

Chemical Weapons Challenges Ahead: The Past and Future of the OPCW

With a Case Study on Syria

Peter van Ham
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Clingendael Report



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Introduction

In 2017 the Organisation for the Prohibition of Chemical Weapons (OPCW) celebrates its 20th anniversary. Looking back at these 20 years, one can hardly deny that the organisation has been successful: it has facilitated the almost universal disarmament of chemical weapons (CW), and not always under easy circumstances. Yet, success is not always rewarded. While the OPCW can be regarded as a highly successful organisation, its reward is a discussion on its viability. Of course, its accomplishments are widely recognized, and the organisation received the Nobel Peace Prize in 2013, but at the same time discussions have started on the sustainability of the OPCW in its current form in what is called the 'post-disarmament era'. Can the OPCW reduce its size and financial resources now that its verification of chemical weapons disarmament is almost finished, or could the organisation change its focus towards other challenges regarding chemical weapons? This policy debate has already been ongoing for several years, but so far without any clear-cut decisions.

In this report the Clingendael Institute examines the track record of the organisation in the light of the questions raised about the OPCW's future. With this report, the authors aim to offer some insights into the challenges and options for the future, as well as to identify potential steps that policy makers could take to prepare the OPCW for the future. The report will build on analyses and recommendations that have been published by the OPCW, in particular the Technical Secretariat of the OPCW. It will provide further input for this debate and the authors hope to stimulate policy discussions with some new and challenging insights. This report has been prepared with a grant from the OPCW Technical Secretariat (in turn funded by the European Union) but the views expressed are the responsibility of the authors alone.

This report is based on a literature study (both academic literature and policy documents) as well as interviews and informal background conversations with experts close to the OPCW (diplomats and officials from the Technical Secretariat) and external observers (from universities and think tanks, non-governmental organisations, as well as the chemical industry). Because most of the interviews were conducted on the basis of anonymity, no references to these interviews are made in the report.

The report is organized as follows: Chapter 1 offers a retrospective look at the challenges and accomplishments of the OPCW during the past 20 years. Chapter 2 presents a detailed case study on the OPCW's most high-profile and politically pertinent challenge: verifying the chemical disarmament process in war-torn Syria, where chemical weapons have actually been used and where the OPCW has to manoeuvre in a complicated geopolitical environment. What lessons can be learned from these

experiences and how could the OPCW respond to current challenges? This case study can also be read as a separate study, not necessarily with a direct connection to the remainder of the study. Chapter 3 focuses on the future: what challenges will the OPCW most likely face in the coming years, and what are the policy options for the OPCW (and its States Parties) to ensure that the organization will remain relevant and effective for many decades to come?

This report is neither an attempt to showcase only the successes, nor to promote a new lease of life for the OPCW regardless of challenges and questions about its future. The authors will not offer recommendations that are categorical nor any 'quick fixes' for the challenges that the OPCW may be facing in the coming few years. The authors hope that the report will, however, make a useful and practical contribution to these discussions, especially as preparations will soon begin for the 4th Review Conference of the Convention to be held in 2018. After analysing the past two decades and the potential challenges in the years ahead, a well-informed discussion is necessary on what is the best way forward to prevent the world from any further use of chemical weapons.

1 The OPCW At 20: A Farewell To Chemical Arms?

Key Findings:

- The comprehensive, non-discriminatory nature of the CWC has helped to generate widespread international acceptance; only 4 states have yet to sign and/or ratify the treaty.
- The OPCW has proven to be a flexible organization, able to adapt to a continuously changing international political environment.
- Disarmament of chemical weapons among States Parties has almost finished.
- Non-state actors acquiring and using chemical weapons remain an important threat.
- For the OPCW to remain relevant, it has to ensure that its verification regime adjusts to this dynamic environment, deterring any re-emergence of CW by state and non-state actors.

Introduction

In the early hours of Wednesday, 21 August 2013, poison-filled rockets hit the Damascus suburb of Ghouta. The fallout was devastating: the estimated death toll ranges from 281 to 1,729 Syrian civilians, instantly killed by Sarin gas. This attack was the deadliest use of chemical weapons (CW) since the 1991 Iran-Iraq war, shocking the world with the realization that this category of weapons is drastically effective against unprotected civilians. The Syrian CW case will be examined in detail in the next chapter, which comprises the accession of Syria to the Chemical Weapons Convention (CWC), the unprecedented demilitarisation mission that followed and the reasons why its denouement remains uncertain. The 2013 Nobel Peace Prize awarded to the Organisation for the Prohibition of Chemical Weapons (OPCW) constituted a recognition of the work of the Organisation which had hitherto remained mostly unknown and it framed the expectations concerning its work to oversee the destruction of Syria's chemical arsenal in the midst of a civil war. These latest events have certainly strengthened the OPCW's credibility and explain why the CWC is now even considered to be a possible model for existing and future arms treaties (see Chapter 3).

This chapter offers a critical assessment of the OPCW's first two decades, from the opening of the Chemical Weapons Convention for signature in 1993, to the OPCW's teething problems in the late 1990s, up until today's mission to ensure the regime's future international security relevance in the light of contemporary dynamics including the rapid advances in science and technology. It recognizes that despite setbacks and

lingering problems, most experts remain laudatory about the CWC's achievements.¹ Jean Pascal Zanders, for example, argued (in 2012) that the "CWC is undoubtedly the most complex arms control or disarmament treaty today and has proven its ability to meet the goals set by the negotiators in the 1980s and early 1990s."² The chapter covers the OPCW's track record, explaining how and why an organization born within a Cold War arms control paradigm has turned itself into a key body working to prevent states rearming with CW and currently even looking into how to fulfil expectations in having a role in preventing criminals and terrorist groups using toxic chemicals. This chapter also offers an appraisal of the principles, the driving forces and the trends in the CW field in the light of the first decades of the OPCW's experiences. It concludes that after two hectic decades, the OPCW still faces challenges both old and new and that the international community will have to remain strongly committed to ensure that the hard-earned norm against chemical weapons survives well into the future.

Establishing the CWC and the OPCW

The CWC was opened for signature in January 1993. In October 1996, 65 states had ratified, a sufficient number for the Convention to enter into force. Still, this number did not include Russia and the United States, the largest possessors of chemical weapons (40,000 and 28,000 metric tons, respectively). This gave rise to apprehensions as to whether these Cold War superpowers would see any benefits in such a disarmament treaty, as they had already concluded the 'Agreement on Destruction and Non-production of Chemical Weapons and on Measures to Facilitate the Multilateral Convention on Banning Chemical Weapons' in 1990, which was a bilateral agreement between them on the destruction and non-production of chemical weapons. After a protracted and hectic debate, the US Senate ratified the CWC just days before the treaty entered into force in April 1997; Russia ratified a few months later, in November 1997. From the beginning, the CWC's primary focus has been to destroy CW stockpiles and associated infrastructure. The convention's implementing body, the OPCW, was established in 1997 and was officially opened in The Hague (the Netherlands) in May 1998. The CWC and the OPCW were conceived and created as the Cold War ended and the Organisation has followed a traditional approach to arms control and disarmament in which matters regarding implementation are deliberated and decided upon almost exclusively by the States Parties.³ From the onset, the CWC focused on the rights

1 For example, see Robert J. Mathews, "Reviewing the Chemical Weapons Convention: Gently Does It", in Trevor Findlay (ed.), *Verification Yearbook 2003* (London: VERTIC, 2003), p. 118.

2 Jean Pascal Zanders, "Biological and Chemical Weapons and the Prospective Disarmament Process in the Middle East", *EU Non-Proliferation Consortium Background Paper* (November 2012), p. 9.

3 Mohamed Daoudi, John Hart, Ajey Lele and Ralf Trapp, "The Future of the Chemical Weapons Convention: Policy and Planning Aspects", *SIPRI Policy Paper*, no. 35 (April 2013), p. v.

and obligations of states and devoted little attention to the possible contribution of non-state actors like civil society and academia, whose interests extend beyond the prohibition and/or control of CW, let alone non-state actors that might obtain and/or use chemical weapons.

Chemical weapons use during the First World War: Australian infantry wearing respirators, Ypres, September 1917



Photo by Captain Frank Hurley / Australian War Memorial

The CWC was built upon the legal foundations of the 1925 Geneva Protocol, which was a response to the public outcry against the use of CW in World War One. By prohibiting CW use, the Geneva Protocol was a step in the right direction, although it did not prohibit development, production or stockpiling. Post-Geneva, there have been numerous cases of CW use, including the use of poison gas by Germany and Japan in World War Two; by Egypt in north Yemen in the 1960s; and more recently by Iraq against Iran and against its own Kurdish population in the 1980s. During the Cold War, the Soviet Union and the US developed massive amounts of CW, despite their dubious utility from a military-strategic standpoint. As a result, some smaller powers equally considered CW as a rather easy and quick way to gain power and status, resulting in

an estimated 25 states developing CW by the 1980s. In 1978, the First Special Session of the United Nations on Disarmament (SSOD I) highlighted (in a rare consensus document) the importance and urgency of a complete and effective CW prohibition. As a result, CWC negotiations started in 1980 in the Conference on Disarmament (CD) in Geneva as part of a priority agenda based on SSOD I. While a contested treaty text continued to evolve, key issues such as the right of retaliation and challenge inspections continued to hamper real progress. CW use by the Iraqi regime against Iranian troops in the Iran-Iraq war, as well as the chemical attack against its own citizens in the town of in Halabja, proved to be a decisive catalyst during the negotiations on a multilateral treaty. The CWC was finally adopted by the CD in September 1992, entering into force on 29 April 1997. Needless to say, the CWC was conceived during the height of the Cold War, but born during an unprecedented spirit of East-West cooperation. As Sergey Batsanov has argued: "The CWC and the OPCW were products of the final phase of the Cold War and may not have emerged in a different historic environment".⁴

Unique and Exceptional Cooperation

The Convention is not only unique because it stipulates the comprehensive and verifiable prohibition of an entire category of weapons of mass destruction. The CWC also fully complies with the principles of equity and non-discrimination, which was particularly important to assure the support and commitment of the large group of countries regularly described as the "non-aligned" countries. The conclusion of the Convention also meant that the culture of verification, which had been mostly developed in the East-West context of arms control (and which was largely unfamiliar to most other states), had now acquired universal acceptance.

Yet, as with all compromises, there were issues of fundamental importance where the eventual consensus on the treaty text concealed divergent approaches. One relates to international cooperation and the question of supplier control regimes existing in parallel with the Convention. Another relates to the extent of the commitments that can be made for providing assistance and protection in the event that a State Party is attacked with chemical weapons. In the end, the prospect of getting rid of the global stockpiles of chemical weapons and establishing a total ban on these weapons outweighed the differences and created a united stand in support of the treaty. This remains an area which is vital to the long-term health and effectiveness of the Organisation.

4 Sergey Batsanov, "Approaching the 10th Anniversary of the Chemical Weapons Convention: A Plan for Future Progress", *Nonproliferation Review*, vol. 13, no. 2 (July 2006), p. 345.

It is this exceptional spirit of cooperation which explains the CWC's boldness and ambition. It is also the first multilateral disarmament and non-proliferation treaty to ban the development, production, acquisition and transfer of an entire category of weapons of mass destruction (WMD) under universally applied international control. Based on the Convention, the CWC States Parties have established what are called the core objectives of the OPCW, namely, chemical demilitarisation, non-proliferation, assistance and protection, international cooperation, universality, national implementation, and organisational effectiveness. Of these, the first four are also described informally as the pillars of the Convention.

The CWC requires the total and verifiable elimination of all CW stockpiles and production facilities. Under the Convention, verification includes compulsory national declarations about relevant industrial and military activities. The Convention also monitors legitimate, non-CW-related, industrial and commercial chemical activities in order to ensure that they are not misused and diverted for illicit purposes. A regime of routine and challenge inspections has been put in place whereby a State Party can request an inspection of any site in another State Party at short notice, including investigations of an alleged use of chemical weapons. The CWC also aims to provide States Parties with assistance and protection in the event of an attack.

The Drive Towards Universal Disarmament

To date, the CWC has 192 States Parties. Only Egypt, North Korea and South Sudan have yet to become a party to the CWC – Israel has signed but has yet to ratify the Convention (it participates as an observer in the OPCW's Annual Conference of States Parties). The CWC is therefore approaching its stated goal of universal membership, which has always been the clear aim of the CWC negotiators.⁵ Universality nonetheless remains a key priority, based on the understanding that the absence of even a few states could undermine the treaty, most notably by offering safe havens or trans-shipment points for terrorists and smugglers.⁶

An international treaty with detailed verification procedures, obligations for national implementation measures and unprecedented provisions for short-notice inspections with no right of refusal can pose ratification challenges. The OPCW (and its Technical Secretariat, which is tasked with the day-to-day administration and implementation of

5 Jean Pascal Zanders, "The Chemical Weapons Convention and Universality: A Question of Quality Over Quantity?", *Disarmament Forum*, no. 4 (2002), p. 23.

6 Daniel Feakes, "Getting Down to the Hard Cases: Prospects for CWC Universality", *Arms Control Today*, vol. 38, no. 2 (March 2008).

the CWC) quickly came to the understanding that even if governments were inclined to join the CWC, doing so was fraught with legal and practical hurdles. This often involved convincing a range of stakeholders, including chemical industries, overcoming interdepartmental opposition or inertia and crowded parliamentary agendas. The OPCW therefore decided to take a much more proactive approach than was usual in security-related treaties, aiming to influence internal governmental decision-making. From the outset, the OPCW took a hands-on role in persuading states to join. The drive for universality was accompanied by offers of assistance, most notably to develop national legislation and regulations. OPCW efforts to secure universal membership were boosted by an Action Plan adopted by its Executive Council in 2003. Since Article VII (para. 1) obliges all States Parties to adopt the necessary measures to implement the CWC, the OPCW's Technical Secretariat has been actively involved in assisting States Parties with national implementation, as well as setting up functional National Authorities. Following the First Review Conference in 2003, another Action Plan on the Implementation of Article VII Obligations was adopted, providing a framework to offer legal technical assistance, comprising models and explanatory documentation and advice on draft legislation.⁷ Sergey Batsanov, who was involved in these OPCW efforts, argues that this "has been the result of long-term planning, analysis [and] non-traditional diplomacy" which only the OPCW was in a position to pursue since "individual states with their diverse foreign policy priorities usually cannot sustain" such a continuity of diplomatic effort.⁸ States Parties wishing to assist (financially or otherwise) could channel their contributions through the OPCW Secretariat.

Accepting any disarmament treaty is a politically fraught decision. In addition, joining the CWC required practical actions and the commitment of resources. The CWC's success in boosting accessions in a rather short timeframe is, therefore, clear evidence of the OPCW's effectiveness, even when viewed against the general acknowledgement of most military establishments that CW lack practical military utility. The comprehensive, non-discriminatory nature of the CWC helped to generate widespread international acceptance. As did the mutually reinforcing relationship between the CWC and the OPCW, which from the outset has offered the Convention a verifiable and robust institutional backup to assure compliance with CWC obligations. This success has enabled the OPCW to develop from an implementing body into the legal, technical and political core of a new, fully-fledged security regime. As an Organization, the OPCW was built swiftly during a four-year preparatory phase (1993-97), before the CWC entered

7 See OPCW.org, under "implementing legislation", and "legal technical assistance".

8 Batsanov, "Approaching the 10th Anniversary of the Chemical Weapons Convention", p. 341.

into force.⁹ Being new to the job and working in a new disarmament field, the OPCW was inevitably faced with many unknowns, requiring considerable improvisation, especially in its early years.

Chemical Weapon Destruction Efforts by the OPCW (per 1 July 2017)

States that have declared chemical weapons

8 ('A State Party', Albania, India, Iraq, Libya, Russia, Syria and the United States)

States that have completed the destruction of chemical weapons

4 ('A State Party', Albania, India and Libya)

The world's declared stockpile of chemical agents that has been verifiably destroyed

90%, or 69,059 of 72,304 metric tonnes

Chemical munitions and containers covered by the CWC that have been verifiably destroyed

57%, or 4.97 million of 8.67 million

States that have declared chemical weapons production facilities

14 (Bosnia and Herzegovina, China, France, India, Iran, Iraq, Japan, Libya, Russia, Serbia, Syria, the United Kingdom, the United States and 'another State Party')

Declared chemical weapons production facilities that have been disabled

100%

Declared chemical weapons production facilities that have been either destroyed or converted for peaceful purposes

90 of 97 (67 destroyed and 23 converted)

(Source: 'The Chemical Weapons Ban, Facts and Figures', www.opcw.org, retrieved 30 August 2017, and OPCW Fact Sheet 6, 'Eliminating Chemical Weapons and Chemical Weapons Production Facilities', March 2016)

9 For a brilliant overview of the development of the CWC and the OPCW, see Ian R. Kenyon and Daniel Feakes (eds), *The Creation of the Organisation for the Prohibition of Chemical Weapons: A Case Study in the Birth of an Intergovernmental Organisation* (The Hague: TMC Asser Press, 2007).

The high rate of CWC accession as well as compliance, due to the pioneering role of the OPCW in outreach and assisting States Parties with implementation challenges including the enactment of national penal legislation, significantly raised the credibility of and the momentum for actual CW disarmament. After less than a decade (by May 2006), nearly 20% of known CW had already been destroyed, and of the 65 declared CW production facilities, 52 had ceased to exist. By late 2006, the US had destroyed less than half of its CW arsenal. Russia performed worse, with around 16%. In 2007, the OPCW had conducted 2,800 inspections (since April 1997) at 200 CW-related sites and over 850 industrial sites in 77 States Parties. No state has left or threatened to withdraw from the CWC. With only 12 remaining holdout states (by 2006), the OPCW could focus its attention on an ever decreasing “grey area” (where national compliance was still shaky), and a manageably small “black area” (consisting of non-parties).

Adjusting to a New Security Environment

As was the case with several other international bodies, the 9/11 terror attacks on the United States created the impetus for the OPCW to define its role in the context of global anti-terrorism efforts as well. On 28 September 2001, the Chair of the OPCW’s Executive Council issued a statement condemning the 9/11 attacks and urging all members “to develop further means and measures to provide legislative support and assistance to States Parties in the enacting of enforceable, national legal provisions for the effective implementation of the Convention, which prohibits any natural or legal persons anywhere on their territory from undertaking any activity prohibited under the CWC.”¹⁰ In December 2001, the Executive Council adopted a decision entitled “The OPCW’s contribution of global anti-terrorism efforts” underscoring the necessity of securing universal adherence to and more effective implementation of the Convention as a contribution to anti-terrorism. The OPCW also initiated an Open-Ended Working Group (OEWG) on Terrorism aimed at examining how to raise barriers to chemical terrorism and how emergency assistance could be provided following a possible chemical terrorism incident.¹¹

After 9/11, several *ad hoc* measures and initiatives were quickly devised, most notably within the context of UN Security Council Resolution 1540 (adopted on 28 April 2004), which obliges all states to refrain from supporting, by any means, non-state actors in developing, acquiring, manufacturing, possessing, transporting, transferring or

10 See OPCW.org, under “The OPCW’s Role in Combating Terrorism” (28 September 2001).

11 The first major OPCW exercise on delivering assistance took place in September 2002, in Croatia. Over 900 individuals from eight States Parties participated in this exercise (named ASSISTEX I). A second major assistance exercise was conducted in 2005, in L’viv (Ukraine; see below), followed by a third such exercise in Tunisia, in 2010.

using nuclear, chemical or biological weapons and their delivery systems.¹² Given the comprehensive nature of the provisions of the CWC including the imperatives for effective national implementation, UNSCR 1540, as such, did not create new obligations for CWC States Parties in so far as prohibition and prevention in the context of chemical weapons are concerned. It did, however, elevate to a completely new level the issue of domestic legislation and controls over related materials to prevent their illicit trafficking. UNSCR 1540 also encourages enhanced international cooperation on such efforts, reiterating that the new “1540 obligations” strengthen and complement the rights and obligations of States Parties under existing WMD proliferation treaties, including the CWC. At the time when the Convention was concluded, the issue of terrorism did not occupy the energies and resources that it does today. Despite the broad recognition that the OPCW can and must play a significant role in preventing chemical terrorism, the adaptation to contemporary expectations will require deeper deliberations and consensus and a clear identification of the practical ways in which the role of the Organisation in this area can be strengthened.

The global 9/11 security paradigm shift has also rekindled the OPCW’s drive to achieve universality (thereby limiting “black areas”) and to focus on the States Parties’ commitment to ensure the effective implementation of the CWC. It also proved to be an opportunity to show that the OPCW could function as a “learning organization that would adapt to new developments”, not just in science and technology (see below), but also within the realm of global politics and security.¹³ Within the context of a traditional disarmament treaty (the CWC), the OPCW was set up as a forum for overseeing implementation and for dialogue between States Parties with a representative Executive Council (consisting of 41 members, elected for two-year terms, meeting 4 to 5 times per year). Notably, the Conference of States Parties (meeting at least annually) functions as the OPCW’s “principal organ” which (as stipulated in the CWC’s Article VIII, para. 19) may “consider any questions, matters or issues within the scope of this Convention (...) It may make recommendations and take decisions on any questions, matters or issues related to this Convention raised by a State Party”. These policy-making organs of the OPCW, especially the Executive Council, have had a remarkable track record of building consensus often on seemingly intractable issues and thereby contributing to the progress that the Organisation has registered over the years. This also applies to the industry verification system, which was devised to be evolutionary by taking into account practical experience and offering opportunities to adjust to new developments

12 See Olivia Bosch and Peter van Ham (eds.), *Global Non-Proliferation and Counter-Terrorism: The Impact of UNSCR 1540* (Baltimore MD: Brookings Institution Press, 2007).

13 Ralf Trapp, “The Chemical Weapons Convention – Multilateral Instrument With a Future”, in Ramesh Thakur and Ere Haru (eds), *The Chemical Weapons Convention: Implementation, Challenges and Opportunities* (Tokyo, UNU Press, 2006), p. 22.

in science, technology and chemical manufacturing. It has also made it relatively straightforward to keep the CWC/OPCW relevant in a rapidly changing security setting.

