare files in order to facilitate and expedite fair and independent criminal proceedings, in accordance with international law standards, in national, regional or international courts or tribunals that have or may in the future have jurisdiction over these crimes, in accordance with international law.⁸⁸

The OPCW Technical Secretariat is already in the process of setting up an information technology infrastructure that would enable communication between the IIT and the IIIM. The IIT also plans to compile its records and findings in a manner suitable for future use by the IIIM.⁸⁹ However, it appears that, in practice, the information from the IIT is not treated as evidence that would meet the standard of proof required in prosecutions; instead it is regarded as useful context and background that could be of assistance to an IIIM investigation should one be initiated.⁹⁰

It is also worth bearing in mind that the IIIM’s mandate is wide: it should preserve evidence for national, regional and international courts with jurisdiction over the violations of international humanitarian law and human rights laws at issue. The prosecution and trial of offences occurring abroad can make the gathering of evidence and identification of witnesses and victims problematic. Thus the likelihood is that the information collected by the IIT will mainly be used in domestic legal systems where such information would be vital for the successful prosecution of suspected war criminals.

Another possible pathway through which the OPCW could promote accountability for CW use might be through cooperation between the IIT and the Independent International Commission of Inquiry on the Syrian Arab Republic (OIC) with regard to the prosecution of war crimes. The OIC was established on 22 August 2011 by the UN Human Rights Council and has a mandate to investigate all alleged violations of international human rights law in Syria since March 2011.⁹¹ The OIC was also tasked ‘to establish the facts and circumstances that may amount to such violations and of the crimes perpetrated and, where

⁸⁶ UN General Assembly Resolution 71/248, 21 Dec. 2016.

⁸⁷ OPCW, CSP, C-SS-4/DEC.3 (note 14), para. 12.

⁸⁸ UN General Assembly Resolution 71/248 (note 86), para. 4.

⁸⁹ French Ministry for Europe and Foreign Affairs, *International Tools for Fighting Against Impunity for the Use of Chemical Weapons: Guiding Document for Outreach* (International Partnership Against Impunity for the Use of Chemical Weapons: Paris, 2020), p. 6.

⁹⁰ IIIM official, Interview with author, Geneva, 24 Jan. 2020.

⁹¹ UN Human Rights Council (UNHRC) Resolution S-17/1, 22 Aug. 2011.

possible, to identify those responsible with a view of ensuring that perpetrators of violations, including those that may constitute crimes against humanity, are held accountable'.⁹²

Because the use of CWs is considered to be a war crime for which there is universal jurisdiction (i.e. it is a crime so grave that the international community as a whole feels the impact), states are entitled to prosecute offenders in their national jurisdiction even in the absence of a link between the crime committed and the prosecuting state. The rationale of universal jurisdiction is to prevent those who commit serious crimes from finding a safe haven.⁹³ However, whether information collected by the IIT would be released to support a national prosecution would probably require the OPCW states parties to make a separate decision.

⁹² UNHRC (note 91), para. 12.

⁹³ Individuals suspected of committing war crimes in Syria based on universal jurisdiction have been successfully prosecuted in Austria, Germany and Sweden, although not for crimes related to CW use. Salahi, R., 'The road to justice for Syria goes through Europe', Middle East Institute, 14 July 2020.

3. Facilitating attribution of chemical weapons attacks

At their Special Session in June 2018 the states parties to the CWC called for additional measures to strengthen the implementation of the Convention by ensuring that ‘the perpetrators, organisers, sponsors or anyone otherwise involved’ should be identified whenever a CW use occurs on the territory of a state party.⁹⁴

The June 2018 Special Session decision states that the OPCW can provide ‘technical support’ to attribution of CW use and that an independent investigation can add value to the process.⁹⁵ The explicit supporting role of the OPCW means that controversies over responsibility for attribution do not cloud implementation of this part of the decision. However, the decision does not specify the nature of the technical support and gives the OPCW a challenging task with little guidance on how to carry it out.

The OPCW Director-General was already authorized to provide technical expertise in response to a request from a CWC state party following CW use on its territory. The June 2018 Special Session decision invites the OPCW to think more broadly about the ways and means to facilitate attribution and support investigations of CW use.

The formulation ‘perpetrators, organisers, sponsors or anyone otherwise involved’ captures state and non-state actors as well as direct and indirect involvement in CW use including, for example, expertise, logistics, manufacture, transfer and sale, brokering and financing activities.

The OPCW Executive Council, which is responsible for deciding on measures to be taken in cases of non-compliance with the CWC by a state party, is a natural recipient of the results of an investigation. However, CW use may also demand accountability via a political and diplomatic response outside the OPCW, or legal action against a natural or legal person—such as a company or commercial entity—or a state employee or non-state actor, brought in either international or domestic criminal proceedings.

Investigators might have to work to different standards when collecting evidence depending on the circumstances of the case. For example, the June 2018 Special Session decision refers to cases where CW use is ‘likely’ as well as confirmed, and in theory also covers conspiracy to use CWs.

Since the OPCW could be called on in any of a wide range of scenarios, involving different investigative methodologies, building the necessary investigatory expertise may not be straightforward. The June 2018 Special Session decision states that the OPCW must make ‘independent, impartial, expert arrangements’

⁹⁴ OPCW, CSP, C-SS-4/DEC.3 (note 14), para. 20.

