

CHEMICAL WEAPONS CONVENTION

Past, Present and Future

Ajey Lele and Natallia Khaniejo

**CHEMICAL WEAPONS
CONVENTION: PAST, PRESENT
AND FUTURE**

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Fax.(91-11) 2615 4191
E-mail: contactus@idsa.in
Website: <http://www.idsa.in>

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Introduction

The modern age is witnessing the emergence and proliferation of several lethal and devastating technologies, all developed in the quest for the dominion of power. Various wars have witnessed multiple uses of different types of weapons. Over centuries the dynamics of power have replicated themselves in strange ways and the tools used to wreak havoc onto enemy armies have gotten more sophisticated.

In recent times, poisonous gas has been used as one of the weapons in war fighting. During the First World War particularly, poisonous gases such as chlorine, phosgene, and mustard gas were used extensively. Since then (as late as April 2018 sarin was used in Syria) there have been various occasions when these gases have been used in the battlefield. Such poisonous gas weapons, known as chemical weapons, are classified under the category of Weapons of Mass Destruction (WMDs) and also termed as CRBN weapons (Chemical, Radiological, Biological and Nuclear Weapons), all of which, if used carelessly could have apocalyptic effects. The usage of such weapons in varying capacities across battlefields today has become a deep cause for concern. Therefore global cooperation in preventing this is absolutely essential if geostrategic peace is to be maintained. Chemical weapons have been found playing a major role in Syria's civil war and have been used to deleterious effect by various parties in the conflict. Presently, more than ever, the validity of the Chemical Weapons Convention (CWC) as a prohibitory treaty needs to be re-evaluated, as the Organization for the Prohibition of Chemical Weapons (OPCW) redefines its approach towards the destruction of these hazardous tools.

2018 marks the year of the Fourth Special Session of the Conference of the States Parties to Review the Operation of the CWC or the Fourth Review Conference (RC). This paper provides a background to this entire

issue and offers some policy recommendations to address the threat from chemical weapons. It also attempts to discuss the challenges for the upcoming Fourth Review Conference. In order to establish the background for the debate, the paper begins by providing a brief history of weapons developed based on chemical substances, followed by an overview of the CWC and an examination of the earlier review conferences.

A Brief History of Chemical Control

Poisoned weapons (and weapon-heads specifically) have been a constant construct in the wars fought over the ages. The first attempt at controlling the proliferation of such tools of war can be traced back to 1675 when France and Germany signed an agreement preventing the use of poisoned bullets in Strasbourg. The second key event in the history of chemical weapons was the Brussels Convention on the Law and Customs of War of 27 August 1874. The Convention prohibited the use of poisoned weapons as well as the use of arms, projectiles or material that could cause unnecessary suffering'.¹ However, the Brussels Convention never entered into force.

The twentieth century witnessed a very different form of chemical warfare, where the poison was not limited to localized surface areas such as bullets or weapon heads, but was released into the air and water supply instead. The use of poisonous gases was a hitherto unwitnessed terror, as there was no way to avoid or filter them out of the air or escape them at all.

The twenty-first Century has seen these measures become even more complex, as distinctions are now being made between Incapacitating Agents (IA), Riot Control Agents (RCAs), and Chemical Weapons. Furthermore,

¹ Genesis and Historical Development of the CWC, OPCW Website. Available at <https://www.opcw.org/chemical-weapons-convention/genesis-and-historical-development/> Accessed on 3rd March 2018. For various details on history and other issues refer to Bretislav Friedrich et al (eds), *One Hundred Years of Chemical Warfare: Research, Deployment, Consequences*, Springer Nature, Cham, Switzerland, 2017.

incapacitating agents themselves are divided into the categories of “harassing agents, physical incapacitating agents and mental incapacitating agents.”²

The twentieth and twenty-first century efforts towards chemical disarmament, (that culminated in the Chemical Weapons Convention) can be traced to The Hague Peace Conference of 1889. The contracting parties decided that they would abstain from the use of asphyxiating and poisonous weapons, and were determined to uphold past treaties on disarmament as well. This decision, and the tenets of the convention, was reiterated by the contracting parties in 1907. However, World War I witnessed a flagrant disregard for the convention, with both sides using toxic chemicals to unprecedented extents. Chlorine, phosphine and other such toxic gases were used in trench warfare to horrifying effects. By the end of the war, 124,200 tonnes of chemical agents had been released and over 90,000 soldiers died out of exposure to these agents.³ Furthermore, the effects were not limited to death. Many victims suffered severe disfigurement and debilitating injuries.