The OPCW is often described as a ‘technical organisation’. In reality it is both a technical and – given its disarmament mandate – a political organisation. This means that the Organisation has had its fair share of controversies beginning with the removal of the OPCW’s Director General José Bustani in April 2002.¹⁴ Presently, the use of chemical weapons in Syria is disputed in terms of whether the disarmament operation was completely successful and who the actual perpetrators of the ongoing chemical weapons attacks might be (see Chapter 2).

The multilateral character of the OPCW is also impacted by parallel, often informal arrangements meant to reinforce what is notionally understood as the ‘non-proliferation’ regime. For example, in 2004 academics like Gary K. Bertsch suggested that “formal treaties such as the NPT, the BTWC, and the CWC appear to have been overtaken by events”, and that these regimes “must recognize that the norms they embody deter only those actors that have something to lose but mean little to non-state (...) actors”.¹⁵ Treaties like the CWC and international organisations like the OPCW were considered necessary, but not sufficient to fully address proliferation concerns or to keep terrorists from acquiring WMD, either from unsuspecting States Parties through subterfuge, or covertly from emerging suppliers across the world. In the chemical realm, this poses particular challenges since non-state entities include not just terrorist groups and criminal organizations feeding a black market, but also a large and growing number of legitimate business corporations.

As a result, existing as well as newly-created WMD non-proliferation regimes gained more attention. Such regimes include the Australia Group (an informal group keeping a lid on the development of CW and biological weapons through the harmonization of export controls); the Zangger Committee (an informal group which serves as the “faithful interpreter” of the NPT’s Article III, para. 2, to harmonize the interpretation of nuclear export control policies for NPT members); and the Proliferation Security Initiative (an informal group striving to coordinate efforts to halt the trade in WMD, related materials and delivery systems). Quite naturally, there was initial concern that US ‘unilateralism’ would strengthen these self-selected, informal groupings since they might be more agile and easier to coordinate as their members share similar interests. Comprehensive and formal treaties (like the NPT and CWC) were considered to be strong on legitimacy, but relatively weak on implementation. As a result, the OPCW had to prove its mettle by combining its aim for universality and robust verification

14 “Chemical Weapons Body Sacks Head”, *BBC News* (22 April 2002).

15 Seema Gahlaut and Gary K. Bertsch, “The War on Terror and the Nonproliferation Regime”, *Orbis*, vol. 48, no. 3 (Summer 2004), p. 503 and p. 501.

procedures, with exploring the possibility of closer connections with other WMD-related International Organizations (IOs) and arrangements. This spirit of engagement also resulted in a renewed effort (with the International Atomic Energy Agency, IAEA) to create a WMD-free zone (WMDFZ) in the Middle East.

All of these post-9/11 security demands certainly kept the OPCW on its toes, steering clear of the bureaucratic complacency that tends to grab hold of IOs. This was all the more necessary since the overall sense within the States Parties was that the CWC was working “reasonably well”, and merely had to continue on its chosen path of chemical disarmament. But 9/11 was to change this perception.

Institutional Outreach, Engagement and Cooperation

The contemporary security landscape is complex and hybrid, which requires closer cooperation, or at least interaction between the main IOs, NGOs, academia and the private sector to handle emerging challenges. In this context, the OPCW has taken the initiative to develop practical and strategic relationships with a wide variety of key players, ranging from NATO and the European Union (EU), to the UN's Office for the Coordination of Humanitarian Affairs (OCHA) and the World Customs Organization (WCO). The OPCW's focus has primarily been on the provisions of Articles VII, X, and XI of the CWC, which relate to the rights and obligations of the States Parties dealing with implementation, assistance and protection, as well as with economic and technological development.

NATO, for example, launched its own WMD Non-Proliferation Centre in May 2000, preparing (amongst other things) for recovery efforts should the Alliance suffer a WMD attack or chemical, biological, radiological and nuclear (CBRN) events. In October 2005, the OPCW and NATO's Euro-Atlantic Disaster Response Coordination Centre (EADRCC) conducted a joint exercise (called “Joined Assistance 2005”) near L'viv (Ukraine), testing procedures to deliver emergency aid following a simulated terror attack using chemical agents. This five-day exercise was the first of its kind, and offered valuable information and lessons learned on the capabilities to assess the extent of contamination, evacuation procedures, medical treatment, as well as (for the OPCW) investigations of a so-called “alleged use.”¹⁶ This exercise has been particularly important since Article X of the CWC offers the OPCW a specific mandate to provide assistance in the case of CW use (or the threat of such use). Improving the OPCW's capabilities to actually deploy assistance and honour its Article X obligations are considered crucial to offset the security consequences of States Parties which have

16 “Chemical Terrorism Protection and Assistance Exercise ‘Joint Assistance 2005’ Concludes in Ukraine”, *OPCW News* (13 October 2005).

voluntarily disavowed CW. After 9/11, the OPCW's Technical Secretariat has received a growing number of requests for assistance and advice, which obviously has financial implications for the Organisation. Strengthening international cooperation may make the deployment of assistance easier, which is an absolute must for the OPCW, since (as Jean Pascal Zanders argued in 2002) “[s]hould some States Parties decide that their security interests are better served through unilateral measures, such as CW armament for deterrence purposes, the whole prohibitory regime on chemical weapons may collapse.”¹⁷

The OPCW has collaborated most closely with the EU, which launched five regional CBRN Centres of Excellence (CoE) in 2010. Since these CoE aim to organize and coordinate donors and organizations providing technical assistance and support that is relevant to preparedness and support in the case of a CBRN event, it is clear that close ties with the OPCW are required. The OPCW uses this network to channel its outreach activities and to spread information on CWC issues (e.g. on chemical safety and security, national implementing legislation, as well as training and response operations). The EU's 2003 WMD Strategy makes a strong commitment to “effective multilateralism”, including formal treaties like the CWC.¹⁸ At the time, this was considered a boost for existing treaty-based WMD non-proliferation efforts, and a useful alternative to further informal *ad hoc* arrangements (like PSI).

The EU's financial support of the OPCW has been consistent (€1 million annually, since 2004), officially supporting “international cooperation for the peaceful uses of chemistry, monitoring advances in science and technology relevant to the Convention, and preparedness of States Parties to prevent and respond to attacks involving chemicals.”¹⁹ The EU has also provided funds for constructing three chemical weapons destruction facilities in Russia, as part of its €1 billion commitment to the G8's “Global Partnership Program Against the Spread of Weapons and Materials of Mass Destruction”, agreed upon in 2002. Despite the EU's continued support, national contributions (by EU member states) are declining. This has put significant pressure on cash-strapped non-proliferation institutions tasked with treaty implementation, and the OPCW has been no exception. The OPCW has therefore been faced with a significant challenge to fulfil its mandate with limited resources. Separately, there is also the question of several States Parties paying their contributions on time in order to ensure a steady and predictable availability of resources for the Organisation.

17 Jean Pascal Zanders, “The Chemical Weapons Convention and Universality: A Question of Quality Over Quantity?”, *Disarmament Forum*, no. 4 (2002), p. 27.

18 Peter van Ham, “The European Union's WMD Strategy and the CFSP: A Critical Analysis”, *EU Non-Proliferation Consortium Papers*, no. 2 (September 2011).

19 See OPCW.org, under “European Union Continues Support for the OPCW”. See also “The OPCW and the European Union”, a brochure provided by the OPCW with EU support (The Hague, September 2013).

As Cindy Vestergaard has argued, “EU member states need to ensure their payments to the CWC are paid on time if the EU is to maintain not only the world’s longest chemical peace but enforce its WMD strategy overall.”²⁰

The OPCW’s ties with the (UNSCR) 1540 Committee and the United Nations Office of Disarmament Affairs (UNODA) are particularly relevant. Gennady Lutay, Chair of the 1540 Committee, argued in October 2016 that his Committee and the CWC “complement and reinforce each other.”²¹ This is particularly the case since the 1540 Committee itself does not provide assistance to States Parties to develop capabilities to implement their 1540 obligations (i.e., establishing domestic controls over WMD-related materials to prevent their illicit trafficking). Instead, it has the role of a clearing house facilitating assistance offered by States Parties and IOs like the OPCW, IAEA, EU and the African Union (AU). A “Relationship Agreement” that has existed between the OPCW and the UN since 2000 offers a solid basis to deepen cooperation whose potential remains significantly untapped in the context of learning from the OPCW’s experience in national implementation to further the objectives of UNSCR 1540.

This also comprises cooperation on education and outreach. Since 2015, the OPCW has a dedicated Advisory Board on Education and Outreach which aims to “improve interaction with chemical industry, the scientific community, academia, and civil society organisations engaged in issues relevant to the Convention, and cooperate as appropriate with other relevant international and regional organisations, in promoting the goals of the Convention.”²² Numerous workshops have been organized (often with OPCW support) bringing together practitioners in the field of disarmament and WMD non-proliferation education in order to share experiences and best practices, as well as to explore the potential for collaboration and synergies between IOs and other key stakeholders. IOs like the IAEA, the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO), the 1540 Committee and the OPCW share the effort to maintain public awareness on the safety and security challenges involved, as well as the common goal to build up training and capacity building.

Institutional cooperation is particularly important in order to arrive at a more comprehensive approach to disarmament and WMD non-proliferation issues. All too often, chemical, biological and nuclear regimes operate independently, which limits

20 Cindy Vestergaard, “Maintaining Chemical Peace: The CWC, the European Union, and Political Developments”, in Jean Pascal Zanders (ed.), “The Future of the CWC in the Post-Destruction Phase”, *EUISS Report*, no. 15 (March 2013), p. 60.

21 “Statement by the Chair of the 1540 Committee to be Delivered by Mr Gennady Lutay, at the Open Ended Working Group of States Parties to the Chemical Weapons Convention”, The Hague (10 October 2016).

22 “OPCW Conference of the States Parties: Establishment of an Advisory Board on Education and Outreach”, The Hague (3 December 2015).

their effectiveness and does not make the best use of the available financial and diplomatic resources.²³ Currently, there are three major multilateral verification organizations in place: the OPCW, the IAEA and the CTBTO. All three organizations gather and process information to verify the compliance of States Parties with their respective obligations and conduct on-site inspections. There are important similarities that offer opportunities for closer cooperation, most notably on procedures for training and deploying inspectors, the use of satellite imagery and secure communications, as well as the logistical aspects of inspections.

But there are also differences in the technologies that are used. These include operational parameters, for example the CWC's right (offered to States Parties) to request an on-site challenge inspection of any facility or location (of any other State Party) in order to clarify questions concerning possible non-compliance with the provisions of the Convention (Article IX), whereas the IAEA has notable problems in detecting (let alone the inspection and surveillance of) undeclared facilities. The CWC's experiences are also of great use to (and even an inspiration for) the Biological Weapons Convention (BWC), which (since 1975) bans the production and use of biological and toxin weapons, but which lacks both an institutional basis and robust verification procedures (see Chapter 3). As will be discussed below, the CWC's verification machinery is set to make a major contribution to the resilience of regional disarmament frameworks, most notably to arrive at a WMDFFZ in the Middle East.

Destroying Chemical Arsenals: Delayed but Successful

The CWC has a ten-year deadline written into the treaty for the full destruction of all chemical weapons owned by a State Party (or which may have been abandoned in another country). At the last minute, Russia successfully called for the inclusion of a possible five-year extension because it was anticipated that Russia (as the inheritor of the world's largest CW stockpile from the USSR) would not be able to achieve this ambitious (and costly) goal in just a decade. The approval of other OPCW States Parties is required for any extension (or modification) of the destruction timeline. The OPCW's Executive Council has been in close consultation with States Parties whose destruction plans are lagging behind, seeking ways to bring these plans into conformity. Although the CWC clearly states that the costs of CW destruction must be borne by the possessor states, most CW states have asked for (and received) both financial and technical assistance. Russia has been the largest recipient of international assistance.

23 Elena Sokova and Daniel Feakes, "Facilitating and Supporting Synergy and Collaboration Between International Organisations", *OPCW Today*, vol. 2, no. 5 (December 2013), p. 35.

In 2007, Albania was the first State Party to confirm the destruction of its complete CW stockpile. The OPCW indicates (on its website) that in October 2016, some 67,098 metric tons, or 90%, of the world's declared stockpile of 72,304 metric tons of chemical agents has been verifiably destroyed; 4.97 million, or 57.32%, of the 8.67 million chemical munitions and containers covered by the CWC have been verifiably destroyed. In 2016, five states (Iraq, Libya, Russia, Syria and the US) have declared CW capabilities. In 2015, Russia had destroyed 91.97% of its CW; the US had reached 90%, all supervised by the OPCW. Issues of abandoned CW (ACW), most notably by Japan on the territory of China, are also scrutinized by OPCW inspections (nine in 2015 alone). Old CW (OCW) are also inspected by the OPCW, most notably in Belgium, France, Germany, Italy, Switzerland and the UK. In order to offer political transparency and encourage peer-pressure, the OPCW has developed a unique, certified analytical database, offering information on over 3,900 CW-related compounds. This database is available to all States Parties and is obviously used for on-site verification activities by OPCW inspection teams.

Declared and Inspected CW Sites (per 1 July 2017)

	States Parties which have declared Facilities	Declared Sites or Facilities	Inspections Conducted	Sites Inspected
Chemical Weapons Production Facilities	6	35	472	65
Chemical Weapons Destruction Facilities	4	3	1,791	8,112
Chemical Weapons Storage Facilities	4	5	497	176
Abandoned Chemical Weapons	1	39	101	224
Old Chemical Weapons	6	6	128	35
Total		88	2,989	8,612

Source: 'The Chemical Weapons Ban, Facts and Figures', www.opcw.org, retrieved 30 August 2017

Despite this notable success, the CWC has not achieved its goal of complete CW disarmament.²⁴ It is clear that CWC negotiators have underestimated "the technological complexity, huge financial burden, and panoply of other issues, including environmental regulations, local concerns, and politics, associated with CW destruction".²⁵ Although understandable, this has proven to be a major concern, particularly since ongoing CW destruction is considered essential for maintaining the momentum of international

24 See "Eliminating Chemical Weapons and Chemical Weapons Production Facilities", *OPCW Fact Sheet*, no. 6 (March 2016).

25 Batsanov, "Approaching the 10th Anniversary of the Chemical Weapons Convention", p. 344.

cooperation in this area. It comes as no great surprise that (apart from Russia's well-known difficulties) it has been the US (the other possessor state of a major CW stockpile) that has run into problems. In the US, destruction has been delayed due to widespread and vocal societal concerns, as well as the massive financial costs involved. This has proved to be a key issue, also because the CWC stipulates that the destruction process should not harm people or the environment. Alternatives had to be found for existing and planned high-temperature incinerators which could accommodate legitimate public safety concerns. As a result, both the US and Russia are behind schedule, which has made them vulnerable to pressure from countries like Iran, a country that is itself under considerable scrutiny by the IAEA for its alleged nuclear weapons programmes. Still, as Amy E. Smithson argues, the delay in CW destruction in the US (as well as in Russia) "is not a compliance problem that in any way threatens the integrity of the [CWC] treaty."²⁶ All existing CW now have to be destroyed by September 2023, the new target date.

Inside the Pueblo Chemical Agent-Destruction Pilot Plant in the United States



Photo: PEO ACWA

26 Amy E. Smithson (interview), "The Achilles' Heel of the Chemical Weapons Dilemma", *Georgetown Journal of International Affairs*, vol. 15, no. 1 (Winter/Spring 2014), p. 166.

Technically, these delays had no impact on the CWC verification regime, but on a political level there have been some drawbacks. Particularly interesting is that compliance concerns tend to be raised by the US, while this state is itself being criticized for delays in disarmament. In 2005, the US expressed concern about active offensive CW research and development (R&D) programmes, as well as inaccurate declarations regarding past CW transfers and undeclared CW facilities in Russia, China, Iran, Libya and Sudan.²⁷ The US decided to address these concerns through bilateral channels, rather than directly engaging formal OPCW mechanisms. In the meantime, the US itself has been criticized for exporting arms classified as “toxicological agents” (notably tear gas) to numerous countries in the Middle East (between 2009-13).²⁸ Since 9/11, the US has also intensified its R&D on “non-lethal” chemical agents, along with new means of delivery and dispersal. The CWC (Article II, para. 2) does cover chemical compounds with incapacitating or irritant effects. Still, the somewhat vague language (law enforcement and domestic riot control is allowed, warfare obviously not) offers States Parties opportunities to stretch the spirit, if not the letter of the CWC to fit their ever-changing strategic requirements. Taken together with the delay in destroying US CW stockpiles, this has taken a toll on the US’ standing within the CWC, undermining its role as a “regime hegemon.”²⁹ Since these compliance concerns remain unresolved, this has also, *ipso facto*, affected the authority of the CWC, and hence the OPCW.

Despite these practical and political impediments, the CWC’s integrity is hardly challenged. Still, the delay in destruction has a negative impact on the political dynamic for further CW disarmament. For example, several countries in the Middle East are widely publicized to have a CW defence and/or protection programme, most notably Israel and Egypt. In both cases, there is uncertainty about the offensive dimensions of these programmes, an ambiguity that both Israel and Egypt maintain for strategic reasons. The saga of Syria’s CW is now well known and is discussed at length in the next chapter. Iran has declared a CW production facility (but not CW as such). Libya has operated a large CW facility at Rabta which was declared by the Libyan authorities when it joined the CWC in 2004. Libya’s CW have now been safely destroyed at two commercial destruction facilities in the UK and Germany. Still, the fear remains that terrorist groups may either produce or steal CW (and/or BW). The Islamic State (IS) has

27 US State Department, *Adherence to and Compliance With Arms Control, Nonproliferation and Disarmament Agreements and Commitments* (Washington DC, August 2005). See also David P. Fidler, “The Chemical Weapons Convention After Ten Years: Successes and Future Challenges”, *ASIL Insight*, vol. 11, no. 12 (27 April 2007).

28 David Sirota, Andrew Perez and Matthew Cunningham-Cook, “Hillary Clinton’s State Department Increased Chemical Arms Sales to Middle East Countries that Gave to Clinton Foundation”, *IBT Investigator* (3 March 2015).

29 See David A. Koplow, “Train Wreck: The U.S. Violation of the Chemical Weapons Convention”, *Journal of National Security Law and Policy*, vol. 6, no. 2 (2013).

already produced and used toxic chemicals (like mustard and chlorine gas).³⁰ Such CW might be spreading outside IS-controlled territory, even beyond the Middle East. These are reminders that complacency may have to be added to the already long list of threats and challenges regarding CW.

New Technologies and Initiatives

Although state-owned CW stockpiles and wavering destruction timelines remain as key challenges for the CWC, they certainly do not pose the biggest threat. Chemical weapons are often dubbed the “poor man’s nuclear bomb”, which indicates that CW (as well as BW) are possibly the weakest link in the international community’s efforts to halt WMD proliferation. Key chemical (and biological) products used by industry are dual-use. This is particularly problematic given the recent advances in science and technology driven by market demands (particularly in food and energy production). This makes it hard for most governments to adjust their national regulatory systems accordingly. New technologies pose a challenge to the CWC in several ways, for example by defying established verification procedures which may require changes in the way routine verifications are conducted.³¹ New technologies may affect the ability of inspectors to recognize non-routine industrial activity since traditional features of CW production may be absent. Apart from new technologies in the chemical sector (and governments’ lack of knowledge and ability to keep track), the increasing convergence between chemistry and biology poses challenges of its own.³² It is beyond the scope of this chapter to examine the full extent of the consequences of the convergence of chemistry and biology in life sciences. Still, it should be clear that chemical R&D increasingly takes place in a new and fully globalized environment, with the Internet enabling the global distribution of information and knowledge, thereby encouraging new forms of scientific collaboration (including the emergence of virtual laboratories, shared databases and open-source software).

It goes without saying that this is a very complex and technical matter which has required the attention of States Parties as well as the OPCW Technical Secretariat. The 2011 Report of the Advisory Panel on Future Priorities of the Organisation for the Prohibition of Chemical Weapons stresses this increased convergence between chemistry and biology, arguing that this requires a clarification of the relationship

30 Ryan Browne, “US Sanctions ISIS Chemical Weapons Experts for First Time”, *CNN.com* (12 June 2017).

31 See Daoudi, *et al.*, “The Future of the Chemical Weapons Convention” (2013), Chapter 3.

32 Alexander Kelle, Kathryn Nixdorff and Malcolm Dando, *Preventing a Biochemical Arms Race* (Stanford: Stanford University Press, 2012).

between the CWC and the BWC.³³ This call was repeated in a 2012 report by the OPCW's Scientific Advisory Board (SAB), which recommends the strengthening of ties between the OPCW and the BWC's Implementation Support Unit.³⁴

Although this is a purely technical subject, it has major political ramifications since technological advances and changes may have a negative impact on the OPCW industry verification regime, and hence undermine confidence in the CWC as a whole. This is especially the case since the CWC requires States Parties to enact and implement national laws, making the National Authority of each State Party the main interlocutor of the OPCW. Since chemical production is rapidly growing in Asia, Africa and Latin America, this places notable burdens on legal systems in countries still unaccustomed to complying with already existing CW-related regulations. The global expansion of the chemical industry requires the OPCW to work with an ever increasing number of states to increase their capacity to monitor their (chemical) imports and exports, and to adopt (national) implementing legislation as well as a legal framework to support their chemical industry.

The Technical Secretariat has made the requisite adjustments to ensure that a (relatively) high level of confidence in the OPCW's verification regime is maintained. Over the years, a rigorous declaration and data-monitoring regime (of chemical plant sites) has been developed. In the future, random inspection selections (using specially designed computer software) may be envisaged. The Technical Secretariat's ability to conduct challenge inspections to investigate alleged CW use remains to be tested in practice since no State Party has ever requested such an inspection. The question is raised (time and again) whether the Technical Secretariat is losing its ability to conduct these challenge inspections, under the motto "use it, or lose it!" This is often combined with the Technical Secretariat's challenge to make the shift from verifying actual CW destruction, to ensuring that no new CW are being produced (especially given new technological realities). In order to maintain readiness, the Technical Secretariat continues with training and contingency planning.