⁹⁵ OPCW, CSP, C-SS-4/DEC.3 (note 14), para. 19.

to investigate CW use but does not provide further guidance on the capabilities the OPCW will need to add to its existing in-house resources.⁹⁶

Moreover, the decision empowers the Director-General to ‘draw on suitable external expertise’ in an investigation but does not describe or place limits on the nature of the suitable expertise.⁹⁷ Apart from national experts drawn from CWC states parties, the range of potential partners could include other international organizations, informal intergovernmental regimes, private industry associations and private experts.

While the OPCW can draw on external expertise, it is at least as important that it retains and leverages its internal capacities. External assessments have highlighted the need for ‘change by design’ to ensure that the OPCW has the flexibility to adapt to new challenges while retaining the knowledge and skills of experienced officers.⁹⁸ When new tasks are added to the mandate of the OPCW, staff qualifications and training need to adapt. But when the organization undertakes contentious tasks, the independence and competence of staff is central to remaining relevant and credible.

In reports on the progress of implementation of the June 2018 Special Session decision, the OPCW has confirmed that its intention is to put in place a mechanism to provide technical support as quickly as possible, by drawing on lessons derived from past experiences, including in Syria. The goal was ‘to have a core capability to provide technical expertise to investigations … before the end of the anticipated period during which the IIT will be operational’ and for the IIT to transfer its knowledge to the Technical Secretariat staff ‘to increase their investigative skills and expertise’.⁹⁹ Such knowledge transfer could be made more difficult by the political sensitivities of the Syria file, which require ensuring strict confidentiality and the integrity and security of information. As one member of the Technical Secretariat has put it, the IIT is ‘hermetically sealed’ to reduce the risk that information will be leaked in ways that damage the work of the group, and this has reduced the degree to which information can flow internally within the OPCW.¹⁰⁰

In a progress report from July 2019, the OPCW Director-General listed actions that the Technical Secretariat could take immediately to implement the June 2018 Special Session decision.¹⁰¹ These include training staff to build investigative capabilities ‘in areas such as crime scene management, witness interviews, evidence collection, and forensics’; procuring relevant software and equipment;

⁹⁶ OPCW, CSP, C-SS-4/DEC.3 (note 14), para. 20.

⁹⁷ OPCW, CSP, C-SS-4/DEC.3 (note 14), para. 20.

⁹⁸ OPCW, Technical Secretariat, Report of the Advisory Panel on Future Priorities of the Organisation for the Prohibition of Chemical Weapons, S/951/2011, 25 July 2011, pp. 26–29.

⁹⁹ OPCW, Executive Council, ‘Progress in the implementation of Decision C-SS-4/DEC.3 on addressing the threat from chemical weapons use’, Report by the Director-General, EC-91/DG.20, 1 July 2019, para. 20.

¹⁰⁰ OPCW official, Interview with author, The Hague, 26 Nov. 2019.

¹⁰¹ OPCW, Executive Council, EC-91/DG.20 (note 99), paras 18–19. See also OPCW, CSP, ‘Report pursuant to paragraph 20 of Decision C-SS-4/DEC.3 (dated 27 June 2018) on addressing the threat from chemical weapons use’, Note by the Director-General, C-23/DG.17, 15 Nov. 2018, para. 4.

and modifying job descriptions for staff to include relevant skills and expertise not currently available within the Technical Secretariat.¹⁰²

As noted above, building a mechanism to provide technical support to an investigation of alleged CW use may not be straightforward. The OPCW has made some progress over the past two years but there are many other hurdles to overcome. The following section examines in more detail how the OPCW could build a generic capability to investigate alleged CW use and discusses some of the challenges that lie ahead.

Building a generic capability within the OPCW to investigate alleged use of chemical weapons

The future investigation support mechanism will need at least six elements: (a) a core group at the OPCW that can provide advice internally and be the basis for a tailored response to an alleged incident; (b) a method to construct international teams at short notice with expertise tailored to the needs of a specific investigation; (c) working relationships with relevant international bodies and networks; (d) expanded technical knowledge within the OPCW—including a new Centre for Chemistry and Technology (ChemTech Centre; see below)—and a means to incorporate that knowledge in an investigation; (e) an ability to bring knowledge gained through the effort to combat chemical terrorism to bear on an investigation; and (f) a facility to contribute proposals to the discussion of how to adapt verification provisions of the CWC to changing CW threats.

The investigations into alleged CW use leading to attribution described in chapter 2 indicate that knowledge of chemistry is not sufficient. The information derived from analyses of chemical samples has to be placed into a context that includes understanding how a chemical threat agent is delivered (and who has the means of delivery); which forces were present at the scene of an alleged incident at the time it occurred; and how the forces that are alleged to have used the CW are organized and their command structure. Generating this information is necessary to an investigation but falls outside the traditional scope of OPCW expertise. Moreover, different types of CW use—in an armed conflict, as an act of terrorism or as a state-sponsored targeted attack on a politically exposed person—create different contexts for an investigation.

An investigation by the Technical Secretariat therefore cannot be tailored to one body or state. The June 2018 Special Session decision requires the OPCW to report information directly to the UN Secretary-General, but the OPCW's investigation capability must also be able to prepare reports for the UN. Moreover, the potential use of the results of an investigation in criminal proceedings requires the OPCW's capability to have knowledge and understanding of legal procedures and protocols.

¹⁰² OPCW, Executive Council, EC-91/DG.20 (note 99), para. 19. See also OPCW, CSP, C-23/DG.17 (note 101), para. 4.