Over the two world wars, variations and combinations of these weapons – such as mustard gas – were used to great effect to neutralize enemies. But the scale at which they were used, and the collateral damage that occurred as a result, shook the world out of its reverie and spurred international efforts to ensure that such inhuman methods were curbed and controlled. These efforts resulted in the 1925 Geneva Protocol for the Prohibition of the Use of Asphyxiating, Poisonous or Other Gases, or the Use of Bacteriological Warfare. The protocol however, was limited to the prevention of the use of chemical weapons in war, and did not have any regulatory mechanisms regarding the development and experimentation of chemical weapons. Furthermore, the lack of universal agreement and applicability meant that nation states that were interested in safeguarding their own sovereign interests were unlikely to cooperate unless they knew that the Protocol was globally applicable and replicable. Over

² Experts Meeting Report, *Incapacitating Chemical Agents: Implications for International Law*, ICRC, 2010.

³ See <https://beta.opcw.org/about-us/history>, accessed on 13 September 2018.

the course of the Cold War, US and Russia built up enormous chemical weapons stockpiles, the effects of which are still being suffered from. While the weapons weren't used in that period, research was still being conducted on lethal nerve gases, and effective ways of destabilizing and destroying the enemy. The gathered stockpiles were used between the years 1980-and 1988 during the Iran-Iraq War and are still being used in Syria today.

1968 witnessed the first dedicated talks that were aimed at global disarmament and destruction of biological and chemical weapons. The Biological Weapons Convention (BWC) came through and was concluded first. It was put out for signatures in 1972. "Negotiations on the CWC took much longer, progressing in fits and starts, as breakthroughs accompanied political and other changes."⁴

An ad hoc working group was established in 1980, and four years later they were asked to elaborate the "rolling text" of the treaty. While there were several concerns that emerged – such as issues of universality, verification, and blockages in scientific and technological development – the usage of chemical weapons in the Iraq War, and the potential of an all-out war, provided the impetus for the treaty to be passed as swiftly as possible. The CWC as we understand it today was opened for signatures in 1993 and came into force on 27 April 1997. Unlike the BWC, the CWC had an additional verification mechanism which took longer to negotiate and incorporate.

Chemical Weapons Convention

The CWC is a multilateral treaty mechanism aimed at ensuring that the world rids itself of chemical weapons. The treaty is overseen by the Organization for the Prohibition of Chemical Weapons (OPCW) and

⁴ Fact Sheet 1, OPCW Website, a Available at <https://www.opcw.org/documents-reports/fact-sheets/>, accessed on 4 March 2018.

through verification and inspection processes determines the commitment and progress being made by the signatory states towards demilitarizing and destroying chemical weapons stockpiles. In order to understand the treaty as it exists today, a little historical context is necessary. As is evinced by the Geneva Protocol, what we now call biological warfare and chemical warfare were considered similar since 1925 onwards for a significant amount of time. The weaponization of disease and poison were not segregated into separate categories until the 1960s when the former was considered too uncontrollable for battlefields. The Conference on Disarmament was one of the first instances that attempted to develop regulatory and control mechanisms around these issues in a discrete manner; it was formed in 1979 as the single multilateral disarmament negotiation forum of the international community. “Following a British proposal, negotiators in what was then called the Eighteen-Nation Disarmament Committee in Geneva decided to separate the two weapons categories and agree on a global ban on biological weapons (including toxins) there and then, while continuing to negotiate the more elaborate and demanding details of a global ban on chemical weapons.”⁵ While negotiating a ban on the weaponization of disease turned out to be the quicker procedure, nation-states seemed reluctant to ban chemical weapons, given their efficacy on the battlefield. Nation-states had witnessed first-hand the results they could wreak once released, and were unwilling to take a collective concrete stand on banning them permanently unless that stand was universally applicable. None of the countries wanted to leave themselves vulnerable to attack. Additionally, another key concern was the fact that chemical advancements were directly correlated to the techno-scientific architecture of the country and nation states were unsure about the various ways in which a ban on chemical weapons would translate to chemical research. The discussions that first emerged therefore were regulatory instead of prohibitive. Furthermore, several countries had major reservations in