Most industry inspections still limit themselves to checking that the information declared on a chemical facility is correct, rather than (more broadly) controlling whether the activities in a chemical facility are overall consistent with the CWC obligations and the treaty's General Purpose Criterion (GPC). The GPC stipulates (in Article II) the prohibition of "[t]oxic chemicals and their precursors, except where intended for

33 "Report of the Advisory Panel on Future Priorities of the Organisation for the Prohibition of Chemical Weapons", The Hague (25 July 2011), paras 21 and 22.

34 "Report of the Scientific Advisory Board on Developments in Science and Technology for the Third Special Session of the Conference of States Parties to Review the Operation of the Chemical Weapons Convention", The Hague (29 October 2012).

purposes not prohibited under this Convention, as long as the types and quantities are consistent with such purposes”.

The blurring of conceptual and technological lines goes beyond chemical-biological matters, and has also affected the debate on the OPCW’s role at the nexus of chemical safety and security. The OPCW has a clear mandate to assist States Parties in strengthening their response capacities, which has become a major issue given the real and present danger of terrorist threats to chemical facilities. The CWC gives all States Parties the right to protect themselves against a CW attack. The OPCW has also put mechanisms in place to deliver and coordinate assistance to States Parties that fall victim to CW. Most States Parties have developed emergency plans for scenarios that include chemical (as well as biological, radiological and nuclear) weapons (e.g. the EU’s CBRN Action Plan; see above). The OPCW has actively reached out to NGOs and other key partners (including the World Health Organization, WHO) in order to develop protocols for operational coordination, consultation and training, aimed at responding swiftly and effectively to a CW emergency. The Centres of Excellence (CoE; see above), established in 2010 with EU financial assistance, are considered to be especially useful to organize and coordinate the many states, IOs and NGOs that provide technical assistance and support relevant to CW preparedness and response. CoE have been established in North Africa; the African Atlantic Façade; the Middle East; South Eastern Europe, the Southern Caucasus, Moldova and Ukraine; and South East Asia. These CoE are made to good use by the UN Interregional Crime and Justice Research Institute (UNICRI, jointly with the EU’s Joint Research Centre), working with a large number of national focal points and national teams in the area of CNBR risk mitigation. A key goal is to develop systematic needs assessments at the national level, and to improve the capacity of participating countries to deal with CNBR emergencies. For the OPCW, these networks have proven valuable to raise awareness of CWC issues, and to develop projects and activities dealing with chemical safety and security, national implementing legislation, as well as training in responding to incidents involving toxic chemicals. This is no mean feat since the origins of chemical risks can be criminal, accidental or natural. Planning for and responding to such a wide array of scenarios remains one of the key challenges for the OPCW and all of its stakeholders.

This begs the question whether the OPCW may have to make changes to its internal capabilities, including existing provisions and arrangements to implement the CWC. The OPCW’s Syrian intervention (see Chapter 2) seems to have demonstrated that the CWC has at least the technical capability to inspect, verify and destroy a state’s CW, even under great political duress. Still, the OPCW remains uncertain about the existing mechanism of challenge inspections, which has always been a political issue due to its inherent sensitivity. As mentioned earlier, no “surprise inspection” has been executed to date, mainly because it is difficult for the OPCW to collect sufficient evidence against a suspected state. Moreover, more than a few States Parties are concerned that conducting challenge inspections might result in so-called “retaliatory inspections”,

for example against the US and/or Russia (to inspect their CW destruction obligations). Key questions also involve the nature and quantity of both routine and challenge inspections at the national and international level to assure the CWC's resilience. These questions are all the more pertinent since once CW destruction verification has been completed, the OPCW is due to face major staff cuts. This may pose a challenge for the OPCW Technical Secretariat, mainly since it needs to maintain ongoing training and access to specialists in order to effectively conduct challenge inspections or investigations of alleged CW use.

The OPCW's Relevance: Key Questions and Lessons

The CWC and OPCW have to adjust themselves to a rapidly changing geostrategic, economic and technological environment. Now that declared CW stockpiles are dwindling and the collective memory of a Cold War-era CW threat is fading, the OPCW has to deal with different threat perceptions and an expanding number of actors and stakeholders. One of the key challenges is the risk (and the concomitant threat) of the re-emergence of CW capabilities. Whereas actual CW capabilities (ranging from CW agents, to delivery systems and production units) are controlled and verified, novel and still potential risks include newly discovered toxic chemicals, the risk of so-called "break-out" capabilities inherent in many new technologies, as well as doubts about the legitimacy (and underlying intentions) of chemical defence activities and programmes. A reorientation of the OPCW's activities has already taken place, as reflected in the decision (in 2012) to allocate more resources to the inspection of so-called "other chemical production facilities" (OCPFs). Still, the number of OCPFs is increasing exponentially, making it hard for the OPCW to uphold a credible verification system. As Alexander Kelle argued in 2013: "[A]ssuming OCPF inspections continue at the rate agreed for 2014, that is, 157 per year, it will take the OPCW at least another 20 years to visit all the remaining facilities in this category just once."³⁵ For the OPCW to remain relevant, it has to ensure that its verification regime adjusts to this dynamic environment, deterring the re-emergence of CW. This will become a key task in the OPCW's portfolio.

The future of CWC verification is widely discussed among practitioners and (academic) experts.³⁶ The CWC allows for new chemicals to be added to the Schedules (i.e., the list of chemicals, divided into three categories, that are relevant to the CWC), but States Parties have been reluctant to do so, mainly since this is bound to hamper the use of

35 Alexander Kelle, "The Third Review Conference of the Chemical Weapons Convention and Beyond: Key Themes and the Prospects of Incremental Change", *International Affairs*, vol. 89, no. 1 (January 2013), p. 147.

36 For example, see Ralf Trapp, "Research, Development and Production: Impact and Challenges for Future Verification Under the CWC", in Zanders (ed.), "The Future of the CWC in the Post-Destruction Phase" (2013).

those chemicals in R&D and peaceful uses. To date, the focus of OPCW inspections is to confirm that no CW are being produced (at the inspected sites), mainly by checking the data submitted in declarations, and by confirming the absence of undeclared chemicals (especially chemicals that can either be used as CW themselves, used to manufacture CW, or have very limited uses outside chemical warfare, i.e., so-called “Schedule 1 chemicals”). Inspectors lack the ability to detect chemicals other than those listed in the Schedules, which may undermine their credibility. But even if inspectors would detect undeclared chemicals (posing a CWC risk), it remains unclear how they could possibly determine whether they had been produced for legitimate purposes, or as part of an undeclared CW activity.

The shrinking demand for CW verification (combined with the OPCW tenure policy of 7 years maximum for staff and inspectors) further raises the question of how confident one can be “that future inspectors will in fact recognize a facility that is involved in undeclared CW activities?”³⁷ The OPCW’s verification regime therefore requires qualitative strengthening in order to keep up with the rapid pace of scientific and technological (S&T) changes. The OPCW must also ensure that its inspectors are first-rate experts, with access to commensurate technical verification capabilities (including sampling and analysis). All these issues and challenges are part of an ongoing discussion about the future of the OPCW’s industry verification regime. The outcome of this conversation will largely determine the confidence of stakeholders in the OPCW, and, *ipso facto*, the CWC.

A further challenge will be for the OPCW to keep the “chemical genie” firmly in the bottle, most notably by strengthening the CW non-proliferation norm. Effective verification is a necessary condition for states to continue their CWC obligations. Still, it has to be acknowledged that “the perception of [CW’s] limited tactical and strategic utility was paramount in the willingness of some states to abandon them, and likely factored into the decision making of other states not to pursue BW or CW in the first place.”³⁸ The OPCW contribution to CW disarmament in Syria has confirmed and reinforced the CW non-proliferation norm. However, this only occurred *after* CW were actually used in a conflict situation.³⁹ A purely normative approach to CW is clearly inadequate to deter so-called “secondary proliferation”, i.e., proliferation from states that have recently obtained nuclear, chemical, or biological weapons capabilities. It also has to be acknowledged that in the new “age of terrorism” CW may have a novel utility. As J.P. Perry Robinson argued (in 2008): “The growing counterterrorism utility of

37 Trapp (2013), p. 26.

38 Cameron S. Brown and David Friedman, “A Cyber Warfare Convention? Lessons From the Conventions on Chemical and Biological Weapons”, *Institute for National Security Studies* (Tel Aviv, 2014), p. 56.

39 Szymon Bochenski, “In the Shadow of Syria: Review of the Chemical Weapons Convention”, *PISM Policy Paper*, no. 22 (July 2013).

chemical weapons is [...] evident in the vigorous advocacy to be heard in some quarters for the arming of counterterrorist forces with more advanced types of 'non-lethal' toxic weapons."⁴⁰ Both the US and Russian authorities have demonstrated that they are prepared to develop and use these toxin weapons. The potential value and practical use of these "non-lethal" CW by military and police forces is obviously a matter of concern, also for the OPCW.

The OPCW's robust undertaking in Syria has certainly reinforced the global CW non-proliferation norm, and strengthened the ongoing process toward the CWC's universalization. It has also rekindled interest in the idea to move forward to creating a WMD-free zone (WMDFFZ) in the Middle East. Today, the CWC only has two holdout states in the Middle East: Egypt and Israel. As indicated earlier, Israel signed the CWC in 1993, but is still to ratify it; Egypt is not a State Party. Israel's policy was reiterated by Foreign Ministry spokesman Yigal Palmor in October 2013: "Israel would not ratify the weapons convention as long as states in the region that process chemical weapons refuse to recognize Israel and call for its destruction (...) The threat of using chemical weapons against the civilian Israeli population is not theoretical or distant."⁴¹ Egypt, in turn, claims that it cannot join the CWC until Israel joins the NPT. It goes without saying that it is not up to the OPCW to solve the Middle East's intricate and long-standing political problems and animosities. Still, it is within the OPCW's remit to encourage all states to join the CWC, if only because universality would further complicate non-state actors (and terrorist organizations in particular) obtaining CW. Here the economic argument may galvanize political difficulties, since remaining outside the CWC prohibits any transfer of Schedule 1 or 2 chemicals to either Egypt or Israel. Although a fully-fledged WMDFFZ in the Middle East may well remain elusive, it would not only offer current outliers (i.e. Egypt and Israel) political and reputational benefits, but would be equally valuable for the OPCW. Full universality would boost the CW non-proliferation norm, and give the much-needed extra confidence and public support to proceed with the OPCW's future work.

The OPCW's future will be examined in detail in Chapter 3 of this Report. Ever since the third of the CWC's quinquennial Review Conferences (RC-3), which took place in April 2013, the OPCW's transition to a new post-CW destruction era has been at the centre of the debate. The CWC/OPCW's future requires changes in the prioritization of its wide-ranging regime goals. Clearly, the goal of the full destruction of CW still needs to be accomplished. Still, priorities may shift in the direction of international cooperation, assistance and protection. Most likely, the CWC/OPCW will change in an incremental

40 J.P. Perry Robinson, "Difficulties Facing the Chemical Weapons Convention", *International Affairs*, vol. 84, no. 2 (March 2008), p. 228.

41 Barak Ravid, "Israel Opts to Stay Vague on Chemical Arms in Wake of Syria Disarmament", *Haaretz* (31 October 2013).

way, finding compromises between competing policy priorities. Minor adjustments have already been made after RC-3, reflecting the OPCW's consensus-based institutional culture. It is clear that traditional political divisions (e.g. between the Western European and Others Group, WEOG, and the Non-Aligned Movement, NAM) are gradually fading. Today, only Cuba and Iran speak up for the NAM, whereas emerging economies like India and Brazil (traditionally part of the NAM) boast some of the world's largest chemical industries. This has shifted the traditional boundaries between "developed" and "developing" countries, allowing practical compromises to trump political antagonism.

The upcoming Fourth Review Conference (RC-4, scheduled to take place in 2018) will have a formidable challenge on its hands. Old and new problems and questions still need resolving, and priorities need to be reset, or at least require recalibration in the light of the swift and dramatic changes in the S&T and geopolitical landscapes. There are good reasons to assume that the OPCW will maintain its relevance, but, like the Red Queen in *Through the Looking-Glass*, the OPCW must constantly adapt and evolve. As the Red Queen said: "It takes all the running you can do, to keep in the same place. If you want to get somewhere else, you must run at least twice as fast as that!" Until now, the OPCW has stuck to this motto, and should continue doing so even if its future remains open.

2 Case Study: The OPCW in Syria

Key Findings:

- While the OPCW had always worked quietly as a technical agency, in Syria it was called upon to engage in a highly political environment, putting its reputation and consensus-based working methods at stake.
- Although there are still questions as to whether complete disarmament took place, and the continuing use of CW could not be prevented, the OPCW achieved a great deal under difficult circumstances.
- Key to success were side-stepping and overcoming institutional differences, particularly between the OPCW and the UN, and *ad hoc* arrangements.
- *Ad hoc* created bodies like the FFM, DAT and JIM show the importance of flexibility and creativity in such difficult circumstances.

Introduction

Arguably, the OPCW's mission in Syria will shape the organization's future, for better or for worse, depending on whether the crisis will galvanize or intensify political differences among the OPCW's States Parties. On the surface, the OPCW's key challenges – how to remain relevant in the decades ahead, and what lessons can be drawn from Syria? – are unconnected. However, in reality, these debates have become intertwined, making it absolutely crucial for the OPCW to offer clear and convincing answers on both accounts.

Although the OPCW has been actively engaged in Syria since 2013, a watershed may have been reached during the night of 6 April 2017, when the United States launched cruise missiles hitting a Syrian air base in response to a suspected CW attack that had reportedly killed more than 70 civilians two days earlier in the northern Syrian town Khan Sheikhoun. At 4.40 a.m. (Syrian time), 59 *Tomahawk* land-attack missiles were fired from two US navy ships in the Mediterranean, which was the first direct US military action against the Syrian government of Bashar al-Assad.⁴² President Trump argued that he had acted in the “vital national security interest” to prevent the use of chemical weapons, whereas Dmitry Peskov, spokesperson for Russian President Putin, called the US strike “an act of aggression against a sovereign nation.”⁴³ Consequently, Russia

42 “TLAMs in Syria”, *IJSS Strategic Comments*, Vol. 23, No. 10 (April 2017).

43 “Syria War: US Launches Missile Strikes in Response to Chemical ‘Attack’”, *BBC News* (7 April 2017).

duly vetoed a US-backed UNSC resolution condemning the Khan Sheikhoun incident as a “chemical attack”.⁴⁴

This dramatic escalation in the conflict in Syria followed several years of intensive “chemical diplomacy” and disarmament efforts led by the OPCW. To some, the US use of military force in Syria only bolsters the existing chemical non-proliferation norm. As President Trump argued after the missile strike: “There can be no dispute that Syria used banned chemical weapons, violated its obligations under the Chemical Weapons Convention and ignored the urging of the U.N. Security Council (...) Tonight I call on all civilized nations to join us in seeking to end the slaughter and bloodshed in Syria and also to end terrorism of all kinds and all types.”⁴⁵ This may seem to echo the words of his predecessor, President Obama, who argued on 31 August 2013 that doing nothing when faced with a chemical attack “risks making a mockery of the global prohibition on the use of chemical weapons.”⁴⁶

Using force rather than diplomatic carrots and sticks comes with its own risks, particularly since some states are inclined to reject all unilateral action and hide behind the fig leaf of “neutrality”. Although it may be too early to tell whether the US military strike strengthens or weakens the CWC, it is important to offer an analytical overview of how the current crisis over Syria’s CW has emerged and developed. In order to facilitate and visualize this evaluation, this Chapter includes a chronology (or time path), indicating the key milestones and events.

This concise case study of Syria’s CW saga centres on the following three questions. First, how has the OPCW fared in responding to an unprecedented chemical demilitarization mission in the midst of an armed conflict and with further challenging tasks such as the Fact Finding Mission and the assessment of Syria’s declaration of its chemical weapons programme under the work of the Declarations Assessment Team (DAT)? Second, how has the OPCW managed the fall-out from its work of investigating CW use in Syria and the consequent “politicisation” of its work? And third, what lessons can (and arguably should) the OPCW draw from the Syria case? As Cindy Vestergaard has argued, the OPCW’s Syria mission has been a test case for the CWC’s provisions, “setting a precedent for how the UNSC responds to confirmed violations of the treaty”. But learning lessons may also involve an OPCW role in determining *who* is culpable for the many CW attacks, which affects the credibility of the overall chemical non-proliferation norm. As Vestergaard suggests: “[i]f judgement on those responsible for breaking the longest ‘chemical peace’ is left to individual capitals, the objective of

44 “Russia Vetoes West’s ‘Misconceived’ Syria Resolution at UN Security Council”, *Reuters* (13 April 2017).

45 “Full Text of President Trump’s Statement After Syria Missile Strikes”, *New York Daily News* (6 April 2017).

46 “Statement by the President on Syria”, The White House, Washington DC (31 August 2013).

a world free of chemical weapons may never be achieved since cases like Syria will occur.”⁴⁷

From Use to Disarmament

On 23 July 2012, the Syrian government publicly acknowledged that it possessed CW. Reports about a Syrian CW programme (which allegedly included mustard gas, blister agents and nerve agents) had already circulated for several years, mainly based on US intelligence. In August 2012, US President Barack Obama made it clear that his government would monitor Syria’s CW activities “very closely”, insinuating a possible military response if CW would actually be utilized. On 23 December, the first reports (and credible allegations) of CW use emerged: seven people were allegedly killed in Homs by “poisonous gas”, followed by further reports (on 19 March 2013) of CW attacks in two suburbs around Aleppo and Damascus where about 25 people were reportedly killed and dozens more injured. All these incidents took place in the context of a massive and extremely violent civil war ravaging Syria since 2011, resulting in several hundred thousand casualties and many more wounded and displaced.⁴⁸

Although it is clear that far more people were killed by conventional warfare, as well as disease and starvation, reports about the use of CW against civilians were (in President Obama’s words) “a game changer.”⁴⁹ Under strong pressure from the US, France and the United Kingdom, and after several (at that time still unconfirmed) reports of the Syrian army dropping gas bombs on rebel-controlled areas, the government of President Assad agreed (on 14 August 2013) to allow UN inspectors into Syria with a mandate to investigate three possible CW uses. The UN investigation, in which it was being assisted by the OPCW and the World Health Organization (WHO), was only allowed to establish *whether* CW were used, but not to determine *who* actually used them. As UN Secretary-General Ban-Ki-moon argued in a press conference, the UN team had been tasked “to determine whether and to what extent chemical weapons were used, not who used them (...) It is for others to decide whether to pursue this mandate further to determine responsibility.”⁵⁰

47 Cindy Vestergaard, “Investigating the Use of Chemical Weapons in Syria”, *Stimson Center Issue Brief* (28 June 2016).

48 Adam Taylor, “The Syrian War’s Death Toll is Absolutely Staggering. But No One can Agree on the Number”, *The Washington Post* (15 March 2016).

49 “Obama: Use of Chemical Weapons in Syria Would Be a ‘Game-Changer’”, *Foxnews.org* (20 March 2013).

50 Quoted in David Cliff, “After Ghouta: Verifying Chemical Disarmament in Syria”, *VERTIC Trust & Verify*, No. 142 (July/September 2013), p. 2.

Between late August and early September 2013, the UK, US, France and Russia (all permanent members of the UNSC) released several reports and assessments of numerous CW incidents in Syria. These reports stated that it was “highly likely” (UK) that CW were used in the 21 August 2013 (Ghouta) attack. The widely reported and large-scale CW attacks on the Damascus suburb of Ghouta, killing several hundred civilians by sarin gas (see Chapter 1), indeed proved to be a political game changer. The UN Security Council held an emergency meeting, resulting in a statement demanding further clarification of the incident. Under mounting international pressure and the spectre of military action, the Syrian government allowed a UN inspection team to investigate the Ghouta incident.

On 14 September 2013, a joint US-Russian “framework document” was released, offering the key terms of Syria’s chemical disarmament. Syria was required to place all its CW under international control, and to submit a comprehensive declaration concerning its CW stockpiles (within one week). The framework document also required Syria to allow the OPCW and UN (and any supporting personnel) to have “immediate and unfettered access to inspect any and all sites in Syria.” The framework agreement supported Article VIII of the CWC, which provided for the referral of any cases of non-compliance to the UN General Assembly and the UNSC. In return for Syrian compliance, US President Obama announced that he would postpone asking for congressional authorization for a military attack, and was prepared to give time for the diplomatic initiative to play out.

Although the threat of a US military response remained on the table (albeit further removed than before), the Syrian government officially declared (on 12 September 2013) its willingness to join the CWC, which happened two days later. On 19 September, Syria submitted its initial declaration, which, according to the OPCW, was “better than expected”.⁵¹ On 27 September, the OPCW Executive Council adopted a decision calling upon Syria to submit further information within seven days; within 30 days Syria was to submit its full and detailed declaration (as required by Article III of the CWC). Although fully understandable for political reasons (“striking the iron when it’s hot”), Syria’s CW declaration to the OPCW was, to all intents and purposes, a “rush job”, which, at least to some extent, explains the many discrepancies and inaccuracies that were unearthed later on. Still, as Sigrid Kaag, a Dutch diplomat leading the OPCW’s Syria mission argued, the cooperation of the Syrian government was “all that could have been hoped for.”⁵² On 16 September 2013, the results of the first UN report on the “UN Mission to Investigate Allegations of the Use of Chemical Weapons in the Syrian Arab Republic” came in, officially confirming that nerve agents (sarin) had indeed been used in Syria.

51 *Ibid.*, p. 3.