The use of CWs is prohibited as a norm of customary international law ‘applicable in both international and non-international armed conflicts’.¹⁰³ The confirmed use of a CW in a conflict could lead to an international criminal justice response, including referral to the International Criminal Court, creation of a dedicated tribunal or a mutually supportive combination of international and domestic legal processes. Credible information attributing the use of a CW to a party could result in holding that party accountable, including countries that are not states parties to the CWC.

The use of nerve agents in Malaysia and the UK led to criminal investigations in both cases; in the latter case, the OPCW played a role in supporting a national investigation.¹⁰⁴ However, the OPCW has not contributed directly to criminal investigations. Preparing and writing reports for prosecutors and making direct submissions to a court would be new activities for the OPCW. However, the results of an investigation into CW use could be introduced into a national post-conflict criminal tribunal, or become part of a post-conflict process of political reconciliation.

Challenges posed by investigation and attribution tasks

The OPCW does not have the legal powers, authority or resources to conduct criminal investigations on its own initiative—and will not be given them—but it could be asked to support a state party to the CWC at any stage of an investigation into CW use. To date the OPCW has already been called on by the UK and Germany to assist domestic investigations of alleged CW use, in the Salisbury and Navalny cases, respectively. In theory, the investigative assistance that the OPCW might be called on to provide could cover a wide spectrum of activities. In the Salisbury and Navalny cases, the OPCW made only a limited contribution in the form of sample collection and analysis. However, the mandate provided by the June 2018 Special Session decision could mean the OPCW is asked to play a more central role in an investigation. What the OPCW is able to do and what it would be willing to do in a potentially highly contentious case remain unclear.

Investigating the use of CWs covers a range of tasks, from detecting that an incident has occurred to holding identified perpetrators accountable, with each task posing separate challenges (discussed in more detail below). The OPCW has only limited experience of these tasks.

Detection. It may not be immediately clear that a chemical threat agent has been used. Understanding that an incident is an attack, rather than the result of an accident, requires an initial assessment. Moreover, detection involves excluding other possible explanations for an incident, such as the side effects of a chemical used by the military—including use as an incendiary—that is not classified as a toxic chemical. Detection also means excluding other threat agents, such as radioactive materials, from an investigation.

¹⁰³ International Committee of the Red Cross, ‘Rule 74. Chemical weapons’, Customary IHL Database.

¹⁰⁴ OPCW, ‘OPCW issues report on technical assistance requested by the United Kingdom regarding toxic chemical incident in Amesbury’, News release, 4 Sep. 2018.

Categorization. To establish the nature of the threat posed by the incident, investigators need to place it in a recognized category. Categorization helps investigators to understand the appropriate tools and methods to apply in their investigation. For example, whether the primary impact of the incident is a threat to public health, public safety, the physical environment or the natural environment would indicate applicable bodies of law and the appropriate tools that will be needed in an investigation.

Characterization. Once the investigation determines that a chemical has been used in an attack, the identification of the agent becomes a key area for investigators. Whether the chemical is a recognized chemical warfare agent, a chemical threat agent that is not included in the schedules of the CWC or a toxic chemical not normally classified as a threat agent at all will be important information. The precise properties of the chemical will potentially assist with attribution.

Attribution. To establish who was responsible for an attack, the investigation needs to gather multiple streams of information using different techniques and technologies, a process that may involve different agencies and authorities. The resulting attribution will also have to meet different standards of proof in different frameworks. The verification system will focus on demonstrating non-compliance with the CWC on the *balance of probabilities*. The Syria FFM based its attribution on an assessment of whether there were *reasonable grounds* that the use of a toxic chemical as a weapon took place in the incident under investigation. In a prosecution the accused must be proved to have committed a criminal offence *beyond reasonable doubt*.

Rehabilitation. The information gathered during an investigation will be essential in determining the necessary level of decontamination at the scene where a chemical attack took place. The degree of risk to public health and the environment as well as the nature of the chemical used in an attack are necessary inputs to the rehabilitation effort, including communication to build public trust that risks have been managed successfully.

Accountability. The perpetrators of a chemical attack may face different forms of penalty, depending on the outcome of an investigation and the framework within which it is carried out. For example, the CWC contains procedures for addressing non-compliance, while the UN Security Council has the authority to implement mandatory sanctions tailored to the specific nature of an attack after attribution, including sanctions applied to states or to legal or natural persons. International and national criminal tribunals or criminal prosecutions can hold individuals to account.

New verification challenges

The OPCW would also need to address new verification challenges. A selection of these are discussed in this section.

Use of chemicals not listed in the CWC. The use in the UK of a nerve agent from the novichok family put a spotlight on the need to update the schedules of chemicals that are a central part of the verification system for the CWC. The characteristics of novichok agents clearly match criteria that should include them as toxic chemicals subject to the verification provisions of the CWC. However, at the time of the attacks in the UK, novichok agents were not among the toxic chemicals listed in the Annex on Chemicals that forms part of the CWC.

The 2019 CSP adopted by consensus two proposals (one submitted by Canada, the Netherlands and the USA, the other submitted by Russia) that added novichok families of chemicals and specific chemical agents to Schedule 1 of the Annex on Chemicals, making them subject to the strictest regulation and verification.¹⁰⁵ The decisions demonstrated that the CWC can be amended using the procedures elaborated within it, provided consensus can be reached among states parties, to address the challenge of verifying that toxic chemicals are used in ways that are consistent with the Convention.

The OPCW analysis of the biomedical samples taken from Alexei Navalny identified a toxic chemical similar to those added to the Annex on Chemicals in November 2019, but not identical. The use of extremely potent unscheduled chemicals in separate attacks also underlines that monitoring the development and production of chemicals needs to be a continuous and open-ended process.