⁵ Ramesh Thakur, Ere Haru, *The Chemical Weapons Convention: Implementation Challenges and Opportunities*, United Nations University, Tokyo, 2006.

committing to a complete ban on chemical weapons as evinced by the fact that the US did not sign the Geneva Protocol for almost 50 years.

It was not until the Iran-Iraq War of 1980-1988 that systematic efforts were made towards the destruction of these weapons altogether. This required changing the mindset surrounding chemical weapons. For a prolonged period of time, despite their horrific consequences, CWs were considered major deterrents securing the state against threats. Despite the fact that the Second World War was heavily shaped by the emergence of nuclear weapons, chemical weapons were thought to have played an important role in deterring enemy states and maintaining troop morale. The Cold War and the emergence of the arms race in the bipolar world further complicated the equation. The constant presence of suspicion and mistrust meant that most countries were unwilling to commit to treaties that would demand complete prohibition and development. “Any progress in CW disarmament negotiations, or lack of progress at times, as well as the development and procurement of new generations of chemical weapons, took place in this broader context of the political, military and economic competition between the two blocs”⁶. Exploratory talks on Chemical Weapons Disarmament began in earnest with the usage of these weapons in the Iran-Iraq War against civilians, and this was followed by bilateral attempts between the US and the Soviet Union, aimed at banning the “most dangerous chemical weapons”. These negotiations were aimed at curbing the arms race that had begun between the two countries – which eventually led to a stockpiling of “Intermediate-Volatility Agents” (IVAs) in the US and “Novichoks” in the Soviet Union. The failure of these bilateral negotiations, however, was contrasted by the resurgence of multilateral attempts at limiting the damage and scourge of chemical weapons as the Conference of Disarmament moved from its conceptual framework to structurally implementable mechanisms.

The environment of the Cold War and the arms race that occurred necessitated the need for a framework that was expansive and detailed

⁶ Ibid.

enough to deal with the huge number of stockpiled weapons that had been collected and stored. The treaty would also need to have review/verification mechanisms in place, in order to ensure that standards were being followed, particularly in the case of dual use or 'binary' weapons. The end of the Cold War, the disintegration of the Soviet Union, and the unification of Germany led to sincere efforts being made towards securing and ratifying support for the treaty. Several questions that emerged in the formation were – whether or not the ban should be permanent and all inclusive, whether they should include RCAs (that might be tools of State Control) and whether there should be a time frame within which these aims would need to be achieved.

“The draft Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction” was adopted in Geneva on 3 September 1992. At the recommendation of the General Assembly, the document was opened for signatures by the UN Secretary General on 13 January 1993. The convention had 165 signatures and 87 State Parties on 29 April 1997. The CWC was aimed at the ban on the development, prohibition, stockpiling and use of chemical weapons and on their destruction. The various articles of the Convention delineated the key ways in which the multilateral treaty would put an end to the development of, as well as destroy the previously stockpiled weapons.

The Articles of the Chemical Weapons Convention

The CWC consists of a preamble, 24 articles and 3 annexures. A brief overview of the various articles is provided below:

Article I states that the general obligations and the four key principles underlying the Convention. It states that each State Party will never undertake the following under any circumstance:

- 1) “To develop, produce, otherwise acquire, stockpile or retain chemical weapons, or transfer, directly or indirectly, chemical weapons to anyone;
- 2) To use chemical weapons;
- 3) To engage in any military preparations to use chemical weapons;

- 4) To assist, encourage or induce, in any way, anyone to engage in any activity prohibited to a State Party under this Convention.²⁷

Article II defines the key terminology that would need to be kept in mind while articulating the scope of the convention and the roadmap for disarmament.