52 “Syria’s Civil War: An Inconvenient Truth”, *The Economics* (14 December 2013).

This episode constitutes a rare diplomatic success which the international community has achieved in the long and tragic Syria saga. The deal with Syria was mainly brokered by Russia, but arguably with a realistic threat of massive US military force in the background. At the same time, it was the result of a rare congruence of political goals between Russia (and the Syrian government) on the one hand, and the US and its allies on the other. Both Russia and the US could realistically sell the deal as a success: Moscow succeeded in removing pressure from the Syrian government, whereas the US (and like-minded states) could oversee the full chemical disarmament of Syria. For the latter it was also important that Syria would commit itself to providing a full declaration of its CW stockpiles “within a week”, and would allow the OPCW and UN full access to all CW sites in the country.⁵³ The agreement further stated that “in the event of non-compliance, including unauthorized transfer, or any use of chemical weapons by anyone in Syria, the UN Security Council should impose measures under Chapter VII of the UN Charter.” This last reference obviously implied that the use of military force in case of further CW use in Syria would remain unmistakably on the table albeit through UN-endorsed action.

The foundations for the elimination of the Syrian chemical weapons programme were established in a decision adopted by the OPCW Executive Council on 27 September 2013 that also provided the most ambitious of expedited timelines and special procedures for effecting chemical disarmament in Syria. This was immediately followed by a UN Security Council resolution endorsing the Executive Council decision. This UNSC Resolution (2118) identified “the proliferation of chemical weapons” as a “threat to international peace and stability”, further declaring that Syria shall “not use, develop, produce, otherwise acquire, stockpile or retain chemical weapons, or transfer, directly or indirectly, chemical weapons to States or non-State actors.” The resolution requested the “Secretary-General, in consultation with the Director-General of the OPCW and, where appropriate, the Director-General of the World Health Organization, to submit to the Council within 10 days of the adoption of this resolution recommendations regarding the role of the United Nations in eliminating the Syrian Arab Republic’s chemical weapons programme”. This became the basis for the subsequent establishment of the OPCW-UN Joint Mission on the elimination of Syrian chemical weapons.⁵⁴

There are two significant aspects of this resolution that continue to impact the ongoing controversies, especially relating to the continued use of chemical weapons in Syria as well as the question of Syria’s declaration of its chemical weapons programme which is being scrutinised by an OPCW Declarations Assessment Team (DAT). The first is the

53 Jean Pascal Zanders, “Disarming Syria”, *EU ISS Issue Brief*, No. 33 (September 2013).

54 Yasemin Balci, “After Ghouta: Verifying Chemical Disarmament in Syria”, *VERTIC Trust & Verify*, No. 142 (July/September 2013), p. 5. See also “The Secretary-General’s Mechanism For Investigation of Alleged Use of Chemical, Bacteriological (Biological) or Toxin Weapons”, *UNODA Report* (May 2015).

Council's determination to ensure that the inspectors had "unfettered access to and the right to inspect, in discharging their functions, any and all sites, and (by allowing) immediate and unfettered access to individuals that the OPCW has grounds to believe to be of importance for the purpose of its mandate". The second aspect concerns the alteration that was effectively brought about in the manner in which non-compliance is handled under the CWC. By providing for a new mechanism the clarity of the CWC in handling cases of non-compliance was replaced by an amorphous mechanism of divided authority between the OPCW and the UN. The effect recently seems to be to cast an eye towards the Security Council rather than reliance on a treaty-based mechanism concerning compliance and non-compliance.

On 11 October 2013, the Norwegian Nobel Committee announced its decision to award the Nobel Peace Prize to the OPCW for its active involvement and commitment in Syria's chemical disarmament, clearly rewarding the organization for its successful attempt to bring Syria, and the region and the world at large, back from the abyss of normalizing (and perhaps even legitimizing) chemical warfare. On 14 October 2013, Syria became an official state party to the CWC. To some, the events running up to the OPCW's Nobel Peace Prize were the pinnacle of the organization's standing, proving that determined multilateral diplomacy (even when backed up with the threat of military force) could work, even in the coming era of geopolitics and *Realpolitik*. Unfortunately the period of jubilation proved to be short-lived since it did not take long for the OPCW to discover that the Syrian official declarations were incomplete and far from accurate. Moreover, the practical process of Syria's chemical disarmament would prove to be uncharted territory for the OPCW, and much more difficult than expected.

If the Syria mission can be viewed in three phases, this period marked the end of the first phase ending the simmering tensions and bringing a sigh of relief all over the world by removing the prospect of another armed confrontation in the Middle East. What it did was also to give the OPCW, for the first time in its history, a central role in resolving a major and high-stakes international issue relating to peace and security. Given the relief and the opportunity to resolve matters through reliance on recognised and legal structures that exist for the governance of peace and security, the international community was keen to chip in and be seen as fully supportive of the disarmament mission. This ensured a steady and sufficient availability of resources, both financial and in kind. The real challenge was coordination, effective leadership and management.

Institutional Innovation: an OPCW-UN Joint Mission

On 24 October 2013, the Syrian authorities officially declared that the country possessed no less than 1,300 tons of chemical agents and precursors. According to the CWC's rules, this would have been Syria's own responsibility (akin to the obligations of the US and Russia and other possessor states to destroy their CW). Given the unique Syrian

circumstances, it fell upon the OPCW to supervise the destruction of Syria's declared CW programme including production facilities. As Ralf Trapp has argued (in December 2015), "never before had the OPCW faced an undertaking that was so politically charged, ambitious, and complex. The uncertainties that the [OPCW] Secretariat had to manage (and that are still being faced today) were plenty, and the safety and security as well as political, legal, reputational, and administrative risks were high."⁵⁵ The OPCW's Syria mission required institutional flexibility and technical innovation (including out-of-country destruction; see below), all taking place in a highly coordinated international effort, combined with public-private partnerships, and under serious time pressure and international media scrutiny.⁵⁶

In accordance with paragraph 8 of UNSCR 2118 (2013), the UN Secretary-General (in a letter to the President of the Security Council) submitted his recommendations "regarding the role of the United Nations in eliminating the chemical weapons programme of the Syrian Arab Republic." Drafted in consultation with the Director-General of the OPCW, the letter became the basis for the establishment of the OPCW-UN Joint Mission for the elimination of Syria's chemical weapons programme setting out the respective areas of responsibilities for the two Organisations.⁵⁷ At the same time, intensive consultations were underway at the OPCW for a plan that would ensure the destruction of Syria's capacity to produce chemical weapons as well as to remove its chemical weapons for destruction outside its territory. While the critical task of the functional destruction of the Syrian chemical weapons production capability had already been completed as announced by the OPCW on 31 October 2013, the Director-General submitted a plan for the destruction of chemical weapons outside the territory of Syria.⁵⁸ The Council adopted a decision (on 15 November) endorsing the removal of chemical weapons from Syria for the purpose of destruction outside its territory. Clearly, this was a major innovation in the application of the CWC since responsibility for destruction is normally placed on the State Party that declares CW possession and these CW are therefore also to be destroyed within its own territory. This explains why the Director-General qualified this as an "approval of an extraordinary measure necessitated by extraordinary circumstances."⁵⁹

The plan and its subsequent execution signified the active and practical engagement of the broader international community. Practical assistance was offered by numerous OPCW States Parties to remove, transport and destroy Syria's CW. For example,

55 Ralf Trapp, "Lessons Learned From the OPCW Mission in Syria", Submitted to the Director-General of the Technical Secretariat of the OPCW, The Hague (16 December 2015).

56 Annabel Corser, "Eliminating Chemical Weapons", *ISS* (27 January 2015).

57 Letter from the Secretary-General addressed to the President of the Security Council, 7 October 2013.

58 EC-M-36/DG.3, Statement by the Director-General to the Executive Council, OPCW, 15 December 2013.

59 Director-General's statement before the Executive Council on 17 December 2013.

Denmark and Norway made two transport cargo vessels available, and an Italian port facility (of Gioia Tauro) was used for transloading Syrian CW to the US MV *Cape Ray* which was specifically fitted with two so-called “Field Deployable Hydrolysis Systems” capable of destroying CW at sea. Other countries (like Germany and the UK) also provided in-kind contributions, for example by making their facilities available for the destruction of some chemicals declared by Syria.⁶⁰ Other countries (including Russia and China) offered support to the OPCW maritime operation (e.g. by escorting the *Cape Ray* through the Mediterranean). Clearly, the OPCW Syria mission offered opportunities for the international community to confirm its commitment to upholding and strengthening the CWC’s norms, and to overcome at least some of the political controversy that was building up prior to October 2013. In the summer of 2014, the OPCW confirmed that Syria’s declared CW stockpile had been removed from the country. The destruction of Syria’s 13 mobile and stationary CW production, mixing, and filling facilities, as well as the destruction of 1,308 declared metric tons of CW substances, was completed in January 2016.⁶¹

Behind these facts lies an extraordinary story of careful and incessant coordination and the utilization of new informal mechanisms to accomplish the targets. Within the OPCW Secretariat, for example, a special Core Group was set up to plan and coordinate all activities related to the Syria mission at OPCW Headquarters, providing strategic direction as well as technical guidance. A special Destruction Planning Group was set up as well, incorporating technical expertise from States Parties, as well as an Operations and Planning Group, and a special Maritime Task Force. Two Trust Funds were established to manage the financial contributions of States Parties (the OPCW Trust Fund for Verification in Syria, and the Syria Trust Fund For the Destruction of Chemical Weapons).

As an organisation which is known, perhaps erroneously, as a technical agency, the OPCW had to tread carefully through a politically sensitive environment and conduct a strategic mission with extensive international media coverage. Moreover, it had to conduct (and coordinate) these activities under enormous time pressure and the scrutiny of many political stakeholders (including key players like the US and Russia).

What made matters politically sensitive was the fact that despite the opposing views of the main protagonists regarding the conflict in Syria, the demilitarisation mission itself was not pursued as a coercive disarmament effort. All parties involved were committed to its success and understood that it needed to proceed in an overall

60 “The OPCW Answers (Or Not) Questions About the Destruction of Syrian Chemicals in the Med”, *The Press Project* (10 July 2014).

61 Dominique Anelli and Mehran Rouzbahani, “Chemical Demilitarisation in Syria: An Overview”, in VERTIC, *Verification and Implementation*, London (2015).

constructive climate in which Syria should be kept on board on the various elements of the programme. And this largely characterised the nature of the working relationships that had been established with considerable care and effort creating, in the process, a degree of mutual confidence on all sides that was critical for progress.

The entire OPCW-UN Joint Mission became suffused with this spirit setting it apart from the previous UN experience of disarmament in Iraq under the Saddam Hussein regime. The Syrian government made it known through various statements that it had taken a strategic decision to abandon its CW programme. The atmosphere is captured in a statement by the Special Coordinator of the Joint Mission made earlier on: “to date, the Government of Syria has fully cooperated in supporting the work of the advance team and the OPCW-UN Joint Mission. Allow me to thank the Government of Syria for its cooperation and to express my gratitude to the Syrian people for their warm welcome”⁶². The OPCW continued to report in its monthly reports that the Syrian authorities were continuing to extend the necessary cooperation.

Re-emergence of Chemical Weapons: FFM & DAT

This second phase in OPCW’s work in Syria began to fade by April 2013 with the surfacing of credible allegations that chlorine was being used as a weapon in the conflict. At the same time, Syria’s declaration of its chemical weapons programme was being subjected to close scrutiny and questions began to be raised.

In combination with the reports of alleged CW use in Syria, the Director-General of the OPCW created (in April 2014) two new mechanisms: the Fact-Finding Mission (FFM) and the Declaration Assessment Team (DAT). The FFM aims to verify the allegations of CW incidents in Syria (reported after 21 August 2013), whereas the DAT aims to clarify anomalies and discrepancies in Syria’s official CW declarations to the OPCW. By setting up these two missions, Syria was placed under a special verification regime as anticipated by the relevant decisions of the Executive Council and the Security Council.⁶³ Over time, both missions attracted controversy.

In the context of the Fact-Finding Missions certain key elements need to be borne in mind. When it became evident that it was not going to be possible to ignore numerous allegations of the use of chlorine the choice before the States Parties was to call for an investigation of the alleged use of chemical weapons. At a time when the removal of Syrian chemical weapons was in full swing, this would not have gone down well with

62 Statement by Sigrid Kaag, Special Coordinator of the Joint OPCW-UN Mission, 22 October 2013.

63 Céline Barmet and Oliver Thränert, “Syria and the Chemical Weapons Ban”, *ETH Zürich CSS Policy Perspectives*, vol. 4/8 (November 2016), p. 2.

Syria and would have injected an element of hostility in the whole operation, possibly jeopardising it. There was also perhaps an element of doubt that could not be ignored. A low-key mechanism seemed to be the answer, one that would not rock the boat but hopefully also serve as a deterrent. While the Fact-Finding Mission was the decision of the Director-General, the sensitivity of the Syrian mission was such that it could not have succeeded without the prior consent of all the main protagonists. Even so, the United Nations, in order to insulate any possible fall-out from the FFM on the operation of the OPCW-UN Joint Mission, created a firewall so that the FFM became a purely OPCW operation, while drawing on logistical and security support from the UN.

The OPCW Laboratory in Rijswijk, the Netherlands



Photo by OPCW

The FFM was an innovation – one suited to the conditions and dynamics of Syria and widely seen as a constructive step necessitated by the particular circumstances but one that needed the Organisation to once again improvise and adapt. At the same time, it was obvious that the methods and procedures of the FFM would also not follow the heavily forensic reliant procedures foreseen for investigations of alleged use. For one thing, chlorine is a widely available and used chemical that is non-persistent. And secondly, because of the ongoing conflict, it was always going to be difficult to access sites where these incidents had occurred or were occurring. The FFM's

investigative work therefore relied on conducting interviews with carefully selected witnesses and the cross-checking of information that was available from all sources. Where relevant, it also secured environmental and biomedical samples which were then analysed by the OPCW Laboratory and OPCW-designated laboratories in different States Parties.

During its first visit to Syria, the FFM attempted, on 27 May 2014, to conduct a field investigation at the village of Kafr Zita in the Hama Governorate. Reports had suggested that this opposition-held location had been attacked with chlorine on 19 May. The visit had to be aborted when the team came under armed attack in its final approach to the village and while crossing a buffer zone. Clearly, the choice at this stage was either to abandon the enquiry or to resort to the more traditional ways of moving the investigations forward by gaining access to those who had suffered from the attacks and those who had been involved in responding and the treatment of casualties. The terms of reference agreed with the Syrian government included explicit provisions for conducting interviews and the examination of persons affected as well as eyewitnesses and medical professionals who had treated victims. Given the nature of the conflict, access to such individuals could only come through liaison with opposition groups – a fact that was never disputed until much later.

On 16 June 2014 the mission published its first summary report (S/1191/2014), covering the period from 3–31 May 2014. The report describes the legal foundation for the creation of the FFM as being based on the general authority of the Director-General as well as the consensus supporting the FFM. The FFM continued its enquiry by bringing carefully selected witnesses from three locations, which were reportedly the scenes of attacks with toxic chemicals, to a safe location outside of Syria. In its second report issued in September 2014, the FFM concluded with ‘a high degree of confidence, that chlorine, either pure or in mixture’ had been used as a weapon ‘systematically and repeatedly, in the villages of Talmanes, Al Tamanah, and Kafr Zeta in northern Syria.’

To put the current controversy about the reports of the FFM and the OPCW-UN Joint Investigative Mechanism (JIM) into perspective, the Executive Council of the OPCW adopted a decision on 4 February 2015 in which it expressed “serious concern regarding the findings of the Fact-Finding Mission, made with a high degree of confidence, that chlorine had been used as a weapon in Syria.”⁶⁴ Except for Iran, all Members of the Executive Council voted in favour of this decision. This was followed up by the UN Security Council which in early March adopted resolution 2209 (2015) noting “that this is the first ever documented instance of the use of toxic chemicals as weapons within the territory of a State Party to the CWC”. The resolution which was supported by all the Members of the Council except for Venezuela expressed “deep concern that toxic

64 Reports of the OPCW Fact-Finding Mission in Syria, EC-M-48/DEC.1, 4 February 2015.

chemicals have been used as a weapon in the Syrian Arab Republic as concluded with a high degree of confidence by the OPCW Fact-Finding Mission and notes that such use of toxic chemicals as a weapon would constitute a violation of resolution 2118 and of the CWC”.

Assigning Blame: The JIM

The FFM has continued to investigate further instances of the alleged use of toxic chemicals as weapons and the use of chemical weapons. According to Director-General Üzümcü, since late 2016 alone, there have been 45 reports of the use of toxic weapons.⁶⁵ Since the FFM was established in April 2014, ‘nineteen separate missions have been deployed to look into various incidents that were reported to involve the use of toxic chemicals as weapons.’⁶⁶ Clearly with this high number of reports and with several confirmations provided by the FFM, there exists a need to go one step further in order to identify who is engaged in such wanton disregard of the norms of the CWC. This function is supposed to be fulfilled by the OPCW-UN Joint Investigative Mechanism or the JIM that was established by the UN Security Council through its Resolution 2235 of 7 August 2015 based upon the reports of the FFM from 2014.

During the debate in the UNSC, the US argued that it was important to assign blame for the CW atrocities that had clearly occurred. China underlined that during the OPCW’s investigations, the sovereignty and territorial integrity of Syria should be respected.⁶⁷ Syria claimed that its armed forces had never used CW, instead blaming a wide range of terrorist groups (from the Islamic State to Al Nusra and Al-Qaida). Syria further stressed that the JIM should remain neutral and transparent. Syria also argued that in the past, previous missions had relied on false witness statements that had been influenced by political forces from outside Syria.

Eventually, the UNSC introduced the JIM as a “non-judicial investigative mechanism”, comprising an independent three-member Leadership Panel supported by a political office (in New York), and an investigative office (in The Hague); a small liaison office was to be based in Damascus. The UNSC stipulated that Syria (and all parties in the country) should cooperate fully with the OPCW and the UN, allowing the JIM to have full access to all locations, individuals and materials in Syria that it deemed relevant and when it determined that “reasonable grounds” existed for access to be justified,

65 ‘Chemical weapons allegedly used 45 times in Syria: OPCW chief’, *Arab News*, 29 April 2017.

66 Keynote Speech by Director-General Ahmet Üzümcü, 20th International Chemical Weapons Demilitarisation Conference, London, United Kingdom, 25 May 2017.

67 Oliver Meier, “The Danger of Chemical Weapons in Syria: Unfinished Disarmament and International Control Efforts”, *SWP Comments*, No. 23 (April 2016), p. 3.

including areas within Syrian territory but outside the Government's control. It called on all Member States to provide relevant information to the Mechanism and the OPCW FFM.

The JIM was introduced as a joint UN-OPCW instrument aiming 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.”⁶⁸ In short, the JIM's main task was to assign blame for the CW in Syria, and to assure that justice could (in due course) be done for Syria's serial CW offenders.⁶⁹ From the outset, it was debated whether the JIM report would be able secure the necessary evidence that could form the basis for a prosecution, possibly by the International Criminal Court (see below). The UNSC also reaffirmed that it would impose measures under Chapter VII of the UN Charter in response to violations of UNCR Resolution 2118 (2013), which determined that the use of CW anywhere constituted a threat to international peace and security. The JIM would start its work in November 2015, investigating the seven cases of alleged CW use that had occurred between April 2014 and August 2015.

What is striking is the fact that through these decisions, both the OPCW Executive Council as well as the UN Security Council continued to show unity including that of the two co-sponsors of the entire Syria demilitarization mission, namely the United States and Russia. It is also important to appreciate that the JIM was established in a period of remarkable US-Russian cooperation in the WMD non-proliferation field that had already resulted in the so-called Joint Comprehensive Plan of Action (or the “Iran Nuclear Deal”) announced on 14 July 2015.

The Road to Escalation

The JIM took up its work in November 2015. A Voluntary Trust Fund mechanism was established as early as September 2015 to cover material and technical needs. In 2016, 12 countries had contributed to the Trust Fund (the EU contributed Euro 4.6 million to the FFM and the JIM), allowing both mechanisms to be fully staffed and equipped. During the reporting period, the JIM reviewed all FFM information, information received from States Parties, NGOs, individual groups, as well as open sources. Satellite imagery was used during the SGM investigation of the alleged use of sarin in the Ghouta area (August 2013), as well in subsequent investigative missions in Syria. The JIM had a

68 UN Security Council Resolution 2235 (7 August 2015).

69 Amy E. Smithson, “Chemical Weapons in Syria: Will There be Justice for a Serial Offender?”, *Bulletin of the Atomic Scientists* (29 September 2016).

carefully phrased and limited mandate, with clear time frames. Since it was expected to report to a very politically charged UNSC, its credibility and evidence base had to meet high standards.

On 24 August 2016, the third (75-page) JIM report was released followed by its fourth report in September. According to the findings of these reports, the Syrian Arab Armed Forces had been involved in the use of toxic chemicals as weapons in three cases in Syria: Talmenes, on 21 April 2014; Qmenas and Sarmin, on 16 March 2015, and that the so-called “Islamic State of Iraq and the Levant” (ISIL, or IS) had been involved in the use of sulphur mustard in Marea, on 21 August 2015. In the other six cases investigated by the JIM, the panel was unable to draw conclusions.