To capture and analyse information about research and innovation in chemistry, as well as developments in the chemical industry, the OPCW will need to not only strengthen its own capabilities, but also find and work with partners with relevant knowledge and expertise.

Incomplete or inaccurate declarations. The declaration of stockpiles, production facilities and related infrastructure that was made by Syria on joining the CWC remains the subject of ongoing discussion. Despite more than 20 rounds of consultation with Syrian officials, the OPCW has still not been able to clarify ‘gaps, discrepancies, and inconsistencies’ in the original declaration and subsequent submissions.¹⁰⁶

The experience with the Syria file has highlighted the general problem of how to ensure that states make accurate and complete declarations of information relevant to national implementation of the CWC. The OPCW Declaration Assessment Team (discussed below), is trying to verify the accuracy of the information contained in the original Syrian declaration and subsequent submissions.

Ensuring that declarations are both correct and complete is a new challenge for the OPCW that will require continuous improvement of verification methods and the incorporation of new techniques into the work of the organization. Some of these verification methods and techniques may draw on work carried out to create an enhanced capacity to investigate CW use.

¹⁰⁵ OPCW, CSP, ‘Statement by the Director-General in response to the adoption of two decisions under Article XV of the Chemical Weapons Convention to amend the Annex on Chemicals’, C-24/DG.20, 27 Nov. 2019.

¹⁰⁶ OPCW, Executive Council, ‘Progress in the elimination of the Syrian chemical weapons programme’, EC-91/DG.1, 25 Mar. 2019, para. 11.

New chemical manufacturing techniques and forms of CW use. Another verification challenge that may need to be addressed in the future is the risk posed by programmes with a smaller ‘footprint’, made possible by new techniques in chemical manufacturing combined with different forms of CW use. An inspection regime designed to detect large-scale programmes managed by the military may need additional tools in a new threat environment.

Examples of the kinds of changes that might be considered include (a) ‘cradle to grave’ mapping of industrial processes relevant to CW production; (b) procedures to share the results of chemical forensic analysis among relevant stakeholders; (c) the use of open-source information to build knowledge and understanding of processes of potential concern; and (d) the use of unmanned aerial vehicles (UAVs) carrying diverse sensors capable of detecting CWS.¹⁰⁷

Instruments at the disposal of the OPCW

The OPCW will probably not be called on to investigate allegations of CW use very often. The capability in the Technical Secretariat must be effective, but also flexible enough to be adapted to the frequency and scale of requests for its use. A small unit equipped with a method for drawing on and combining various assets distributed across the organization is the most likely way of achieving a balance between effectiveness and efficiency.

The OPCW has assets that can be part of an investigation support system, several of which are being further developed.

The Centre for Chemistry and Technology

The OPCW Technical Secretariat has proposed expanding laboratory capacity building ‘to support those national laboratories working with police or other entities in the conduct of CBRN-related investigations’ in order to assist CWC states parties to identify and prosecute the perpetrators of chemical attacks.¹⁰⁸ The OPCW emphasizes that the CWC has always been built on a scientific foundation and that ‘effective implementation requires technical expertise and scientific literacy’.¹⁰⁹

The OPCW has made use of rented facilities in a suburb of The Hague for its Laboratory and Equipment Store (OPCW Laboratory) for more than 20 years. The demands on the OPCW Laboratory have grown over time in response to an increase in the number of non-routine operations that states parties have decided

¹⁰⁷ Heinonen, O., Presentation to the third meeting of the Temporary Working Group on Investigative Science and Technology of the Scientific Advisory Board (SAB), OPCW, SAB, ‘Summary of the third meeting of the Scientific Advisory Board’s Temporary Working Group on Investigative Science and Technology’, SAB-28/WP.3, 4 June 2019.

¹⁰⁸ OPCW, CSP, ‘Report on proposals and options pursuant to paragraph 21 of Decision C-SS-4/DEC.3 (Dated 27 June 2018) on addressing the threat from chemical weapons use’, Note by the Director-General, C-23/DG.16, 15 Nov. 2018, para. 15(c)(vi). ‘CBRN’ stands for chemical, biological, radiological or nuclear.

¹⁰⁹ Pontes, G. F. M., ‘Bridging the gap between science and diplomacy: Experiences from the OPCW’, July 2017.

to carry out and in the number of requests from states for the laboratory to assist with training and capacity-building initiatives.

In June 2017 the OPCW Technical Secretariat circulated a concept paper with details of a proposed project to upgrade ‘the OPCW Laboratory to a Centre for Chemistry and Technology’.¹¹⁰ The Centre should enhance understanding of tendencies in chemical technology development to facilitate threat assessment and anticipate developments that could threaten the CWC. The project was also expected ‘to enhance the capability to lead the network of partner laboratories in research activities on chemical weapons investigation’.¹¹¹

The ChemTech Centre should not only develop in-house capacities, but also provide critical support to other centres by becoming a hub for relevant laboratories and experts involved in tackling chemical threats worldwide. Expanding the network of OPCW designated laboratories would be consistent with a recommendation made by an Open-ended Working Group (OEWG) to create a partnership of regional or subregional centres. The OEWG made the recommendation to the Fourth Review Conference of the CWC in 2018 as part of its examination of the future of the OPCW.¹¹²

To meet its objectives, the Centre will need to hire staff that can conduct proficiency tests for an expanded laboratory network, and to support a research effort to develop more sophisticated chemical analyses and acquire chemical signatures that can assist attribution efforts.