Article III outlines the specific declarations that would need to be submitted to the CWC by the signatory states within 30 days. These include declarations regarding current weapons, old weapons, weapon production facilities and RCAs.

Article IV deals directly with the destruction of the chemical weapons, and the various procedures that would need to be followed in order to ensure successful implementation.

Article V states the methods to be adopted while shutting down and destroying chemical weapons production facilities.

Article VI outlines the various activities that are not prohibited under the convention.

Article VII outlines the national measures that each State Party would need to undertake and the nation's relation to the Organization.

Article VIII dictates the Organization's responsibility.

Article IX deals with consultation, cooperation and fact finding.

Article X examines the assistance and protection to be provided against chemical weapons.

Article XI examines the economic and technological development surrounding the creation and proliferation of chemical weapons.

Article XII encapsulates the various ways for redressal, and ensuring of compliance.

⁷ OPCW, *OPCW: The Legal Texts*, The Hague, 2015.

Article XIII talks about how the conference is related to other international agreements.

Article XIV determines the settlement of disputes.

Article XV delineates the steps to be followed if amendments are to be made to the document.

Article XVI examines the duration and steps for withdrawal for the agreement.

Article XVII outlines the status of the annexures.

Articles XVIII, XIX, and XX all deal with the signature, ratification and accession of the treaty.

Article XXI marks its entry into force.

Article XXII refutes reservations that might occur with regards to the contents of the Convention or the annexures.

Article XXIII designates the UN SG as the depositary of the Convention.

Article XXIV states the global applicability of the texts with the various translations available for accessibility.

A key point to keep in mind is that the drafters of the treaty chose to keep it flexible in order to ensure future adaptability. The inclusion of issues like economics, science and technology all ensure that the treaty remains relevant and manages to eradicate the scourge of chemical weapons eventually. Furthermore, the treaty boasts of certain key features that other treaties lack, such as short notice inspection and verification. The inspection and verification mechanism is a further process of the CWC that adds rigour to the document, reinforces the treaty and exhibits the commitment of its overseers towards creating a world free of chemical weapons. The inspection is to be undertaken by the OPCW. There are three key inspections that can be undertaken by the Organization. These are – Routine Inspections, Challenge Inspections and Alleged Usage.

Routine Inspection is aimed at State Parties, to ensure cooperation towards the destruction of chemical weapons in a timely fashion. “From April

1997 to October 2017, the OPCW has conducted over 6,600 inspections on the territory of over 86 States Parties.”⁸

The Challenge Inspection is outlined in Article IX of the mandate, and its inclusion is aimed at ensuring cooperation and preventing lack of compliance. Under Article IX of the Convention, “any State Party can request the Secretariat to conduct an on-site challenge inspection anywhere in the territory (or under the jurisdiction or control) of any other State Party.”⁹

The third mode of inspection is to verify/examine alleged usage of chemical weapons in areas of conflict. Articles IX and X outline the implementation of these mechanisms. In the 1980s/1990s, the UN established teams to investigate the usage of chemical weapons in Azerbaijan, Iraq and Mozambique. Since then, these inspections have been attributed to the OPCW, which is currently continuing its investigations in the case of the Syrian conflict as well. The OPCW has also established a proficiency-testing scheme with the objective of stimulating off-site sample analysis, in order to select laboratories that are capable of the following:

- 1) Performing trace analyses (ppm levels) of chemicals scheduled under the CWC and/or their degradation products in a wide variety of matrices;
- 2) Providing the Technical Secretariat with a detailed report on the analysis results that:
 - a. Contains analytical proof of the presence of the chemicals reported, and provides high certainty of the absence of other chemicals, relevant for the implementation of the CWC; and

⁸ Fact Sheet 5, OPCW, available at <https://www.opcw.org/documents-reports/fact-sheets/>, accessed on 5 March 2018.