This very first instance of an international mechanism that had the endorsement of the UN Security Council (based upon the work of the OPCW’s FFM) provoked immediate and opposing reactions. Following the JIM’s third report, the Russian Ambassador to the UK, Alexander Yakovenko, argued that the JIM was not only seriously flawed, but also compromised by politicization.⁷⁰ Yakovenko argued that “some of [the JIM’s] information was misleading, and sources of information were second or third hand.” He also claimed that the “accusation against Damascus is mostly based on the testimonies of the ‘witnesses’ handpicked by opposition NGOs”. The Russian Ambassador repeated the well-known claim that it was terrorist organizations that repeatedly used CW in Syria, and that the West’s unwillingness to acknowledge this had resulted in “time lost in pointless political rhetoric [which] affected the work of both the OPCW and the JIM, and made it much harder for them to execute their respective mandates.” Russia’s attempts to discredit the JIM (and, by implication, the OPCW itself) was repeated in February 2017, when Mikhail Uliyanov, head of the Department for Non-Proliferation and Arms Control of the Russian MFA, claimed that the JIM reports were examples of “low-quality work”, mainly because the interviewed witnesses of CW incidents were (allegedly) “people who have been brought by hand [sic] by various non-governmental organizations opposed to Damascus. The reliability of such accounts, of course, raises serious doubts.”⁷¹

On the other hand, on 11 November 2016, the OPCW adopted (by majority vote) a decision expressing “grave concern with the findings of the third and fourth reports of the OPCW-United Nations Joint Investigative Mechanism that the Syrian Arab Armed Forces had been involved in the use of toxic chemicals as weapons” and “expresses grave concern about and condemns in the strongest possible terms the use of chemical

70 Alexander Yakovenko, “Russian Position on OPCW-UN JIM Report on Syria”, *RT.com* (5 October 2016).

71 “OPCW’s Chemical Weapons Probes in Syria, Iraq Inefficient: Russian FM”, *Tasnim News*, Tehran (8 February 2017).

weapons in the Syrian Arab Republic as reported by the OPCW-United Nations Joint Investigative Mechanism.”⁷²

Political Polarization

Following the reports of the JIM and the decision adopted by the Executive Council, the gradual emergence of divergences over the question of the use of chemical weapons in Syria turned into near complete polarization. Complicating matters further is the parallel process of seeking to determine whether or not the declaration submitted by Syria regarding its chemical weapons programme is complete and accurate. In the face of questions raised at the OPCW concerning the accuracy of Syria’s declaration about its chemical weapons programme, in 2014 the OPCW Director-General established a team of experts to engage the relevant Syrian authorities to resolve the identified gaps and inconsistencies in the Syrian declaration. The team known as the Declaration Assessment Team (DAT) has undertaken many visits to Syria. These are again not inspections under the CWC but simply represent yet another adaptation seeking to resolve issues through a process of engagement. Naturally, the DAT has held scores of meetings with the Syrian authorities, visited former chemical weapons sites, and has taken samples. It submits reports to the OPCW Executive Council which are confidential. However, from information that has been made public thus far, the Director-General has informed the Executive Council “that the Technical Secretariat was not able to resolve all identified gaps, inconsistencies and discrepancies in Syria’s declaration and therefore could not fully verify that Syria had submitted a declaration that could be considered accurate and complete in accordance with the Chemical Weapons Convention and Executive Council decision.” The Director-General submitted his report after high-level consultations with the Syrian Arab Republic.⁷³

While the unclassified report issued by the OPCW states that “the Secretariat considers that many of the explanations provided by the Syrian Arab Republic are not scientifically or technically plausible, and that the presence of several undeclared chemical warfare agents is still to be clarified”⁷⁴, media reports claiming access to the confidential report

72 “OPCW Executive Council Adopts Decision Regarding the OPCW-United Nations Joint Investigative Mechanism Reports About Chemical Weapons Use in the Syrian Arab Republic”, OPCW, The Hague (11 November 2016).

73 “OPCW Media Brief: Reported Use of Chemical Weapons, Southern Idlib, Syria, 4 April 2017”, OPCW, 7 April 2017.

74 EC-82/DG.18, 6 July 2016.

suggest “discoveries of precursors for chemical warfare agents like soman and VX at several undeclared facilities.”⁷⁵

Inconsistencies in the declaration were also found with regard to other chemical agents including sarin, ricin, mustard gas and VX. The public report also points to a possible role in the chemical weapons programme by the Scientific Studies and Research Centre (SSRC). Reportedly, the confidential part of the document states that the majority of the 122 samples taken at “multiple locations” in Syria “indicate potentially undeclared chemical weapons-related activities.”⁷⁶

An obvious implication stemming from the work of DAT is the question whether Syria has abided by its CWC commitments to destroy all of its CW stockpiles. During this protracted process of “chemical diplomacy” (within the UN and OPCW, as well as in other settings), the key question has been whether the US (and its European allies) was prepared to escalate the imminent conflict with the Syrian government, knowing that this would most likely deepen disagreement with Russia (as well as China and Iran). For example, vocal criticism was aired by the UK Ambassador, Sir Geoffrey Adams, who argued (in October 2015) that “[f]rom all the available evidence, from more than 200 alleged incidents of chemical weapons use in Syria over the past three years, it is impossible not to conclude that the Syrian authorities are responsible for the overwhelming majority of chemical weapons attacks in the Syria conflict. The international community must continue to be strong in its resolve to bring the perpetrators to justice.”⁷⁷ One year later, Ambassador Adams reiterated that “[b]oth Syria’s use of chemical weapons and its failure to provide a full account of its chemical weapons programme amount to serious violations of the Chemical Weapons Convention.”⁷⁸

In a similar vein, the US Ambassador to the OPCW, Kenneth Ward, accused Syria (in July 2016) of engaging “in a calculated campaign of intransigence and obfuscation, of deception, and of defiance”, adding that the samples investigated by the OPCW were “indicative of production, weaponization, and storage of [chemical warfare] agents by the Syrian military that has never been acknowledged by the Syrian government.”⁷⁹

75 Colum Lynch and David Kenner, “U.S. and Europe Say Assad May Have Kept Some Chemical Weapons”, *Foreign Policy* (23 August 2016).

76 Colum Lynch and David Kenner, “U.S. and Europe Say Assad May Have Kept Some Chemical Weapons”, *Foreign Policy* (23 August 2016).

77 Statement by H.E. Ambassador Sir Geoffrey Adams to the 80th Session of the OPCW Executive Council, *OPCW* (6 October 2015).

78 “British Ambassador Addresses the Organisation for the Prohibition of Chemical Weapons”, *Foreign and Commonwealth Office* (12 October 2016).

79 Quoted in Lynch and Kenner (2016).

The US Ambassador further argued that the US is “very concerned that chemical warfare agents and associated munitions, subject to declaration and destruction, have been illicitly retained by Syria.”⁸⁰ Ward concluded that the new body of evidence confirmed that “Syria never truly accepted the obligations or ideals of the Chemical Weapons Convention.”⁸¹

The decision adopted by the OPCW Executive Council in November further “expressed its grave concern” for the continued gaps, inconsistencies and discrepancies in Syria’s initial declaration, which comes closest to an implied declaration that Syria should now be considered (for the first time ever) a State Party in breach of its CWC obligations. As for the use of chemical weapons by terrorists, OPCW Director-General Üzümcü also declared that his organization had taken samples of mustard gas used in CW attacks in Syria for analysis by OPCW’s designated laboratories, and that “the findings do suggest that this substance may have been produced by ISIS itself (...) [It was] poor quality, but still harmful and it was weaponized so it’s extremely worrying.”⁸²

Overall, Russia declared that the OPCW’s 11 November decision discredited one “of the most highly respected and successful organizations in the area of disarmament and WMD non-proliferation”, which is now “being turned by a group of countries that are set on regime change in Damascus into an instrument of political and economic pressure and blackmail.”⁸³ Russia’s strong reaction offered a foretaste of the full-blown Great Power conflict that would soar after the US military strike of April 2017.

Despite the certainty of IS’s efforts to acquire and to use chemical weapons, the assertions that every documented case of the use of chemical weapons in Syria is the handiwork of ‘terrorists’ are not credible. No one has seriously questioned that sarin was not used in the incident in Khan Sheikhoun on 4 April 2017. But those who see the hand of terrorists behind such attacks in Syria have claimed that this was the likely result of the release of sarin from a bombed warehouse containing a rebel stockpile of chemical weapons. The OPCW Director-General, based on bio-medical samples obtained from victims and survivors, confirmed that “the results of the analysis indicate that the victims were exposed to Sarin or a Sarin-like substance.”⁸⁴ In September 2017,

80 “Watchdog Demands Syria Account for Four Undeclared Chemical Warfare Agents”, *The Japan Times* (14 July 2016).

81 *Ibid.*

82 Ben Ariel, “OPCW Probing Over 20 Reports of Syrian Chemical Attacks”, *Israel National News* (18 November 2016).

83 “OPCW Decision on Syria is Deeply Regrettable”, *Russia Today* (18 November 2016).

84 “OPCW Director-General Shares Incontrovertible Laboratory Results Concluding Exposure to Sarin”, OPCW, 19 April 2017.

the UN Commission of Inquiry on Syria attributed the attack to the Syrian air force.⁸⁵ The Commission also attributed attacks with weaponized chlorine in Idlib, Hamah, eastern Ghouta, and Damascus to Syrian government forces.

Identity and Accountability of Perpetrators

Despite these political controversies, the UNSC extended (on 17 November 2016) the JIM's mandate by one additional year (UNSCR 2319). Clearly, it will be crucial to maintain the JIM's work (and further mandates), preferably as soon as possible and for longer periods. The JIM's efforts to identify the perpetrators of CW use are particularly relevant to obtain and reliably document who is responsible so that they may be prosecuted at a later stage. In October 2016, the French Foreign Minister Jean-Marc Ayrault declared that the Syrian and Russian armed forces had committed "war crimes (...) [France] shall contact the International Criminal Court prosecutor to see how she can launch these investigations."⁸⁶ One of the key problems here is that Syria is not a State Party to the ICC's Rome Statute, which means that the ICC only has jurisdiction over the country if the UN Security Council refers the conflict to the UNSC.⁸⁷ In February 2013, the UN-appointed Commission of Inquiry already concluded that the ICC is the appropriate organization to assure accountability for crimes being committed in Syria. Still, as Veronika Stromsikova, Director of the OPCW's Office of Strategy and Policy, declared in November 2016: "[C]ertainly the OPCW and the CWC have no capacity in terms of prosecution, and I would like to stress that we even do not have any capacity or mandate to determine the responsibility and accountability question [in Syria]".⁸⁸

Still, both Russia and China have repeatedly blocked UN Security Council resolutions referring the situation in Syria to the ICC. For example, in May 2014, more than 60 countries co-sponsored a resolution to this effect, backed by 13 UNSC Members. As expected, this resolution was vetoed by Russia and China.⁸⁹ Although the ICC's Rome Statute criminalizes "poison or poisoned weapons", as well as "poisonous or other gases", there is no direct mention of CW in the ICC Statute, which makes this a legally

85 Report of the Independent International Commission of Inquiry on the Syrian Arab Republic, UN Document A/HRC/36/55, 6 September 2017.

86 John Irish, "France to Seek ICC Options For War Crimes Investigations in Aleppo", *Reuters* (10 October 2016).

87 Alex Whiting, "The International Criminal Court, the Islamic States, and Chemical Weapons", *Justsecurity.org* (4 November 2015).

88 Presentation by Veronika Stromsikova at the EU Non-Proliferation and Disarmament Conference, Special session on "Progress and Challenges in Chemical Disarmament" (London, IISS), 4 November 2016.

89 "Russia, China Block Security Council Referral of Syria to International Criminal Court", *UN News Centre* (22 May 2014).

contentious issue.⁹⁰ It is against this background that Céline Barmet and Oliver Thränert argue that since “the ICC has not (yet) been mandated, it seem[s] even more urgent at this point that the [Executive Council] of the OPCW resolutely decides on measures within its own mandate.”⁹¹

The OPCW Headquarters in The Hague



Photo by OPCW

Despite this legal ambivalence, one thing is beyond dispute: It is vital to the future of the CWC and OPCW that the use of CW in Syria is effectively investigated and documented, and that the perpetrators are prosecuted and held accountable. Otherwise, the chemical non-proliferation norm will inevitably suffer. After the JIM’s damning Syria report was referred to the UNSC, Human Rights Watch declared that “[n]ow that a UN investigation has officially identified responsibility for several chemical weapons attacks in Syria, the focus should turn to bringing those responsible to account. The chemical weapons issue will only be closed when those who ordered and executed these atrocities are convicted and behind bars, and their victims compensated.”⁹² It is therefore important that several

90 Dapo Akande, “Can the ICC Prosecute for the Use of Chemical Weapons in Syria?”, *EJILTalk.org* (23 August 2013).

91 Barmet and Thränert (2016), p. 3.

92 “UN Security Council: Ensure Justice for Syria Atrocities”, *HRW.org* (30 August 2016).

Western states have set up the Commission for International Justice and Accountability (CIJA), an independent organization of experts in humanitarian law aimed at collecting evidence of atrocities committed by both the Syrian government and rebel forces.⁹³ Like the OPCW's DAT, these efforts aimed at documenting and securing forensic and witness evidence will be critical to any future international investigation into war crimes in Syria, including the use of CW. Doing nothing has even further negative strategic consequences. As Louis Charbonneau, UN director at Human Rights Watch, has argued: "The [UN] Security Council diminishes its importance if it doesn't take strong action against demonstrated use of chemical weapons by the Syrian government."⁹⁴

It is therefore incumbent upon both the UN and the OPCW to reflect on the case of Syria and to draw lessons learned, not merely to address these serious moral and security concerns, but also to ensure the continued health and relevance of the multilateral legal order without which justice and security are impossible.

Lessons Learned for the OPCW

The lessons learned from Syria are numerous and – given the ongoing and even escalating war in the country – are still "work in progress". In April 2015, OPCW Director-General Üzümcü offered the following three key lessons from the case of Syria: (1) Quick and decisive action towards chemical disarmament is essential; (2) International and multilateral legal approaches towards chemical disarmament are indispensable; and (3) With sufficient political will, consensus can be reached even in the midst of an intractable conflict.⁹⁵ Additional lessons include the need to think creatively, and a willingness to operate, investigate, inspect and monitor the destruction of Syria's CW programme without guiding legal and political precedents.

In 2015, both the OPCW and UN undertook a more profound and reflective lessons-learned exercise, which has resulted in two reports.⁹⁶ The OPCW report was authored by Ralf Trapp, who came up with numerous key findings that offer guidance for the OPCW in preparing for future contingencies of a similar kind. According to the report,

93 Julian Borger, "Syria's Truth Smugglers", *The Guardian* (12 May 2015).

94 Quoted in "UN Security Council: Ensure Justice for Syria Atrocities", *HRW.org* (30 August 2016).

95 Ashley Miller, "The Law and Politics of Eliminating Syria's Chemical Weapons Program", *Brookings* (13 April 2015).

96 Ralf Trapp, "Lessons Learned From the OPCW Mission in Syria", Submitted to the Director-General of the Technical Secretariat of the OPCW, The Hague (16 December 2015); and United Nations Office for Disarmament Affairs, "The Secretary-General's Mechanism for Investigation of Alleged Use of Chemical, Bacteriological (Biological) or Toxin Weapons – A Lessons-Learned Exercise for the United Nations Mission in the Syrian Arab Republic", United Nations (May 2015).

the OPCW had to quickly find its place in a complex multilateral setting, with building a productive partnership with the UN as a first priority to tackle Syria's CW challenge. Until then, the OPCW had worked quietly as a technical agency, but was now called upon to engage in a highly political environment, putting its reputation (and arguably its future) at stake. This not only required strong leadership within the OPCW, but also stretched its "human resources" far beyond existing capabilities. Staff members had to improvise and develop skills as they went along, focusing on getting the job done in Syria which also implied that routine verification activities were plagued by delays and cancellations. As Trapp concludes, "[g]iven the importance of the human element, there is a need to further improve the [OPCW] Secretariat's human resource management system to prepare for contingencies as complex and demanding as the Syria mission."⁹⁷

Trapp's influential report also touches upon the specific legal and political issues raised by the OPCW's Syria mission. One of the key questions concerns the legal basis of the undertaking. Clearly, political support and legal endorsement for the Syria mission was provided by UNSC Resolution 2118 (2013). Since political support proved to be constant, the OPCW's Syria mission did not give rise, luckily, to any legal challenges. However, for future cases it will be crucial to clarify whether the CWC offers a sufficient legal basis for CW disarmament missions, even under politically charged and dangerous security circumstances. In Syria, much was achieved by side-stepping and overcoming institutional differences (particularly between the OPCW and the UN), and by *ad hoc* arrangements (i.e., by an exchange of letters instead of developing and approving standing arrangements with all partners involved). These shortcuts were absolutely necessary to achieve a shared mission. As Virginia Gamba, Head of the JIM's Leadership Panel, argued: "[W]e had an unprecedented mandate. No one had ever done this before in the United Nations, so we really didn't have standard operating procedures to engage; we had to develop our own parameters of investigation. And what we did is, the investigators used the fact-finding mission's findings in The Hague from the OPCW."⁹⁸ This explains Trapp's conclusion that the OPCW's "relationship with the UN will be important in any future contingency of a similar nature, and needs to be cemented into standing arrangements that are regularly exercised."⁹⁹

The OPCW Lessons Learned Report makes useful suggestions as to how information flows should be managed and protected, and how health, safety and security procedures should be improved. The Report rightfully emphasizes the OPCW's capacity to quickly develop novel approaches to handle the analysis and clarification of Syria's CW declaration, notably by establishing the Declaration Assessment Team (DAT).

97 Ralf Trapp, "Lessons Learned From the OPCW Mission in Syria" (2015), p. 9.

98 "Interview: The Syrian Forces and ISIL Used Toxic Chemicals as Weapons – Report", *UN News Centre* (30 August 2016).

99 *Ibid.*, p. 12.

In many ways, the DAT is a new and useful mechanism that should be here to stay. One could argue that the CWC already allowed the OPCW Secretariat to offer certain States Parties assistance in preparing their national declarations, but these were not formal arrangements and were developed on an *ad hoc* basis. In future, most likely less politicized and dangerous circumstances, the DAT could be used to offer support to a National Authority to achieve a more accurate national declaration, for example by verifying data in a systematic manner. Making the DAT a permanent mechanism within the OPCW's institutional toolbox could facilitate a more active role in this field. Given the rapid technical and technological changes, this also implies that the OPCW should acquire new specialized equipment for operations in conflict areas, as well as up-to-date communications systems. Although the FFM lacks a formal hook within the CWC, it has been developed on the basis of agreements between the OPCW and the Syrian government, which is clearly possible in future cases if there is the political will to do so. All these innovations raise the bigger question of whether the OPCW has the right tools to be effective, and also whether the organization makes sufficient and effective use of the tools that are already available to it.

The OPCW's Syria mission has also strengthened the long-standing call by verification experts to clarify the use of open sources. It is clear that the OPCW has no intelligence capabilities and also lacks the mandate to build such a capacity. In Syria, the OPCW has made use of satellite imagery and has benefited from support offered by the European Union's Satellite Centre (in Torrejon, Spain), which provided information on Syrian facilities, site surroundings and road networks. The EU SatCen intelligence was further used by the OPCW FFM to verify Syrian CW declarations and reports.¹⁰⁰ The capacity to interpret satellite imagery was further developed with support from the UN Institute for Training and Research (UNITAR) Operational Satellite Applications Programme (UNOSAT), which is used to deliver satellite imagery to relief and development agencies (both within and outside the UN framework). The OPCW Lessons Learned report therefore concludes that the "Syria mission clearly demonstrated the utility of this method for developing situational awareness and understanding, and open source monitoring should be integrated in the Secretariat's toolbox to support security and safety risk assessments, operational planning, and independent checks on information received from external sources."¹⁰¹

In 2015, David Martin optimistically claimed that the "Syrian intervention demonstrated not only that the CWC provisions and mechanism allowed for flexibility, adaptability, and technical capability for, and that the States Parties had the sheer political will to bring about total disarmament in Syria, it also proved that the CWC is capable to bring about

100 *EU Satellite Centre Annual Report 2015*, Madrid (2016), p. 15.

101 Ralf Trapp, "Lessons Learned From the OPCW Mission in Syria" (2015), p. 28.

chemical disarmament across the world.”¹⁰² Despite all the OPCW’s achievements, the prospects for the complete “chemical disarmament” of Syria remain inconclusive at best, not only because the security situation continues to frustrate and delay destruction, but also because there is now solid evidence that the Syrian government has hidden key elements of its CW programme and that it has wilfully destroyed relevant documentation concerning its CW facilities, stockpiles and programmes in order to avoid detection. All these revelations amount to a very troubling pattern indicating that Syria is in violation of several UNSC resolutions as well as its CWC commitments.

The OPCW’s lessons learned will be valuable to keep the organization relevant and “fit for purpose.” The Syria mission should make the OPCW both more modest (since Syria’s chemical disarmament has not been fully achieved), as well as more determined (since taking the lessons learned into account may make the OPCW more effective). This is particularly the case since the OPCW (and the international community at large) is likely to be faced with future challenges of chemical disarmament that may even be more daunting. There is compelling evidence that the IS has used mustard gas in Iraq (confirmed by several JIM reports) and that it has actively recruited chemical experts (particularly from the former Iraqi regime’s CW programme). For now, terrorists may have limited (and rather weak) versions of CW with no (or limited) military value. Still, as Dimitris Iliopoulos of the EU’s External action service argued (in July 2016): “It has been assessed that the use of CW by IS has little military value as such, but it might have a larger psychological impact (...) Considering ISIS’s terror doctrine, it is certain that if it had the opportunity, ISIS would not hesitate to use it ruthlessly in European cities and elsewhere.”¹⁰³

The key lesson to learn from the Syria mission is therefore that strengthening the CW non-proliferation norm, as well as guarding the “red line” against actual CW use, is a high-level and unremitting political duty. And not only for the OPCW; in the case of Syria the close cooperation between the OPCW and the UN was crucial for the efforts to disarm, verify, and investigate. *Ad hoc* created bodies like the FFM, DAT and JIM show how important flexibility and creativity are in such difficult circumstances. Moreover, this is only possible when there is a sufficient quality and quantity of human resources available at the cooperating organisations – which again shows the risks of budget cuts and downsizing the OPCW after the ‘disarmament era’ will be more or less closed.