The ChemTech Centre is expected to help meet the growing demand from states for capacity-building activities, and it should provide opportunities for post-graduate students to take part in CWC-related research activities and projects.¹¹³ When agreeing to contribute to funding the ChemTech Centre, the EU also noted that the call for independent investigation mechanisms in June 2018 was likely to create additional demands.¹¹⁴ A separate trust fund could be created to provide grants to facilitate projects involving students from developing countries.

In 2020 the OPCW launched the fifth phase of the Programme to Strengthen Cooperation with Africa on the Chemical Weapons Convention (the Africa Programme), which promotes the peaceful uses of chemistry for a developed, safe and secure Africa. At the request of African states, the work programme for 2020–22

¹¹⁰ OPCW, Technical Secretariat, ‘Upgrading the OPCW Chemical Laboratory to a Centre for Chemistry and Technology’, S/1512/2017, 10 July 2017.

¹¹¹ OPCW, Technical Secretariat, S/1512/2017 (note 110), para. 4.

¹¹² OPCW, Review Conference, ‘Open-ended Working Group on the Future Priorities of the OPCW, Recommendations to the Fourth Special Session of the Conference of the States Parties to review the operation of the Chemical Weapons Convention’, RC-4/WP.1, 16 July 2018, para. 30.

¹¹³ OPCW, CSP, C-23/DG.16 (note 108), para. 14.

¹¹⁴ Council Decision (CFSP) 2019/538 of 1 Apr. 2019 in support of activities of the Organisation for the Prohibition of Chemical Weapons (OPCW) in the framework of the implementation of the EU Strategy against Proliferation of Weapons of Mass Destruction, *Official Journal of the European Union*, L93/3, 2 Apr. 2020, Annex: Union support for OPCW activities in the framework of the implementation of the EU Strategy against Proliferation of Weapons of Mass Destruction, Project I: OPCW Centre for Chemistry and Technology and implementation of Decision C-SS-4/DEC.3 on addressing the threat of chemical weapons use.

includes strengthening the capabilities of chemical laboratories in Africa.¹¹⁵ The ChemTech Centre could be expected to incorporate activities to support the Africa Programme into its schedule of work.

Investigative science and technology working group

The OPCW has a Scientific Advisory Board (SAB), made up of 25 independent experts, which regularly reports on developments in science and technology relevant to the CWC. A temporary working group (TWG) under the SAB will report towards the end of 2020 on investigative science and technology, and the SAB will probably continue to be involved in helping the OPCW to build the generic investigation capability.

The TWG was established to conduct an in-depth review of methods and technologies that OPCW inspectors could use for investigative work.¹¹⁶ The TWG used a series of working meetings to explore a wide range of issues of direct relevance to the future capability of the OPCW to contribute to attribution of CW use. In its work, the TWG explored, among other things, the following three key issues related to investigations:

1. *Crime scene management.* The TWG's discussions on this issue looked at how investigators could draw on the existing expertise in national criminal technical services and how these might be adapted to cases involving the use of CWs.
2. *Evidence collection, preservation and analysis.* The TWG discussions on this issue drew on examples of how evidence has been collected, preserved and analysed in cases involving explosives.
3. *Chemical forensics.* This has been defined as 'a scientific discipline that aims to attribute a chemical (or mixture) of interest to its source by the analysis of the chemical itself or associated material constituents to address investigative, legal or intelligence questions'.¹¹⁷ The chemicals of interest could include chemical warfare agents, their precursors or other toxic industrial chemicals. The analysis of explosives and their precursors has also been a part of the international discussion of chemical forensics. The TWG examined how to bring forensic techniques into the OPCW Laboratory and also into the toolbox available to the OPCW designated-laboratory network. It is very likely that chemical forensics will be a topic taken up by the ChemTech Centre once it becomes operational.

¹¹⁵ OPCW, Executive Council, 'The fifth phase of the Programme to Strengthen Cooperation with Africa on the Chemical Weapons Convention', EC-93/DG.9, 18 Feb. 2020.

¹¹⁶ OPCW, SAB, 'Summary of the first meeting of the Scientific Advisory Board's Temporary Working Group on Investigative Science and Technology', SAB-27/WP.1, 26 Feb. 2018, para. 1.2.

¹¹⁷ Chemical Forensics International Technical Working Group (CFITWG), Fraga, C. G., Pacific Northwest National Laboratory, Presentation to the Annual Meeting of the Nuclear Forensics International Technical Working Group (ITWG), Bucharest, 25–27 June 2019.

The June 2018 Special Session took place after the TWG had already begun its work, and in January 2019 the TWG discussed the implications of the decisions taken at that meeting. The TWG included a special focus on building capacity for contingency operations into its work programme and opened a discussion on how to draw on and integrate information streams from different parts of the OPCW in an investigation.¹¹⁸

The TWG also opened a dialogue with the SAB of the International Criminal Court to examine how investigations into CW use might assist the work of a prosecutor in prosecuting crimes listed in the Rome Statute.¹¹⁹ Such interaction with prosecutors could help to inform investigators about the type of information that is useful to a prosecution when preparing a case file and once the case comes before a court. It could also help investigators to understand how reports should be written if they are to be admissible as evidence.

In addition, the TWG explored how to make best use of tools that can assist with collecting information and evidence without direct access to locations of interest. The use of satellite imagery, UAVs, and testing of water and air were among the topics examined.¹²⁰

Based on the work in its various subgroups, the TWG developed a series of preliminary recommendations in advance of the publication of its final report towards the end of 2020. Among the recommendations was the inclusion of an expert forensic adviser in the office of the Director-General tasked with coordinating the various activities associated with an investigation leading to attribution.

When the SAB looked at the work of the IIT, it identified an important role for an adviser ‘with broad experience in forensic science and international law’ to help the Director-General to design an effective response when operating in a contentious environment. The SAB recommended that a forensic adviser would preferably be ‘an external, independent, unbiased, and impartial expert, who would provide advice on which exhibits should be examined’.¹²¹

Linking existing capabilities

The OPCW has already developed several contingency capabilities aimed at responding to non-routine incidents. Harvesting and analysing the information from various activities is providing the OPCW with insights into how existing capabilities can be linked to support future requests for assistance in investigating alleged incidents of CW use.

The OPCW maintains the capability to respond to a chemical incident at the request of a CWC state party that believes itself to have been attacked, or to be under imminent threat of attack, with CWs. The capability is designed to identify the toxic chemicals involved in an incident and to provide the affected state

¹¹⁸ OPCW, SAB, ‘Summary of the second meeting of the Scientific Advisory Board’s Temporary Working Group on Investigative Science and Technology’, SAB-28/WP.2, 21 Jan. 2019.

¹¹⁹ OPCW, SAB, SAB-28/WP.2 (note 118), para. 11.1.

¹²⁰ OPCW, SAB, SAB-28/WP.3 (note 107).

¹²¹ OPCW, SAB, SAB-28/WP.3 (note 107).

with advice about decontamination, treatment of victims and how to secure the affected area.

In 2016 the capability was consolidated into a Rapid Response and Assistance Team (RRAT), which the former OPCW Director-General described as a ‘ready-to-go team composed of different experts that could be dispatched within several hours to a requesting state to assist ... with the aftermath response in the field’.¹²² The RRAT is regularly tested using drills and exercises.¹²³ However, in 2016–17 it contributed to the removal and destruction of CWs from Libya, meaning that the OPCW Technical Secretariat had to plan and implement tasks under very challenging conditions.¹²⁴

The Declaration Assessment Team (DAT) is another capability that could provide some useful insights. After Syria joined the CWC a team of experts was formed in the Technical Secretariat to try to resolve questions arising from the initial Syrian declaration of CW capabilities and capacity. The DAT has made more than 20 visits to Syria, taking samples from a range of sites and facilities.¹²⁵ The DAT’s work has also yielded useful information that supplements the reporting from facility inspections.

In 2018 the technical assistance visits to the UK in connection to the above-mentioned incidents in Salisbury and Amesbury were a non-routine activity that included identification of an unscheduled chemical as a type of nerve agent. The deployment and working methods of the UK visits provide information that can be harvested internally as a contribution to the development of the investigation mechanism.

In 2017 two assistance visits were conducted in Iraq at the request of the Iraqi Government to investigate allegations of CW use by ISIL. In that case, the team of OPCW experts contributed to the ongoing national investigation into the alleged attacks using toxic chemicals in Iraq.¹²⁶

In addition to the above activities and capabilities, a CWC state party that suspects another state of non-compliance with the Convention has the right to request an onsite challenge inspection of any facility or location to clarify and resolve concerns. The procedures for challenge inspections are specified in detail in the CWC verification annex.

¹²² OPCW, Technical Secretariat, ‘Establishment of a Rapid Response Assistance Team’, S/1381/2016, 10 May 2016. The OPCW Director-General is quoted in van Ham, P., van der Meer, S. and Ellahi, M., *Chemical Weapons Challenges Ahead: The Past and Future of the OPCW*, Clingendael Report (Netherlands Institute of Public Relations: The Hague, Oct. 2017), p. 76.

¹²³ OPCW, ‘Field exercise in Romania to improve OPCW’s rapid response and assistance capabilities’, News release, 14 Dec. 2017.

¹²⁴ Hart, J., ‘Chemical arms control and disarmament’ in *SIPRI Yearbook: 2017: Armaments, Disarmament and International Security* (Oxford University Press: Oxford, 2017), p. 528.

¹²⁵ OPCW, Executive Council, ‘Outcome of consultations with the Syrian Arab Republic regarding its chemical weapons declaration’, Note by the Director-General, EC-91/DG.23, 5 July 2019.

¹²⁶ OPCW, Executive Council, ‘Status of the OPCW’s contribution to global anti-terrorism efforts’, Note by the Director-General, EC-87/DG.17, 23 Feb. 2018, para. 48.

Use of scenarios and exercises

Responding to an incident where a non-state actor uses a chemical threat agent, including in a mass-impact terrorist attack, is perhaps the most likely scenario in which a state party would call on the OPCW for assistance. Immediately after the mass-impact terrorist attacks on the USA of 11 September 2001 the OPCW began to explore how to strengthen barriers and design effective responses to terrorist use of chemicals.

The OPCW SAB has pointed to the value of pre-planned archetypal scenarios involving CW use, as a tool to enhance preparedness. Scenario exercises will help to identify the capacities that the OPCW needs to add internally, in terms of staff, equipment and hardware, methods, processes and practices. The exercises will also help to determine where and how external resources can be accessed, including OPCW designated laboratories and national criminal technical and forensic institutes in states parties.¹²⁷

Through the work of the OEWG on Terrorism, established by the OPCW Executive Council in 2001, table-top and regional exercises and cooperation with the International Criminal Police Organization (INTERPOL) have generated considerable expertise.¹²⁸ However, the expertise is largely based on using the convening power of the OPCW or knowledge about the science of chemical munitions.