102 David Martin, “The Chemical Weapons Convention: Hollow Idealism or Capable Mechanism? The Syrian Intervention as a Test Case”, *L.A. Int’l & Comp. L. Rev.*, Vol. 37, No. 1-2 (2015), p. 65.

103 Presentation by Dimitris Iliopoulos (Principal Advisor, EU External Action Service) at the Fifth Consultative Meeting of the EU Non-Proliferation Consortium, Brussels (7-8 July 2016).

TIMELINE OF CW-RELATED EVENTS IN SYRIA, 2012-2017

2012

23 July the Syrian government publicly acknowledges that it possesses CW

24 Dec. first reports (and credible allegations) of CW use emerged: seven people were allegedly killed in Homs by “poisonous gas”

2013

Feb. UN-appointed Commission of Inquiry already concludes that the ICC is the appropriate organization to assure accountability for crimes being committed in Syria

19 Mar. reports of CW attacks in two suburbs around Aleppo and Damascus where about 25 people were reportedly killed and dozens more injured

14 Aug. Assad government agrees to allow UN inspectors into Syria with a mandate to investigate three possible CW uses after strong pressure from the US, France and the UK

21 Aug. CW Attack on the Damascus suburb of Ghouta, killing several hundred civilians by sarin gas. Followed by UNSC emergency meeting.

31 Aug. *US President Obama: doing nothing when faced with a chemical attack “risks making a mockery of the global prohibition on the use of chemical weapons.”*

12 Sept. Syrian government officially declares its willingness to join the CWC, which happened two days later

14 Sept. joint US-Russian “framework document” released, offering the key terms of Syria’s chemical disarmament

16 Sept. the results of the first UN report on the “UN Mission to Investigate Allegations of the Use of Chemical Weapons in the Syrian Arab Republic” come in, officially confirming that nerve agents (sarin) has indeed been used in Syria

19 Sept. Syria submits CW initial declaration

27 Sept. UNSC Resolution 2118 offering an OPCW timeline for destroying Syria’s CW arsenal, and creating an OPCW-UN Joint Mission for that purpose

14 Oct. Syria becomes an official State Party to the CWC

16 Oct. Trust fund in support of the verification of the destruction of Syrian chemical weapons established

24 Oct. the Syrian authorities officially declare possession of no less than 1,300 tons of chemical agents and precursors

2014

April toxic gas (chlorine) attack by the Syrian military in Idlib province, according to JIM

April 2014: OPCW creates two new instruments: the Fact-Finding Mission (FFM) and the Declaration Assessment Team (DAT)

May more than 60 countries co-sponsor a resolution, backed by 13 UNSC Members, referring the situation in Syria to the ICC, which is vetoed by Russia and China.

Summer OPCW confirms that Syria's declared CW stockpile has been removed from the country

2015

March second toxic gas (chlorine) attack by the Syrian military in Idlib province, according to JIM

7 Aug. UNSC Resolution 2235 establishing the Joint Investigative Mechanism (JIM)

Aug. IS terrorists use mustard gas in Marea (north of Aleppo), according to JIM

Sept. Voluntary Trust Fund Mechanism established to cover material and technical needs

Oct. *UK Ambassador Sir Geoffrey Adams: "it is impossible not to conclude that the Syrian authorities are responsible for the overwhelming majority of chemical weapons attacks in the Syria conflict."*

Nov. November 2015: JIM starts investigations

16 Dec. Lessons Learned From the OPCW Mission in Syria, Submitted to the Director-General of the Technical Secretariat of the OPCW, The Hague

2016

Jan. The complete destruction of Syria's 13 mobile and stationary CW production, mixing, and filling facilities, as well as the destruction of 1,308 declared metric tons of CW substances is completed

July *July 2016: US Ambassador to the OPCW Kenneth Ward accuses Syria of engaging "in a calculated campaign of intransigence and obfuscation, of deception, and of defiance"*

- July OPCW declares that it has found no less than four undeclared CW agents, which confirms growing suspicions that the Assad government continues to hoard CW
- 24 Aug. JIM releases third (75-page) report, claiming that the Syrian government has been responsible for several CW attacks, accompanied by a confidential two-page summary pointing to indications of potentially undeclared chemical weapons-related activities
- Oct. *French Foreign Minister Jean-Marc Ayrault declares that Syrian and Russian armed forces have committed “war crimes (...) [France] shall contact the International Criminal Court prosecutor to see how she can launch these investigations.”*
- 11 Nov. OPCW adopts a decision “that expresses grave concern about and condemns in the strongest possible terms the use of chemical weapons in the Syrian Arab Republic”
- 17 Nov. UNSC Resolution 2319 extending the JIM’s mandate by one additional year
- 18 Nov. *Russia declares that the OPCW’s 11 November decision discredits one “of the most highly respected and successful organizations in the area of disarmament and WMD non-proliferation”, which is now “being turned by a group of countries that are set on regime change in Damascus into an instrument of political and economic pressure and blackmail.”*

2017

- Feb. *Mikhail Uliyanov, head of the Department for non-Proliferation and Arms Control of the Russian MFA, claims that the JIM reports are examples of “low-quality work”, mainly because the interviewed witnesses of CW incidents are (allegedly) “people who have been brought by hand [sic] by various non-governmental organizations opposed to Damascus. The reliability of such accounts, of course, raises serious doubts.”*
- 4 Apr. Suspected CW attack killing more than 70 civilians in the northern Syrian town Khan Sheikhoun
- 5 Apr. The UN Security Council emergency meeting to discuss the chemical weapons attack in Idlib
- 6 Apr. The United States uses Tomahawk cruise missiles to target an air base in Syria. The Assad regime is believed to have conducted the April 4 chemical weapons attack from that base
- 6 Sept. The UN Commission of Inquiry on Syria attributes sarin attack in Khan Sheikhoun to Syrian government forces, as well as several attacks with weaponized chlorine.

3 The OPCW's Future: Remaining Fit for Purpose

Key Findings:

- One of the main tasks of the OPCW, universal chemical weapons disarmament, has almost been completed (to the extent of the declared CW programmes). When industry inspections to prevent the re-emergence of CW will be the only task left, some States Parties argue that the OPCW could shrink considerably in its budget and staff. This bears the risk of losing unique expertise and the ability to get things done in expected *and* unforeseen situations.
- After disarmament has (almost) finished, several challenges remain, ranging from the increasing number of industry locations that should be inspected, to the dangers of the terrorist use of chemical agents, and the risks of chemical riot control agents.
- This report offers three recommendations for the OPCW to remain relevant:
 - Make a “switch” from a disarmament focus to a non-proliferation focus, and accept the implication that the OPCW will gradually change from a technocratic into a more political (and hence politicized) organization, particularly since it cannot (and should not) avoid dealing with the challenge of chemical weapons terrorism.
 - Ensure that the OPCW maintains and strengthens its role as a credible compliance-management organization, building trust through verification.
 - Strengthen the OPCW's outreach beyond the current very small group of stakeholders; this will be key to maintain political and financial support as well as the requisite scientific know-how.

Introduction

The OPCW has achieved broad recognition of its contribution to almost universal chemical disarmament in the past 20 years, even under dire circumstances like in Syria. In September 2017 Russia completed the destruction of its last remaining chemical weapons. The total percentage of chemical weapons destroyed has now reached an impressive 96 percent. The last of the remaining (declared) chemical weapons in the world are possessed by the US which is expected to complete the destruction process by 2023. So what is next for the OPCW?

Although the CWC is of unlimited duration and has few detractors questioning its legitimacy or significance, there are indicators that foretell budget cuts and the downsizing of the OPCW once the major objective of disarmament has been

accomplished. The trend was already evident before the Syria challenge injected a completely different perspective regarding the value of the OPCW and opened up qualitatively new lines of debate. This is a healthy trend that will hopefully transcend the simplistic equation of judging the value of the OPCW from a purely programmatic angle of how many weapons have been destroyed or how many industry inspections have been conducted. The latter represents the other readily quantifiable task of the OPCW that is meant as an instrument of transparency and deterrence against the diversion of industrial products for illegitimate purposes. It is almost impossible to extend verification to that entire part of the global chemical industry that deals with materials covered by the Convention. Industry verification will therefore always remain selective. And with the Convention placing limits on the total number of industry inspections that an individual country can receive during a year, this verification tool will have to continue to be used with numerical limitations. The focus on strengthening the OPCW's mission therefore has to transcend the traditional quantitative criteria and focus on the normative aspects of ensuring that the ban on chemical weapons acquires universal and enduring value.

For this to happen, not only will there be the need to review the intensity but also the focus of the industry verification regime given the dramatic advancements that have occurred since the Convention was negotiated some 25 years ago. States Parties will also have to take into account the entire scope of issues that impact the future effectiveness of the OPCW as well as new security challenges.

A mechanical approach that reduces the size of the OPCW simply because there will be no more disarmament inspections to conduct could have serious consequences; it risks losing unique expertise and the ability to get things done in expected and unexpected situations.

The OPCW's verification regime is robust, but financial means and practical capabilities are naturally limited. For example, in 2014 the OPCW carried out 241 inspections in industrial facilities handling chemicals of relevance to the Convention, out of the 4,851 facilities subject to inspection.¹⁰⁴ While the number of annual inspections cannot continue to be enhanced in keeping pace with the growth of relevant industry, the assurance that industry verification provides can be successfully maintained or even enhanced by setting the right priorities and improving the organisation's ability and resilience to achieve its mission.

Fortunately, the broad political support for the OPCW has not resulted in bureaucratic complacency, but has offered time for the organization to consider a new strategic direction in what is generally labelled as the OPCW's "post-destruction phase." Complacency would certainly be very unjustified given the scope and gravity of the

104 Mark Peplow, "A Farewell to Chemical Arms", *Chemistry World* (18 January 2016).

challenges facing the OPCW in the years ahead. The case of Syria indicates that success in destroying CW stockpiles may be one thing, but keeping toxic chemicals out of a warzone is quite another. For example, in Syria chlorine (not explicitly banned by the CWC) proved easy to weaponize and deliver.

At present a number of structural challenges will have to be overcome to place the reconstruction of the narrative on a firm footing. For the most part the debate about future priorities has been led by the OPCW Secretariat. There is a need for greater participation by States Parties in this matter. For now, reactions from States Parties to proposals have often remained clichéd and repetitive and betray either indifference or a lack of understanding of what is at stake. It also tends to suggest that not many capitals are fully in tune with the substance of the debates that are conducted at the OPCW. Secondly, the erosion of consensus and the polarisation created over Syria will inevitably impact discussions about future priorities. In such situations, politics tends to trump merit. States Parties will have to rise above narrow political agendas to participate fully and constructively in reshaping the Organisation's future. Universality is yet another issue that is likely to remain on the agenda for a long time considering that apart from South Sudan, three other states (North Korea, Egypt and Israel) represent countries that show no inclination of joining any time soon. In addition, there are subjects of long-standing interest, such as the question of incapacitating chemical agents, that have been raised at the OPCW, especially during the Review Conferences, but have not made much headway.

It is also important to review the relevance of the international cooperation dimension of the CWC as embodied in its Articles, especially Article XI. The history of how attitudes have evolved on this subject over the last twenty years is highly instructive for the future of the OPCW, especially since this is the only viable and effective avenue for carving out a clear and substantive role for the Organisation in the context of global terrorism concerns.

This chapter discusses the strengths and weaknesses of the OPCW's decision-making process which, until recently, has relied on consensus-building as a rule of thumb. It remains to be seen how the recent erosion of that practice, seen in the context of certain decisions on Syria, could impact this consensus culture. Anyway, critical decisions regarding the future of the OPCW cannot be postponed for much longer if the Organisation is to be placed on a firm footing and remains fit for purpose and relevant to its mission to ensure a world free of chemical weapons.

This final chapter also offers an analytical overview of the challenges facing the OPCW as well as the strategic vision and course of the organization. Already in December 2010 (at the 15th session of the Conference of the States Parties), an "Advisory Panel on Future OPCW Priorities" was established, chaired by Ambassador Rolf Ekeus. In July 2011, the Advisory Panel issued a 30-page report setting the wheels in motion

for an ongoing debate aimed at keeping the OPCW relevant in a rapidly changing technological, industrial and geopolitical environment. This chapter reviews the main arguments of this debate, both within the OPCW community and beyond. It covers key issues like the future of verification, the challenge posed by non-state actors (notably terrorist groups), the unending quest for universal membership, as well as possible changes to the CWC (for example, by including a clearer mandate to tackle chemical terrorism). It concludes that the OPCW is developing a sensible and practical set of reforms and adaptations, setting clear policy goals (so-called “indicators of achievement”). Still, much will depend on whether the geopolitical environment will be conducive to an organization setting out to bolster and monitor a norm that has considerably strengthened over the last twenty years despite its recent violations.

The chapter examines the OPCW’s efforts to remain credible and relevant following the elimination of declared CW stockpiles by focusing on three key questions: (1) Will the OPCW have the specialist knowledge and expertise as well as the financial resources and analytical capabilities to monitor and verify the full spectrum of relevant toxic chemicals falling within its mandate? (2) Will the changing geopolitical environment be conducive or detrimental to multilateral efforts (embodied in the OPCW) to maintain a robust and credible chemical non-proliferation norm? and (3) Will the OPCW, as an organization, adjust and augment its working methods and capabilities, thereby allowing it to respond effectively to future challenges and remain the platform for deliberation on CW matters, as the CWC calls for? The chapter closes with some recommendations for consideration by States Parties.

The OPCW in 2025: Planning for Relevance

The process of preparing the OPCW for a transition from CW disarmament to preventing the re-emergence of chemical weapons in the future was kicked off by the above-mentioned “Advisory Panel on Future OPCW Priorities”, whose 2011 report was followed by a “Medium-Term Plan For the Period From 2015 to 2019” (prepared by the OPCW Technical Secretariat in April 2014), culminating in the “The OPCW in 2025: Ensuring a World Free of Chemical Weapons” (prepared by the OPCW Technical Secretariat in March 2015).¹⁰⁵ In July 2016, an Open-Ended Working Group on the Future Priorities of the OPCW (OEWG-FP) was established, which is a forum “for receiving, discussing, prioritising, elaborating, and integrating ideas and proposal from States Parties and the Secretariat on the future priorities” of the Organization.¹⁰⁶ The goal of this OEWG-FP is to

105 “Report of the Advisory Panel on Future Priorities of the Organisation for the Prohibition of Chemical Weapons” (27 July 2011); “Medium-Term Plan for the Period From 2015 to 2019” (23 April 2014); and “The OPCW in 2015: Ensuring a World Free of Chemical Weapons” (6 March 2015).

106 “Establishment of an Open-Ended Working Group on the Future Priorities of the OPCW” (14 July 2016).

supply “a holistic, coherent, forward-looking, and action-oriented document”, that could also constitute a resource for the CWC’s Fourth Review Conference in 2018 (see below).

All three reports mentioned above highlight the need for the OPCW to adapt to a rapidly changing environment, where “[s]cience and technology are advancing at an astounding pace, creating new opportunities but also new risks.”¹⁰⁷ The Advisory Panel clarified that it was not proposing any changes to the CWC, nor would it invent new tasks for the OPCW. The Advisory Panel’s report recognizes that the end of the Cold War has structurally altered the geostrategic context of opposing military alliances. Instead, it argues, the “borderlines between war, civil war, large-scale violations of human rights, revolutions and uprisings, insurgencies and terrorism as well as organized crime are blurred.”¹⁰⁸ With prescience, the Advisory Panel suggests that given the specific characteristics of CW, “there may be perceptions that chemical weapons are useful for these contemporary types of violent conflict.”¹⁰⁹ The Advisory Panel ticks all the important and now well-known boxes of future OPCW tasks: working towards universal adherence; assure that the OPCW remains the global repository of knowledge and expertise on CW disarmament and verification; sustain technical assistance to the National Authorities of States Parties; improve interaction between the OPCW and the chemical industry; enhance the existing verification process and maintain the professional skills needed to implement challenge inspections; and strengthen capabilities to respond to threats related to releases of toxic chemicals.

The Advisory Panel’s report set the stage for the policy debate on the OPCW’s future course and vision, offering valuable input to the 2014 “Medium-Term Plan for the Period From 2015 to 2019”. The Medium-Term Plan (MTP) offered four equally plausible scenarios, taking into account the level of conflict and/or CW use, as well as the resources that are available to the OPCW. Without adequate resources and support, the OPCW cannot be expected to be fully prepared for a “high level of conflict” scenario (labelled “Mission Improbable”). A well-resourced OPCW, on the other hand, will remain ready and able to at least conduct challenge inspections (and investigations of alleged use), and offer assistance and protection to the countries in accordance with the provisions of the Convention. The MTP realistically concludes that the OPCW should focus “more on results instead of inputs”, which is the report’s main message. This also involves upgrading the OPCW’s ICT capabilities, as well as maintaining the organization’s “institutional memory” and recruiting the right expertise and talent. It goes without saying that this cannot be realized without stable and predictable financial resources.

107 “Report of the Advisory Panel” (2011), p. 4.

108 *Ibid.*, p. 5.

109 *Ibid.*

The future vision of the Organisation has continued to be refined and honed by the Secretariat. In March 2015, the Technical Secretariat issued a paper entitled “The OPCW in 2025: Ensuring a World Free of Chemical Weapons”, synthesizing the key elements and proposals of earlier reports, and kick-starting “forward-looking discussions” within (and among) States Parties and the wider policy community. By the year 2025, the OPCW aspires to be “the premier international organization working for a world free of chemical weapons, with a focus on preventing their re-emergence, by implementing all provisions of the convention in an effective, efficient, and non-discriminatory manner.”¹¹⁰ The OPCW intends to generate an “integrated strategic direction”, which will require “sufficient flexibility for the adoption of additional new, project-based working methods and tools (...), knowledge management, and ICT.”¹¹¹ The report offers a long list of “assumptions”, sketching out the external environment (in 2025) and the role the OPCW is expected to play. These include: (1) the verified elimination of currently declared CW by 2023; (2) no significant new (suspicions concerning) undeclared CW, although new States Parties may join as CW possessor states; (3) continued concern about CW use by non-state actors, notably terrorist groups; (4) continuing rapid advances in science and technology; and (5) new technologies which will be integrated into routine use in the chemical industry, posing serious challenges to the expertise of the OPCW Technical Secretariat.

On the basis of these (reasonable and well-argued) “predictions”, the OPCW suggests that it needs to “fund new priorities in the areas of verification, capacity development, engagement, and organizational governance”, despite the financial constraints facing States Parties today.¹¹² In all identified areas of concern, the OPCW offers sets of “indicators of achievement” to be reached by 2025. Most goals and ambitions are realistic, and none of them is phrased in an alarmist manner. Indicators vary from the establishment of a risk management system; setting in place a robust and flexible review of science and technology; augmenting state of the art methods and technologies for sampling and analysis; to assuring that all States Parties have established a National Authority; creating a formal network of cooperation with the science and technology community; and assuring that the OPCW has an up-to-date ICT system in place to enable fully electronic declarations and verification processes.

Verification, Confidence and Compliance

Without confidence that the OPCW can monitor and verify the CWC, the CW norm will inevitably suffer. The challenges for future verification under the CWC derive from the

110 “The OPCW in 2025” (2015), p. 3.

111 *Ibid.*, p. 5.

112 *Ibid.*

simple fact that chemistry and chemical technology are by nature dual-use, and that choices have to be made as to what level of verification is both possible (technically and financially) and acceptable to States Parties and the chemical industry. Since the entry into force of the CWC (in April 1997), the parameters of the OPCW's verification system have markedly changed. During the Cold War, the CWC verification system was devised to focus on what was then labelled a "militarily significant quantity" (often several thousand tons of chemical agents), which shifted (as a result of the use of CW during the Iran-Iraq war in the 1980s) to "quantities significant for CW proliferation" (between 50 and hundred tons). After 9/11, the OPCW (and the international community at large) aims to control "security-relevant" amounts of toxic chemical agents, which, in some cases, can best be measured in grams.¹¹³

Participants in an OPCW mock inspection exercise



Photo by OPCW

113 Ralf Trapp, "Research, Development and Production: Impact and Challenges for Future Verification Under the CWC", in Jean Pascal Zanders (ed.), "The Future of the CWC in the Post-Destruction Phase", *EUISS Report*, no. 15 (March 2013), p. 16.

The changing security environment has confronted the OPCW with a need for decisions that will ensure that the verification regime is not out of sync with the many advances made in the fields of science and technology (see Chapter 1). This also involves the gradual convergence of chemistry and biology in life sciences. Biology has increasingly become understandable in terms of chemistry (and chemicals), and (conversely) biology is now often used to manufacture chemical products. As Veronika Stromsikova, Director of the OPCW's Office of Strategy and Policy, has articulated, "rapid science and technology advancements have obscured, at times, whether toxic substances should be governed by the chemical or indeed biological regime, or both."¹¹⁴ Indeed, although the CWC and BWC remain separate, they now cover areas and WMD non-proliferation concerns that increasingly overlap. The reality that the BWC has no verification regime whatsoever thereby becomes problematic, potentially also for the future credibility of CWC verification (and hence the OPCW). Close relations with the chemical industry sector are crucial to receive timely and relevant input on new technical developments that should be taken into account by OPCW inspections. Such relations are not only beneficial to the OPCW, but also to the industry itself, because they contribute to effective, efficient and standardized inspections and from that perspective create a "level playing field", assuring that the administrative burdens are equal for all chemical industrial companies in any CWC member state.

The OPCW's challenge is deepened by the simple reality that the chemical industry has truly become global. An increasing number of industrial facilities in a growing number of states is a challenge in itself. Many new locations are and will be located in countries that need to develop their national implementation and regulatory structures. This is not to suggest that their economic development aims should be hampered. However, the OPCW could play an active role in providing assistance for the development of national legislation and offer advice on how this can be effectively enforced. The sharing of good practices can considerably facilitate this objective.

To recapitulate, the OPCW's task in the context of verification can be summarized as follows: It has to have a good overview of the dynamics in the chemical industry and the new and emerging technologies as well as means and methods of production. At the same time it needs to ensure that industry verification, despite the relatively small number of inspections that can realistically and feasibly be conducted, remains a potent verification tool.