In October 2017 the OPCW Executive Council instructed the Technical Secretariat to assist states parties in addressing the threats posed by non-state actors, including terrorists, who seek to use CWs.¹²⁹ The OPCW has facilitated discussions at a dedicated conference on how to reduce the risk of chemical terrorism, including attacks of different kinds using toxic chemicals and the deliberate engineering of safety failures at sensitive facilities.¹³⁰ The conference helped to identify opportunities to include counterterrorism in subsequent outreach activities and to integrate additional elements into existing programmes designed to strengthen chemical safety and security.¹³¹

Every country has a national criminal law enforcement capability but, because attacks using chemical threat agents are very infrequent, there may be little or no experience in investigating such cases. As the Technical Secretariat develops its own expertise and expands the network of cooperation partners, it is logical to integrate the investigation and prosecution of a CW attack by a non-state actor into the programme of outreach and capacity building among states parties. Training

¹²⁷ OPCW, SAB, ‘Summary of the fourth meeting of the Scientific Advisory Board’s Temporary Working Group on Investigative Science and Technology’, SAB-29/WP.1, 25 Nov. 2019.

¹²⁸ See e.g. United Nations Office of Counter-Terrorism, ‘Report on the inter-agency table-top exercise’, *Ensuring Effective Interagency Interoperability and Coordinated Communication in Case of Chemical and/or Biological Attacks* (United Nations: New York, 2017), pp. 40–48.

¹²⁹ OPCW, Executive Council, ‘Decision: Addressing the threat posed by the use of chemical weapons by non-state actors’, EC-86/DEC.9, 13 Oct. 2017.

¹³⁰ OPCW, ‘OPCW holds conference on countering chemical terrorism’, News release, 7 June 2018.

¹³¹ OPCW, Executive Council, ‘Report by HE Ambassador Maria Teresa Infante, Facilitator of the Sub-Working Group on Non-State Actors of the Open-ended Working Group on Terrorism: Summary of Intersessional Work’, EC-88/WP.1, 3 July 2018.

exercises might help to build international cooperation and increase the cadre of national investigators with specialized knowledge of chemical threat agents.

New instruments to reduce the risk of CW use

While much has been, and is being, done to identify and mitigate chemical threats, the confirmed use of CWs by state and non-state actors indicates the need for additional measures to address both crude and sophisticated weapons as well as the different means employed to deliver them.

Groups of states are working together to design and implement measures that are complementary to the CWC, but outside its framework. An example is the International Partnership against Impunity for the Use of Chemical Weapons mentioned in chapter 2. However, to meet the challenge of preventing CW use, states need to play their part in reducing risks by continuously examining new instruments that can be applied inside the CWC regime.

Complementary access

During the negotiation of the CWC, the UK proposed adding an ad hoc inspection system granting inspectors complementary access to anywhere in the territory of a state party without linking the inspection to any allegation of non-compliance. This proposal was not accepted, but the idea of adding a right of complementary access has been raised more recently in non-governmental analyses.¹³²

Some studies have suggested attaching a protocol to the CWC that would give states parties higher levels of inspection and transparency than required under the existing verification annex of the CWC.¹³³ One model could be the Additional Protocol that members of the International Atomic Energy Agency (IAEA) can add to their bilateral safeguards agreement with the IAEA. The OPCW does not have an equivalent to these bilateral agreements that allow inspection and verification arrangements to be designed according to the specific conditions existing within a state.

Complementary access would be different from the existing challenge inspection mechanism in the CWC (noted above), which is triggered if one state party has raised concerns about non-compliance by another. In the case of complementary access, the inspected party would consent to accepting tailored rules governing the timing of an inspection; the scope of access granted to inspectors; and the procedures, techniques and equipment that inspectors could use.

Additional measures to strengthen national implementation of the CWC

The extensive CWC verification regime is supplemented by a range of assistance tools that states parties can use on a voluntary basis to ensure that they have the

¹³² See e.g. Iannotti, A. et al., ‘Chemical Weapons Convention and its application against the use of chemical warfare agents’, *Defence S&T Technical Bulletin*, vol. 9, no. 2 (2016).

¹³³ Hersman, R., Claeys, S. and Jabbari, C., *Rigid Structures, Evolving Threat: Preventing the Proliferation and Use of Chemical Weapons* (Center for Strategic and International Studies: Washington, DC, Dec. 2019), p. 29.

necessary elements in place to be fully compliant with the CWC. As of July 2020, the OPCW assesses that as many as 74 CWC states parties lack some or all of the national implementing legislation covering all initial measures of the Convention.¹³⁴ Moreover, once legislation is on the statute books it must be made operational by a range of national agencies and authorities if it is to achieve its purpose.

As the chemical industry develops globally, the challenge of CWC compliance is also becoming more complex. Supply chains and distribution networks span multiple jurisdictions in a more internationalized industry, while the volume of items being transported increases the risk of diversion from peaceful uses. As noted earlier in this chapter, new methods to develop and produce chemicals are emerging.

To help each other to improve the quality of national implementation, CWC states parties might consider using some methods that have been applied in other frameworks, such as the Organisation for Economic Cooperation and Development (OECD) and the Financial Action Task Force (FATF).

OECD peer reviews. OECD participating states regularly agree to submit their performance or practices in a particular area to scrutiny by small teams of external auditors drawn from participating states, civil society and the private sector, and supported by OECD staff experts. The peer review produces a report that may be extremely critical, and that contains recommendations, but that does not mandate corrective action or lead to sanctions. Follow-up reviews are normal practice, and the next review will include whether the state has acted on the advice contained in previous reports and whether the situation has improved.¹³⁵

FATF mutual evaluations. The FATF organizes mutual evaluations to measure compliance with technical standards to combat money laundering and financial crimes. Evaluations are carried out by assessment teams, each team comprising usually five to six expert assessors with complementary expertise, drawn from FATF members and supported by the FATF Secretariat. The assessment team compiles an independent report that contains analysis, findings and recommendations concerning the reviewed state's compliance with FATF Standards, in terms of both technical compliance and effectiveness.¹³⁶ The reviewed state is a partner in the process of review, which is believed to strengthen subsequent implementation of the recommendations in the final report. The quality of the participation by the reviewed state contributes to the credibility of the report and the degree of confidence in compliance with agreed standards. The reviewed state cannot veto all or part of the peer review report, and attempts to influence the final outcome will be recorded by team members.

¹³⁴ OPCW, 'OPCW by the numbers', 31 Aug. 2020.

¹³⁵ Organisation for Economic Development (OECD), *Peer Review: An OECD Tool for Co-operation and Change* (OECD: Paris, 2003).

¹³⁶ Financial Action Task Force (FATF), *Procedures for the FATF Fourth Round of AML/CFT Mutual Evaluations* (FATF: Paris, Oct. 2019).

4. Conclusions and recommendations

The CWC is widely recognized as the most successful multilateral disarmament instrument because of its comprehensive provisions, extensive verification system, non-discriminatory character and almost universal participation. The recent confirmed uses of CWs challenged the states parties to the CWC to find an effective response, which led to intensive and controversial debates as different approaches were examined.

The recent confirmed cases suggest that the undoubted successes of the CWC might be put at risk if the norm against CW use erodes without an effective response. As long as the UN Security Council remains divided over how to approach allegations of CW use, the OPCW will be a primary focus for action. At the Special Session of the OPCW CSP in June 2018, a group of states forced a decision by vote on a matter of great substance—the attribution of responsibility for confirmed use of a CW—over the objections of a relatively small, but important, group of opponents.

The vote at the Special Session indicated the strength of feeling among most of the CWC states parties that there could not be impunity for perpetrators of CW use. However, recent cases illustrate the complexity of the challenge when an effective response must not only cover the use of crude agents on the battlefield as well as novel agents in non-military scenarios, but also address the possibility that the perpetrators could be either state or non-state actors.

The envisaged range of possible responses to non-compliance with the CWC is relatively limited, and states determined to reinforce the norm of CW disarmament may seek additional forms of response in case of further CW use in a conflict or if Syria fails to restore full cooperation with the OPCW.

The Special Session of the CSP could add momentum to processes that have been in progress for some time and it could also provide the basis for elaborating new types of response to allegations of CW use. To make the most effective use of the decision taken at the June 2018 Special Session, the following measures could be considered:

1. The OPCW should start to plan on the basis that the new ChemTech Centre will become a focal point for an expanded network of laboratories and bring a wider spectrum of analytical tools and methods to bear on CW disarmament. To extend global expert engagement with research and innovations in chemistry relevant to the CWC, the centre should already conduct outreach to identify new chemical laboratories with which it should collaborate.
2. The OPCW should accelerate and expand the work to develop forensic science as an instrument to support CW disarmament in several ways: (a) through a dedicated programme to establish standard working methods and protocols that forensic laboratories who partner with the OPCW will use; (b) by harvesting the lessons learned from the use of forensic science in investigating

incidents involving radioactive materials; and (c) by promoting a focused discussion of how chemical forensic science can be used in investigations that attribute confirmed cases of CW use.

3. The OPCW should organize a series of discussions that highlight the practical and legal aspects that need to be thought through in designing an attribution mechanism in order to pinpoint the main challenges and develop effective responses to them. The discussions should be designed to produce a clear understanding of what the OPCW can do (and is willing to do) in different scenarios of alleged CW use.
4. Investigations to identify the perpetrators of CW use should become a focus for national and regional exercises that link the CW expert community and the law enforcement community. The OPCW should expand its calendar of capacity building and training events to include exercises tailored to investigations.
5. The coalition of non-governmental experts that work to support the effective implementation of the CWC should organize a focused dialogue on the potential for complementary access to eliminate the risk of clandestine CW programmes with a small ‘footprint’. The dialogue would contribute to the discussion on a future verification system adapted to new threats.

Strengthening Global Regimes

The inadequate response to the use of chemical weapons by a state against its own population was an important catalyst leading to the creation of the 1993 Chemical Weapons Convention (CWC). A great deal has been achieved under the CWC, which is an important example of how multilateral cooperation can succeed.

Recent cases of confirmed use prove that the task of eliminating chemical weapons is not complete. Chemical weapons are once again being used on the battlefield and as terror weapons. Moreover, their use in targeted attacks against politically exposed persons presents a new challenge to the commitment made by CWC states parties that chemicals will be developed and produced exclusively for peaceful use.

When they come together to review the CWC in late 2020, the states parties will have to assess whether their response to the challenges posed by the use of chemical weapons has been proportionate to the threat. If not, then they will have the responsibility to create the new capacities, invent the new instruments and develop the new initiatives that will make their efforts more effective.

This policy paper provides an explanation of the context for some important recent decisions and an analysis of them. It also proposes some actions that CWC states parties could take together in support of the effort to eliminate the threat of chemical weapons.

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