114 Presentation by Veronika Stromsikova at the EU Non-Proliferation and Disarmament Conference, Special session on "Progress and Challenges in Chemical Disarmament" (London, IISS), 4 November 2016.

Knowledge and Expertise

Probably better than any other organization, the OPCW realizes that specialist knowledge and expertise are required to keep up with continuing technical and technological developments, allowing it to recognize equipment and understand its potential use in the field. A key issue is how to ensure the retention of knowledge and expertise within the OPCW; with limited resources and a continuous overturn of experts because of the OPCW's tenure policy, keeping track of the difficult and rapidly changing developments in the field of chemistry and chemical technology is not an easy challenge. Inspectors must be equipped with the ability to continuously monitor and make risk assessments about new processes and technologies. While, at present, concerns on this score have not been vocal, only a well-resourced Organisation can ensure increasing investment in developing and retaining such capabilities and skills.

The CWC was created as a comprehensive prohibition on chemical weapons. However, the major chunk of the OPCW's resources was devoted to verifying the elimination of the declared stockpiles of chemical weapons. The unpleasant memory of the Cold War and the opportunity to erase a dangerous element of that legacy also ensured that the political priority remained firmly focussed on verifying the destruction of chemical weapons. An OPCW Scientific Advisory Board (SAB) has been in existence since the beginning. However, with the end of the destruction of declared stockpiles now in sight and with so many new challenges confronting the integrity of the global ban on chemical weapons, the role of the Scientific Advisory Board has come into sharp focus. The SAB is called upon to determine what resources, technical competences, operational readiness and professional skills are required to maintain a robust verification regime which also includes challenge inspections (CIs) and investigations of alleged uses (IAUs).¹¹⁵

The SAB's recent work is indicative of the extensive attention that it has given to these various aspects of the operation of the Convention and the recommendations it has provided. The recommendations cover aspects regarding the refinement and consistency of declarations that form the basis of inspections in the chemical industry. Caution and orthodoxy mark most of the disarmament work. In this culture the letter of the treaties establishes precedents that are closely guarded and deviation is fiercely resisted. While this is understandable given the national security perceptions of different states, there comes a time when, without necessary changes because of the needs of the times, the norm can begin to atrophy. With that in mind, some of the recommendations made by the SAB can only be described as bold. It has, for example, recommended that "the Secretariat should adopt a comprehensive, more analytical

115 See, for example: 'Report of the Scientific Advisory Board on Developments in Science and Technology for the Third Special Session of the Conference of the States Parties to Review the Operation of the Chemical Weapons Convention', OPCW, The Hague, 2012.

approach to verification utilizing all available and verifiable information”.¹¹⁶ The SAB has argued that a purely declaration-based approach does not allow the completeness or correctness of such declarations to be assessed and therefore the Secretariat should develop and institutionalise a capability for gathering and analysing information from ‘complementary sources’ along the lines of the practice is some other international organisations. The SAB has gone further and recommended the use of open-source information on a routine basis as well as the use of satellite imagery in the case of challenge inspections and investigations of the alleged use of chemical weapons.

As regards the issue of advancements in science and technology and their impact on the verification regime – a rubric that amongst its various elements has such issues as the convergence between chemistry and biology, generally the SAB recommendations pertain to the continued and focussed monitoring of trends both by itself as well as the OPCW Secretariat.

Relations with the Chemical Industry

Considering these new economic and technological realities, the OPCW is actively engaged in relationships with the chemical industry, aimed at enhancing transparency and preserving a basic level of trust. The mainstay of the OPCW’s involvement with the chemical industry is based on the organization’s regime to inspect industrial facilities. Although the chemical industry may be engaged in modest and generally rather discreet lobbying activities, the chemical sector as such seems to be rather passive towards the OPCW and has no official role in the organization’s policy-shaping process. Although formal decision-making remains the recognized (and undisputed) responsibility of the States Parties, a more pronounced (albeit unofficial) role for the chemical industry might be studied in the light of the OPCW’s current challenges. Since so-called “Public-Private Partnerships” (PPP, or 3P) have quickly become the norm in other societal sectors, the OPCW would certainly benefit from a closer and more institutionalized relationship with its key private “partners”.¹¹⁷ The frequently aired argument that it would not be ethically justified if industry would be actively involved in the organisation verifying this same industry can be overcome by preventing industrial involvement in the actual verification processes, but the sector would still be more actively incorporated into the ever-changing design and set-up of the process on a conceptual level. It is also said that the OPCW’s diplomatic culture, based on a slow-moving process of seeking consensus and avoiding controversies of any kind, clearly stands in stark contrast to the chemical

116 SAB/REP/1/15, ‘Verification: Report of the Scientific Advisory Board’s Temporary Working Group’, OPCW, June 2015.

117 See, for example, the *Public-Private Partnerships Reference Guide, Version 2.0*, jointly published by the World Bank, the Asian Development Bank, and the Inter-American Development Bank (2014).

industry's commercial ethos and working methods. However, this excuse no longer stands up to critical examination and the cultural differences should not prevent closer cooperation.

One could also argue that the increased involvement of the chemical industry in the OPCW does not pose a conflict of interests, but instead would emphasize that there is a common interest. It is most likely that any use of CW (like in Syria) may have major implications for the chemical industry from a public relations perspective. If ingredients used in (future) CW attacks can be traced back to commercial suppliers, this will inexorably harm the sector's public image, which may result in economic backlashes for the sector. From this perspective, the chemical industry obviously has much to gain from preventing any future CW use, which should make it not only a stakeholder but also a strong proponent of an active and effective OPCW. For example, the chemical industry's commitment to the CWC could be expressed by offering financial support, possibly by contributing to a (new) Trust Fund (managed by the OPCW). This would follow the good example of the OPCW Trust Fund set up to support the OPCW-UN Joint Mission in Syria (which was established in October 2013). Whereas contributions to the OPCW's Trust Fund for Syria all came from states (including the EU), an OPCW Trust Fund dedicated to, for example, verification, might be co-funded by the chemical industry. As long as guarantees are built in that such financial support does not facilitate industrial influence on the actual verification process, there are hardly any ethical dilemmas involved; it concerns financial support for a common goal of both the OPCW and the chemical industry: preventing the misuse of chemicals by weaponization. Such a public-private Trust Fund could ameliorate the financial challenges posed for the OPCW in developing new verification technologies as well as upgrading the methodology for annual declarations by States Parties.

This option would build upon the OPCW's experience with Trust Funds to support the activities of the Science Advisory Board (SAB). Since 2006, the OPCW has encouraged States Parties to support the work of the SAB by making voluntary contributions to a trust fund. Since the inception of the SAB Trust Fund, only 16 States Parties have made contributions, with a modest available balance of (less than) Euro 25,000.¹¹⁸ This indicates that third parties have so far remained hesitant to fork out additional funds, even for useful initiatives. It also requires the OPCW to take into account the well-known drawbacks of the trust funds model, notably the increased administrative burden it may place on an organization (partially due to different reporting rules).

118 "Note by the Technical Secretariat – Call for Voluntary Contributions to the Trust Fund for the Scientific Advisory Board", OPCW, The Hague (16 January 2017).

The OPCW is clearly aware that in order to remain “fit for purpose”, it needs to make the best use of ICT. Upgrading the OPCW’s own ICT infrastructure is considered to be an “enabler”, improving and facilitating knowledge management capabilities. This will involve setting up a secure system allowing for remote access to data on the Security Critical Network (SCN) and the Security Non-Critical Network (SNCN). In 2015, the OPCW Secretariat already made two updated versions of the Electronic Declarations Tool for National Authorities (EDNA) available to States Parties, facilitating the all-important annual declaration process. The OPCW also promotes the Secure Information Exchange (SIX) system, aimed at enabling the secure exchange of information between States Parties and the Secretariat using the Internet. In 2015, 29 States Parties had registered in order to use this system, and the OPCW is actively engaged (i.e., through e-learning modules) in offering basic training in electronic declarations. The OPCW’s think-piece for 2025 aims to make rapid and radical strides in this direction (see above). This will also be crucial to maintain the CW-related knowledge and expertise that is essential for the OPCW to function effectively. This also includes more financial resources to fund new initiatives, and to maintain credibility in core tasks like verification and international engagement. Clearly, a greater role of the chemical industry (including financial contributions and technical expertise) could be considered here as well.

Another avenue to be explored is to open the OPCW’s Voluntary Fund for Assistance (which develops expertise in predicting hazards, detecting and decontaminating chemical agents, medical relief, as well as on-site coordination with humanitarian and disaster response agencies) to financial contributions from the chemical industry. Today, the Voluntary Fund for Assistance has a limited budget (of approximately Euro 1.3 million) paid by 45 CWC States Parties. Since a significant (and possibly growing) number of states see the OPCW’s post-destruction phase as an opportunity to reduce their financial contributions to the organisation, the OPCW risks entering a vicious circle: without appropriate funding, its technical expertise will suffer, and without expertise, it will become more difficult to receive funding. Given the enlightened self-interest of the chemical industry in maintaining the CW norm based on a robust OPCW, new initiatives (like 3P Trust Funds) may be necessary and arguably long overdue.

From Invisibility to Political Controversy

The OPCW’s active and successful contribution to eliminating Syria’s chemical weapons (followed by a Nobel Peace Prize in 2013) has given the organization good PR. Still, these events have also challenged the OPCW’s valued consensus culture. For some, the OPCW is no longer to be considered a neutral, technical body, but a potential activist instrument in the hands of Western Great Powers and being used to further their geopolitical agenda. For example, Russia now sees the OPCW as antagonistic to Syria’s Assad government. In December 2016, a Russian senior diplomat argued that the “OPCW has a mechanism to establish facts of possible uses of chemical weapons.

I cannot say we are satisfied with their work [...] I am not prepared to speak about the OPCW critically. I would rather say that we expected their work [in Syria] to become more effective, energetic and swift.”¹¹⁹ In May 2017, after the re-emergence of sarin on the battlefield in Syria, Russia openly accused the OPCW of partiality and siding with the West.¹²⁰ It is within this volatile context that Russia has added pressure on the OPCW by launching a proposal (March 2016) to negotiate a new convention specifically aimed at suppressing chemical terrorism, possibly also extending to biological terrorism (see below)¹²¹. All this has altered the political environment in which the organization has to act and manoeuvre; the traditional consensus culture within the OPCW suddenly seems to have changed into politicization and polarization.

This poses a challenge to the OPCW, since (up until today) the Organization’s success is arguably due to its technocratic aura and its relative invisibility. For two decades, the OPCW has been working “under the radar”, and has been careful to avoid political controversy. Apart from a selected group of experts and diplomats, few people are aware of the organisation’s work and activities. This has allowed the OPCW to develop into a consensus-based organisation generally devoid of the customary political games and tugs-of-war that affect many IOs. The fact that no challenge inspections have been requested in the past 20 years (which would be an excellent political tool to antagonise adversaries and foes), bears this out. By becoming more activist (as in Syria), the OPCW will almost inevitably step on some sensitive toes, thereby losing its neutral image amongst certain groups of States Parties (as well as other stakeholders). Since the OPCW relies on the active engagement of all States Parties to comply with the wide range of CWC commitments, the organization will have to strike hard compromises, taking into account technical and political considerations. This is clearly new territory for the OPCW.

This comes at a time when the chemical non-proliferation norm is challenged, by both the use of CW (in Syria) and the gradual legitimization of using chemical agents for riot control (see below). In 2014, Amy E. Smithson could still argue that “[i]n 1988, the international legal norm was ‘don’t use it.’ In 2013, the international legal norm is ‘don’t develop it, don’t produce it, don’t stockpile it, and certainly don’t use it.’”¹²² This statement has, very unfortunately, become problematic due to a flurry of

119 “Russian Diplomat Blasts OPCW Probe Into Chemical Weapons Use in Syria”, *TASS.com* (15 December 2016).

120 Patrick Wintour, “Russian and Western Dispute over Syria Chemical Attack Further Muddies Truth”, *The Guardian* (25 April 2017).

121 “Elements of the Draft International Convention for the Suppression of Acts of Chemical Terrorism”, *The Ministry of Foreign Affairs of the Russian Federation* (6 April 2016).

122 Amy E. Smithson (interview), “The Achilles’ Heel of the Chemical Weapons Dilemma”, *Georgetown Journal of International Affairs*, vol. 15, no. 1 (Winter/Spring 2014), p. 168.

reports that toxic chemical agents have been used against civilians in Syria and that terrorist groups may develop CW capabilities (see above and Chapter 1). Although the OPCW has (since 2001) spelled out the CWC's provisions which apply to the dangers of the terrorist use of chemical agents, it has stuck to its core roles of ensuring CW disarmament, providing protection and assistance, encouraging international cooperation, and bringing about universal membership.

Universality and the Middle East

By working towards universality, the OPCW aims to strengthen the chemical non-proliferation norm, even in regions where cooperative structures are thin on the ground (like in the Middle East; see below). With 192 States Parties and only three (official) holdout states (Egypt, North Korea and South Sudan – next to them, Israel has signed the CWC but has never ratified it), the CWC has almost reached the objective of universal membership. As far as numbers are concerned, the CWC is therefore on track. Another way to strengthen the norm has been to detract from the strategic and military utility of CW. Arguably, this is why CW were hardly used during World War Two, and are still (dis)qualified as the “poor man’s atomic bomb.” Both tracks come together in today’s Middle East. The Middle East is nowadays a volatile region where traditional rules of acceptable wartime conduct (*jus in bello*) are often breached. The tragic case of Syria indicates that CW are now obviously considered to be of military use. IS (and other terrorist groups) now also proclaim their aspirations to develop CW. What is more, some states in the Middle East (Egypt and Israel) remain either outside of the CWC or not fully integrated into its verification regime.

With Syria recently joining the CWC (in 2013), support for making the CWC truly universal is growing, in the Middle East as well as the rest of the world. This opens new opportunities to eliminate CW in this region, most notably by dusting off the old idea of creating a Middle East WMD-Free Zone (WMDFZ). This goal was first proposed by Egypt in 1988, but has, despite several serious efforts by the United Nations, never materialized. Most of the challenges are regional, and contain the toxic mixture of geopolitical rivalry, historic hostility, as well as religious and sectarian tensions. During the 2015 NPT Review Conference, Egypt put forward a new proposal for a Middle East WMDFZ, which included initial plans for regional verification measures and implementation mechanisms. Ultimately (and as usual), the proposal was not passed, due to disagreements over the exact terms and sequence of the project.¹²³ These disagreements are rooted in distrust and long-standing hostility. As Dina Esfandiary argues, for “Arab states and Iran, the main reason to pursue a WMD-free

123 Dan Zak, “U.N. Nuclear Conference Collapses over WMD-Free Zone in the Middle East”, *The Washington Post*, 22 May 2015.

zone is to curtail or eliminate Israel's undeclared nuclear arsenal. At the same time, this is also why progress has been impossible."¹²⁴

Given these political realities, the chances of a creating a Middle East WMDFZ remain slim. Still, as Esfandiary rightfully suggests, with the recent Syrian CW deal, a major cause for concern and a major impediment have been removed, at a time when the CWC's status has improved. As a result, the road towards banning CW in the region seems more viable than before. Ideally, the full universalization of CWC membership in the Middle East would be part of a WMD "package deal", linking all WMD (and their means of delivery) in one, comprehensive regional WMDFZ agreement. But it has to be acknowledged that the OPCW has no influence on (and even less say over) the key factors shaping the Middle East's security environment.¹²⁵

The Grey Area of Riot Control Agents

The OPCW's post-destruction challenge is not limited to these recognized and long-standing questions and challenges. Just as the risk for the OPCW will be the "BWC-ization" of its verification regime, one of the dangers eroding the chemical non-proliferation norm is the creeping legitimization due to the actual use of chemical agents for riot control (most notably "tear gas"). In 2015, 138 states had declared possession of riot control agents (RCAs, mainly tear gas). The CWC stipulates that RCAs may only be used for law enforcement purposes and are prohibited as a method of warfare. However, the CWC does not define the boundary between warfare and law enforcement, leaving it up to states to interpret the Convention's restrictions. This ambiguity has become untenable since, as a recent monograph by Michael Crowley conveys in horrific detail, riot control and incapacitating agents are not the humane and non-lethal weapons (NLW) they are often made out to be. Instead, they are often used to torture prisoners or regime opponents.¹²⁶ As the life sciences advance, new, tailored RCAs could be developed, including psychochemical weapons. As J.P. Perry Robinson argues, "[a]dd to these chemicals the various infective agents that can induce highly debilitating diseases of low mortality, and a category of CBW is created whose features seem quite different from those of WMD, whose possession may therefore appear desirable, and whose

124 Dina Esfandiary, "In the Middle East, Get Rid of Chemical Weapons First", *Arms Control Today*, vol. 44, no. 1 (January/February 2014).

125 See, for example, "Prospects for Arms Control and Disarmament in the Middle East", EU Non-Proliferation and Disarmament Conference (London, IISS), 3 November 2016.

126 Michael Crowley, *Chemical Control: Regulation of Incapacitating Chemical Agent Weapons, Riot Control Agents and their Means of Delivery* (Basingstoke: Palgrave Macmillan, 2015). Crowley asks for a systemic rethink of the current approach to non-proliferation, calling for "holistic arms control" which would expand the number and types of regulatory measures and broaden the range of possible stakeholders.

constraint by treaty may thus seem a liability, notwithstanding the abyss into which the tailoring could also cast us.”¹²⁷ Major recent developments in the category of “Advanced RCA Technology” (ARCAT) amounted to further steps towards what Robinson calls “a most serious challenge to the [CWC] regime.” By the surreptitious equation of toxicity with lethal toxicity, Robinson suggests, “we have started to see a creeping legitimization of non-WMD CBW.”¹²⁸

Chemical riot control agents are allowed for law enforcement purposes only



Photo by Flickr/ Plenty's Paradox

Within the OPCW the debate on possible new regulations on RCAs and incapacitating chemical agents is underway. Still, the OPCW has not yet put mechanisms in place to determine which RCAs violate the CWC. As a result, it is up to CWC States Parties to interpret the scope and nature of their CWC obligations. As a result, there is uncertainty as to which chemical toxic agents can legitimately be used for law enforcement purposes. So far, the OPCW has not come up with any appropriate initiatives to regulate the trade and use of these new agents. This whereas the 2018 CWC Review Conference has a clear mandate to examine the consequences of all scientific and technological

127 J.P. Perry Robinson, “Difficulties Facing the Chemical Weapons Convention”, *International Affairs*, vol. 84, no. 2 (March 2008), p. 237.

128 *Ibid.*, p. 238.

developments that are relevant to the Convention. All these pressing questions need to be urgently addressed. As Michael Crowley has put it: “If the OPCW does not take appropriate action, the situation could dramatically worsen as a result of ongoing developments, marketing, and subsequent deployment of a range of systems capable of delivering far greater amounts of riot agents over wider areas or more extended distances than currently possible”.¹²⁹ Crowley therefore suggests that “a dedicated, open-ended working group or some other formal mechanism within the OPCW” should be called upon to make recommendations on these issues as input in the upcoming Review Conference (of 2018).¹³⁰

All this makes clear that Amy E. Smithson’s assurance that CW are today fully discredited has proven to be not completely tenable. Instead, toxic chemical agents are developed and used in conflict situations (like Syria) as well as in prisons across the globe. The imminence of a truly global chemical industry combined with major advances in science and technology is rapidly making the future of (CW) verification rather shaky.

Keeping the OPCW Fit For Purpose: 3 Avenues

The OPCW has to be more innovative and perhaps even bolder in order to remain relevant in the “post-disarmament era”. In 2006, Sergey Batsanov argued that the “OPCW has been fortunate to avoid ‘acute bureaucratization syndrome,’ from which the UN continues to suffer, although some mild symptoms inevitably exist.”¹³¹ If true, this is a testimony to the OPCW’s political and practical relevance, and hence its overall credibility. “The OPCW in 2025” Report offers the best official outline of the OPCW’s own vision for the immediate future. The Report suggests that four principles will guide the transition of the organization: inclusive consultation; transparency; non-discrimination; and consensus building. The Report argues that “breaking down silos” and designating staff and units “for project-related work on cross-cutting issues” are all necessary to work “in a more effective, flexible, and resilient manner.”¹³² Leaving aside the fuzzy management-speak of part of this OPCW report, it is clear that the Organization is keen to stay agile and flexible, using all available ICT tools and infrastructure to show and prove that it keeps on top of things. This includes renewed attention for human resources, which is considered essential to the Organisation’s continued success.¹³³

129 Michael Crowley: “Perilous Paths: Weaponizing Toxic Chemicals for Law Enforcement”, *Arms Control Today*, vol. 46, no. 2 (March 2016).

130 *Ibid.*

131 Sergey Batsanov, “Approaching the 10th Anniversary of the Chemical Weapons Convention: A Plan for Future Progress”, *Nonproliferation Review*, vol. 13, no. 2 (July 2006), p. 352.

132 “The OPCW in 2025” (2015), p. 12.

133 *Ibid.*, p. 13.

Overall, the OPCW has certainly showed initiative, for example by introducing new mechanisms like the Fact-Finding Mission (FFM), the Declaration Assessment Team (DAT), as well as the Rapid Response and Assistance Mission (RRAM – see below). These innovations were introduced by the OPCW's Director-General after 2014, aimed at examining alleged uses of chlorine gas as a weapon in Syria, and clarifying questions as to whether Syria had declared its entire CW programme. These innovations were based on the spirit of the CWC, rather than its direct text, showing the resilience of both the Convention and the OPCW itself. For the OPCW, the immediate challenge will be to assure that these innovations are preserved, even when their immediate rationale may have expired (see below).

For the OPCW to remain relevant after its aim of universal disarmament of CW will be (almost) accomplished, this report argues that it has to make the switch from “disarmament” to “non-proliferation”. The report offers three avenues for this effort: (1) accept that this “switch” implies that the OPCW will gradually change from a technocratic into a more political (and hence politicized) organization, particularly since it cannot (and should not) avoid dealing with the challenge of CW terrorism; (2) assure that the OPCW maintains (and even strengthens) its role as a credible compliance-management organization, building trust through verification; and (3) strengthen the OPCW's outreach beyond the very small group of stakeholders, which will be key to maintain political and financial support as well as the requisite scientific know-how. The remainder of this Report will examine these three avenues in more detail.

Making the Switch: The OPCW may be forced to make the “switch” to non-proliferation due to changing realities in the security environment, as well as new and vocal demands from key States Parties. On 1 March 2016, Russia put forward an official proposal to negotiate (in the Geneva-based Conference on Disarmament) a new convention to tackle acts of chemical terrorism, which has put significant pressure on the OPCW. This Russian proposal took the international community by surprise, and is clearly part of a broader scheme to further politicize the OPCW. A fully-fledged Draft was presented by the Russian Ministry of Foreign Affairs in April 2016, and has been widely discussed within the CW expert community. Russia's chief rationale for a new Chemical Terrorism Convention is based on the premise that the CWC does not fully address the challenges of countering terrorism. Moscow claims that “a dozen countries, including very influential ones, have supported us.”¹³⁴

For now, this Russian proposal only has modest backing. Still, the OPCW would do well to take the proposal seriously, and even to use the underlying critique to its own advantage. To keep Russia firmly aboard the OPCW (which surely is absolutely

134 “Russian Proposal on the Chemical Terrorism Convention at the CD: Four Months Later”, *PIR Center* (30 June 2016).

essential), Moscow's points of criticism should be heeded, also since it provides the required external pressure that liquefies a still largely stagnant debate on the organization's future. Despite all the OPCW's own reports and many internal discussion papers, bold reform could be considered to maintain long-term international support.

The Russian proposal for a new chemical counter-terrorism convention forces the OPCW to come to terms, and perhaps even embrace, the already long-overdue shift from "disarmament" to "non-proliferation", and arguably even "counter-terrorism." Surely, there are large numbers of States Parties that remain reluctant, if not adamantly hostile to reforming an organization that does not bother them, and offers them a minimum of hassle and diplomatic aggravation. But this should not keep the OPCW from honestly assessing where the real problems and challenges lie, and what needs to change to address them head-on and to do so effectively. Other International Organizations, like NATO, have already reinvented themselves, transmogrifying from Cold War outfits to 21st-century security platforms. As the example of NATO bears out, this requires a combination of leadership, commitment, good ideas, as well as time (and patience).

OPCW reform may also halt the momentum of the Russian proposal for a new, competing convention. Oliver Meier and Ralf Trapp have already questioned the merits of this Russian proposal on two accounts: First, the Russian argument that the CWC does not fully address the challenges of countering terrorism is problematic. Both the CWC (and UNSCR 1540) oblige all States Parties to enact national penal legislation with respect to prohibited activities allowing them to prosecute and punish any natural or legal persons misusing toxic agents for hostile purposes. Second, even if Russia might be right that the OPCW needs to shift its focus on combating chemical terrorism, introducing a new convention may not be the best, and certainly not the swiftest, way to generate more and better international cooperation in preventing such acts.¹³⁵ The OPCW could point out that Russia's proposal might (as Meier and Trapp argue) "in fact run the risk of increasing fragmentation, resulting in legal uncertainties and incoherence".¹³⁶ This is an especially important and relevant observation since the CWC itself offers numerous mechanisms that remain unused or under-used. Surely, the CWC may need a new "toolbox", but even that may be achieved more easily (and more swiftly) within the existing institutional framework than by beginning from scratch. Meier and Trapp therefore suggest that the issue of chemical and biological terrorism could be best addressed by (1) strengthening existing regimes; (2) increasing efforts to enforce regime norms and regulations at the national level; and (3) enhancing international collaborations and coordination within and between the institutional settings (most notably the CWC and the BWC).

135 Oliver Meier and Ralf Trapp, "Russia's Chemical Terrorism Proposal: Red Herring or Useful Tool?", *Bulletin of the Atomic Scientists* (7 June 2016).

136 Meier and Ralf Trapp, "Russia's Chemical Terrorism Proposal" (2016).

Credible Compliance Management: So, how could the CWC be strengthened to include, explicitly, dealing with non-state actors and CW terrorism? The Convention's General Purpose Criterion (GPC; see Chapter 1) may well be considered the primary mechanism allowing the CWC to respond to new, and previously unknown chemical agents. The Convention is based on the understanding that any toxic chemical is prohibited when it is used for the purpose of warfare.

Surely, the starting point has to be that the CWC and the OPCW are (well-nigh) universal, which is key to avoid legal and real-world "black holes" attracting terrorists. Moreover, all CWC States Parties regularly confirm and underline their commitment to combating (chemical) terrorism, as they are obliged to do under international law (UNSCR 1540). The introduction of Fact-Finding Missions (FFM) is a useful, new and innovative mechanism, even if it remains limited to determining whether CW have been used; the question of by whom they may have been used, remains outside the OPCW's remit.

A careful balance should be struck between the necessity of institutional innovation and reform, and the fact that the CWC is a formal treaty which has been signed and ratified by 192 states. The OPCW should draw clear, and preferably formal, lessons from its CW disarmament of Syria and the removal of CW from Libya. In both cases, there was both a UNSC decision authorizing the OPCW's involvement, even when in the case of Libya the disarmament case was hybrid (partially cooperative; partially coercive). The legal clarity of the Syria and Libya cases has sidelined the bigger question of what the OPCW's responsibility and policy options are in case of a violation of the CWC. It is undisputed (for now) that the OPCW remains a "compliance-management" body, which has no formal role in the process of prosecution. Still, as the Syria and Libya cases prove, there is an urgent need for contingency planning within the OPCW on how to deal with CW terrorism.

Another suggestion to further strengthen the effectiveness (and efficiency) of the OPCW's verification efforts is renewing the debate on the so-called "state-level concept" that has been discussed (since 2013) in the IAEA. The state-level concept is an approach "in which the IAEA considers a broad range of information about a state's nuclear capabilities and tailors its safeguards activities in each state accordingly."¹³⁷ The IAEA's main objective was to better allocate limited safeguard resources, focusing on a wide range of information provided by States Parties as well as open sources. This would allow the IAEA to reduce routine inspections where it has found no indication of undeclared activities, and instead direct resources to areas and issues of safeguard

137 David Trimble, Josey Ballenger and Glen Levis, "IAEA's Implementation of the State-Level Concept", *US Government Accountability Office*, Washington DC (October 2014).

concern. The US has overall supported the IAEA's plans to work in this manner and to take the state-level concept as a guiding principle.

Criticism has particularly focused on the lack of objective criteria which could result in the IAEA implementing its safeguards activities in an inconsistent, subjective and potentially discriminatory manner. Concern was also aired that the state-level concept might allow the IAEA to be too intrusive, allowing the Agency too much latitude in gathering information on its own. The OPCW has to take these concerns to heart, since its current verification system requires more focus. As Mohamed Daoudi *et al.* argued (in 2013): "There appears to be less of a focus on the broader questions of whether an inspected facility is capable of engaging in CW-related activities and how confident the inspection team is that the facility would not engage in such activities if it had the technological capability to do so."¹³⁸ Indeed, the degree of confidence created by its verification system is directly related to the scope and reliability of the verification process itself. This requires modernization, including the adoption of a comprehensive and more analytical approach to verification based on all available (open source) and verifiable information and data.

Today, the OPCW verification system lacks provisions for assessing the completeness of national declarations, and is limited to evaluating the correctness of declarations only. Although Article VII of the CWC explicitly requests States Parties to enact penal legislation with respect to prohibited activities by natural or legal persons (i.e., non-state actors), it is a reality that approximately 36 per cent of these States Parties (to the CWC) have yet to fully adopt the required national legislation. The OPCW therefore still has a massive challenge to redress this situation, most notably through its international cooperation programmes. The OPCW offers model legislation in this area, as well as practical assistance with legal drafting for those states that require (and request) this. The suggestion to allow the OPCW Technical Secretariat to visit National Authorities (NAs) to obtain assurance on the accuracy and completeness of their declarations, now seems to gather some support among CWC States Parties. However, even this rather common-sense proposal (which takes a leaf out of the IAEA's rulebook, which conducts audit-type visits to NAs regularly) represents a significant departure from current OPCW practice. This should go hand-in-hand with dealing with identified shortages in the OPCW's investigative capabilities (including skills and technologies), which came to the fore during Fact-Finding Missions. These concerns with regard to so-called "scientific literacy" are important to prevent CW re-emergence and counter-terrorism (e.g., by understanding the differences between state and terrorist CW agents).

138 Mohamed Daoudi, John Hart, Ajey Lele and Ralf Trapp, "The Future of the Chemical Weapons Convention: Policy and Planning Aspects", *SIPRI Policy Paper*, no. 35 (April 2013), p. 25.

Verification modernization could even include the option of using satellite imagery for the planning of non-routine missions (in particular for IAU and CI). These ideas were already floated in the OPCW SAB Report on Verification, in June 2015. To further support OPCW verification, the analytical capabilities of laboratories should also be enhanced, including bio-medical samples, toxins, as well as investigative analysis (chemical forensics). Given the changing nature of the CWC's future verification challenges (more facilities, spread across the globe, new scientific and technological realities, etc.), the OPCW will have to confront hard choices, above all on which regions and industrial sectors need specific (verification) attention. Concentrating attention on regions (mostly in the developing world) where national control mechanisms are weak and vulnerable, will be the most logical way ahead. Still, in order to avoid a counterproductive narrative of "the West vs. the Rest", the OPCW also needs to focus on the (research) centres of the biochemical industry, which are mainly to be found in OECD countries.

Still, the real risk here is not the minor controversies that a state-level concept of verification may generate, but the risk of dramatic damage to the OPCW's verification system, and, further down the road, damage to the CWC itself. Greater OPCW assertiveness could (and perhaps should) include Challenge Inspections, which remain the only true deterrence measure for violations of the CWC. Better information combined with improved technical know-how (probably derived from a state-level approach) may allow for future Challenge Inspections, thereby strengthening the OPCW's credibility.

Outreach, Engagement and Rapid Response: One way to achieve these goals is to actively improve the public knowledge and image of the OPCW. Broadening the current small circle of people who acknowledge the global importance of the OPCW seems crucial to secure the Organisation's future. While the CWC/OPCW dossier is now mostly dealt with at the level of Ministries of Foreign Affairs within States Parties, the organisation should step outside the traditional circle of diplomats and experts, and actively reach out to domestic security officials, the chemical industry, and the general public in its States Parties. Next to its crucial work on multilateral arms control, its unique knowledge and expertise must be opened to those who are dealing with the potential use of chemical weapons by non-state actors. For example, connections with Ministries of Internal Affairs or Ministries of Justice could be strengthened as a matter of urgency.

Although the OPCW's success is at least partially explained because it largely works "under the radar", this political invisibility also creates risks for its future relevance (and funding). As long as only few people outside the specialist circle of diplomats and arms control experts are aware of the OPCW's work, the organisation remains vulnerable. This is particularly true since many States Parties are facing budget constraints and looking to cut costs. The growing criticism in certain states (including the US) of large multilateral organisations also adds to the political (and hence financial) pressure on the OPCW. In order to offer a convincing set of answers to the question "What is in it

for me?”, the OPCW has to make a convincing case that it is imperative to make the “switch” from chemical disarmament to non-proliferation and CW counter-terrorism. To make a compelling case, the OPCW (backed by key States Parties) has to prove that it has both the resources and practical capabilities to support the prevention of CW re-emergence and (chemical) terrorism.

An exercise by the U.S. Navy involving a response to a chemical weapon attack



Photo by U.S. Navy / William R. Goodwin

To boost the OPCW’s relevance, more attention (and commensurate resources) therefore has to be given to honouring the obligations under Article X (of the CWC), which deals with the provision of emergency assistance to a requesting state in the case of CW use (or the threat of such use). The OPCW’s recent removal (for destruction) of Libya’s remaining stockpile of (potential) CW in 2016 offers pointers to the way ahead. In July 2016, the Libyan government made a formal request for international assistance to have a stockpile of hundreds of tons of industrial chemicals removed. In late 2015, an extremist group had already staged an attack against a security checkpoint a few dozen kilometres from the storage site, followed by another attack (even closer to the site) in May 2016.¹³⁹ Libya’s formal request was quickly followed by a rapid OPCW response, together with several States Parties (most notably Canada, Denmark, Finland, Germany,

139 John Hart, “Moving Day”, *CBRNeWorld.com* (December 2016).

Italy, the UK and the US). As Kristian Jensen, Denmark's Foreign Minister, argued: "We have now removed the chemical remnants from Libya and have ensured that they will not fall into the wrong hands."¹⁴⁰

Learning lessons from Syria and Libya, the OPCW took steps to establish a Rapid Response and Assistance Mission (RRAM), a team of OPCW experts that is deployed (at short notice) to assist a State Party affected by an unexpected chemical incident or attack. The RRAM (introduced by OPCW Director-General Ahmet Üzümcü in May 2016) is thereby billed as a "ready-to-go team composed of different experts that could be dispatched within several hours to a requesting state to assist them with the aftermath response in the field."¹⁴¹ The RRAM is innovative, although it is based on Article X (paras 8 and 11) of the CWC. The RRAM has capabilities to provide advice for assistance in response procedures, and is able to collect and preserve evidence (including sampling and analysis). The RRAM is specifically aimed to respond to requests from States Parties accepting an offer of assistance from the OPCW Secretariat (rather than from other States Parties). Although the establishment of the RRAM seems to be a timely innovation by the OPCW, it should be mentioned that these new Rapid Response Assistance Teams have yet to materialize and their success cannot yet be evaluated.

Prior to the Fourth Review Conference (RC-4) scheduled for 2018, debates on the process of reform and renewal are essential to generate new ideas. In the past, several States Parties have been reluctant to engage in such a debate, for economic, trade, financial, political and/or strategic reasons. The CWC's Review Conferences were supposed to regularly assess and modernize the Convention, adapting the organization's compliance-management system to often rapidly changing circumstances. During the CWC's past two decades of existence, this has not happened. The current circumstances and perspectives for the future of the OPCW make such debates and decisions inevitable. Postponing decisions regarding the adaptation of the OPCW for the "post-disarmament era" may undermine political support for the longer-term survival of the organisation as an active and relevant player in the field of global chemical weapons arms control.

Final Remarks

The OPCW has been a very effective multilateral arms control organisation in the past 20 years. The organisation is widely recognized for its huge contribution to almost universal chemical disarmament, most recently in very difficult circumstances in Syria.

140 "Libya Hands Over Last Stockpile of Chemical Weapon Ingredients", *The Guardian* (1 September 2016).

141 Quoted in the presentation by Veronika Stromsikova at the EU Non-Proliferation and Disarmament Conference, Special session on "Progress and Challenges in Chemical Disarmament" (London, IISS), 4 November 2016.

Yet, the recognition of past achievements is no guarantee for future support. With the disarmament efforts almost finished, the call from States Parties to reduce the size and budget of the OPCW will certainly increase – which, in turn, would cause a decrease of expertise and abilities to get the remaining tasks done. To remain relevant, this report advises the OPCW to shift its focus from chemical disarmament towards preventing the re-emergence of CW by state as well as non-state actors. Without changing the organisation's priorities, the OPCW could face indifference if not neglect by its States Parties, with the risk of becoming increasingly irrelevant.

To keep the OPCW relevant for another two decades, the organisation should make a switch from a focus on “disarmament” to “non-proliferation”. With that aim in mind, this report offers the following practical recommendations:

- 1) **Protect and Strengthen the Norm:** Despite the magnitude and dangers of the undertaking in Syria, the OPCW gave an excellent account of itself in shouldering this responsibility. The demilitarisation mission was carried out successfully (to the extent of what was declared) because of the close cooperation of States Parties and the work of the Technical Secretariat. However, the Organisation's policy making function has fallen short. Decisions regarding the use of chemical weapons have broken the tradition of consensus and have been voted upon. An erroneous perception has also taken hold that the OPCW cannot go in the direction of a judgement about compliance; that it can only report on technical facts. This only holds true to the extent of the work of an inspection team or an investigation conducted by the Secretariat. The Executive Council is fully empowered under the Convention to go further and to state what it thinks of the findings submitted to it by the Secretariat. An erosion of the norm must be prevented at all costs and States Parties must continue to forcefully campaign against the use of chemical weapons both at the OPCW and publicly.
- 2) **Prepare Well for the Fourth Review Conference:** There seems to be little disagreement that the Organisation needs to reprioritise its work and to focus on preventing the re-emergence of chemical weapons which is a more complex undertaking conceptually and practically. The initiative in this regard has largely come from the OPCW Secretariat with States Parties mostly reacting. The Fourth Review Conference in 2018 offers an opportunity to establish a road map for the OPCW for its future. It is important for States Parties to seize this opportunity. Review Conferences tend to become rituals where the lowest common denominator becomes the convenient basis for consensus. States Parties can insert substance and purpose into the next Review Conference by formulating and submitting proposals well in advance. There is now a substantial collection of documents issued by the Secretariat regarding future priorities. The Open Ended Working Group on Future Priorities would also have completed its work and hopefully submitted its own recommendations. States Parties can submit their working papers for the

Review Conference covering various issues indicating their own perceptions and recommendations regarding the way forward. This will ensure that discussions and preparations for the Review Conference do not merely regurgitate known positions but can focus on result-oriented outcomes.

- 3) Focus on the SAB's Recommendations: The Scientific Advisory Board submits its recommendations to successive review conferences. There is already a substantial amount of work that the SAB has done regarding issues that impact the future of the OPCW and its verification regime. There has been an effort to create channels of communication in order for SAB's technical work to be better understood by policy makers. There are, however, practical issues that hinder the institutionalisation of such interaction. Many States Parties in Asia, Africa and Latin America are constrained by the high costs of bringing their experts to The Hague on a regular basis. In the run-up to the Fourth Review Conference, arrangements could be made to sponsor expert-level participation on issues identified as ripe in the context of future priorities and on which a sustained dialogue involving both experts and policy makers would help forward movement. This is a mechanism that is utilised by other international organisations and is facilitated by the creation of separate funding mechanisms supported by voluntary contributions. The EU has played a prominent role in supporting the work of the OPCW including by investing significant amounts of funds for various programmes. In the context of establishing a firm footing for the OPCW's future priorities, it could consider launching and supporting such an initiative.
- 4) Strengthen the OPCW's Outreach: Currently only a very small group of stakeholders is involved in (and aware of) the OPCW. Enlarging this group will be key to maintain political and financial support as well as the requisite scientific know-how in the near future.

As a final remark, this report emphasizes that a key factor of a successful "switch" from disarmament to non-proliferation – and thus in securing the future relevance of the OPCW – is the willingness of its States Parties to enable it. The current tensions among States Parties regarding the OPCW's role in Syria may complicate finding unanimity in this regard, but could also offer a chance; the tensions demonstrate that a status-quo situation will not be helpful to anyone, but that policy changes are required to be able to deal effectively with today's chemical weapon-related incidents. Even more, the tensions show that the need for action is urgent. Postponing decisions regarding the adaptation of the OPCW for the "post-disarmament era" risks undermining political support for the longer-term survival of the Organisation. That, in turn, would be a real loss for the international community, considering that the OPCW has been an active and relevant player in the field of global chemical weapons arms control in the past 20 years, and has the capacity to continue to do this in the future as well. The unique expertise of the OPCW in keeping the world free from the use of chemical weapons should not be lost too easily.

List of Abbreviations

ACW	Abandoned Chemical Weapons
AU	African Union
BTWC	Biological and Toxic Weapons Convention
BWC	Biological Weapons Convention
CBRN	Chemical, Biological, Radiological and Nuclear
CPPNM	Convention on the Physical Protection of Nuclear Material
CTBT	Comprehensive Nuclear Test Ban Treaty
CTBTO	Comprehensive Nuclear-Test-Ban Treaty Organisation
CD	Conference on Disarmament
CI	Challenge Inspection
CoE	Centre of Excellence
CSP	Conference of States Parties
CW	Chemical Weapons
CWC	Chemical Weapons Convention
DAT	Declaration Assessment Team
DG	Director-General
EC	Executive Council
EU	European Union
FFM	Fact-Finding Mission
GPC	General Purpose Criterion
IAEA	International Atomic Energy Agency
IAU	Investigations of Alleged Use
ICT	Information and Communications Technology
IO	International Organisation
IS	Islamic State
ISIL	Islamic State of Iraq and the Levant
ISIS	Islamic State of Iraq and Syria
JIM	Joint Investigative Mechanism
MFA	Ministry of Foreign Affairs
MTP	Medium-Term Plan
NAM	Non-Aligned Movement
NGO	Non-Governmental Organisation
NLW	Non-Lethal Weapons
NPT	Non-Proliferation Treaty
OCPF	Other Chemical Production Facility
OCW	Old Chemical Weapons
OEWG	Open-Ended Working Group
OEWG-FP	Open-Ended Working Group on the Future Priorities of the OPCW

OPCW	Organisation for the Prohibition of Chemical Weapons
R&D	Research & Development
RC	Review Conference
RCA	Riot Control Agent
RRAM	Rapid Response and Assistance Mission
S&T	Scientific and Technological
SAB	Scientific Advisory Board
SCN	Security Critical Network
SIX	Secure Information Exchange
SNCN	Security Non-Critical Network
TS	Technical Secretariat
UK	United Kingdom
UN	United Nations
UNODA	United Nations Office of Disarmament Affairs
UNSC	United Nations Security Council
UNSCR	United Nations Security Council Resolution
US	United States
USSR	Union of Socialist Soviet Republics
WHO	World Health Organisation
WMD	Weapons of Mass Destruction
WMDFZ	Weapons of Mass Destruction-Free Zone

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