⁹ Challenge Inspections, OPCW, available at <https://www.opcw.org/our-work/national-implementation/routine-tasks/challenge-inspections/>, accessed on 5 March 2018.

- b. Does not contain information on chemicals not relevant for the implementation of the CWC.¹⁰

On the whole, the CWC is one of the most comprehensive instruments, with a clear mandate aimed not just at limiting the stockpiling of such dangerous weapons but at eliminating them altogether. While mechanisms of verification, inspection and state responsibility all serve to ensure compliance, and the destruction of chemical weapon stockpiles, ensuring continued relevance, given the march of time, is a challenge for most treaties of this nature. There is a need to constantly re-examine and re-evaluate the role/responsibilities of the various stakeholders involved, in efficiently overseeing the CWC's mandate. One such mechanism for evaluation, aside from the Inspections, is the Review Conferences (RevCon). Given the geostrategic nature of the destruction of chemical weapons, and the stakes of the various militaries involved, periodic reviews are essential for determining the ways in which the Convention adapts to shifting geopolitical paradigms and polarity shifts. Since the inception of the CWC, the world has gone from being bipolar to unipolar to multipolar, with a plethora of emerging economies. Furthermore, the growing strength of extremism, and the establishment of rogue states and non state actors, has changed the global power balance significantly. The recent decades have witnessed renewed efforts to limit the proliferation of such weapons, but they have also been unable to limit them completely, in a systematic and strategic manner. Examples can be seen from the Iran-Iraq War (1980-1988) and the current war in Syria. A more recent example is also the usage of Novichok used to incapacitate Sergei Skripal.¹¹ While reviewing and examining the viability of the CWC as an instrument, it is also necessary

¹⁰ Markku Mesilaakso, *Chemical Weapons Convention Chemicals Analysis*, Wiley Blackwell, West Sussex, 2005.

¹¹ ANI, "India Says its Position on Chemical Weapons Clear and Consistent", *The Times of India*, 2018, available at <https://timesofindia.indiatimes.com/india/india-says-its-position-on-chemical-weapons-clear-and-consistent/articleshow/63818841.cms>, accessed on 26 May 2018.

to account for the shifting dynamics of warfare and the emergence of asymmetric models of attack and defence. The Review Conferences serve as fora where issues/lacunae and blind spots in the Convention can be discussed and mitigated.

The Review Conferences

Termed Special Sessions of the Conference of State Parties or Review Conferences (RevCon) for short, are five yearly reassessment mechanisms established as a means to ensure compliance, verification and assurance because of the global determination to stop the proliferation of chemical weapons and eliminate them altogether. As a method, the Review Conferences had already been adopted by the Biological Weapons Convention (BWC), the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), and the Comprehensive Nuclear Test Ban Treaty (CTBT). The CWC made a provision for a review mechanism in Article VII of the treaty. As mentioned above, the CWC and its functioning is overseen by the OPCW (which is constituted by the State Parties of the Convention) and the Review Conferences would be conducted under the aegis of the same. The three key organs of the OPCW are the Conference of the State Parties, the Executive Council and the Technical Secretariat. Article VIII of the Convention outlines the way in which the Review Conferences were to be constituted. Point 22 states that “The Conference shall not (take place) later than one year after the expiry of the fifth and the tenth year after the entry into force of this Convention, and at such other times within that time period as may be decided upon, convene in special sessions to undertake reviews of the operation of this Convention. Such reviews shall take into account any relevant scientific and technological developments. At intervals of five years thereafter, unless otherwise decided upon, further sessions of the Conference shall be convened with the same objective.”¹²

¹² OPCW, *OPCW: The Legal Texts*, The Hague, 2015.

The purpose of the Review Conferences is not just to monitor the efforts being undertaken by State Parties towards the prohibition and destruction of chemical weapons, but also to keep an eye open for scientific and technological advancements that might impact the principles of the Convention. One of the biggest concerns with regard to a lot of nuclear and chemical raw material is the aspect of its dual usage. This is particularly the case with chemical materials. They are extremely essential for technological and scientific research, but an unchecked/uncontrolled availability would also mean that they could be instantly weaponized. The Review Conferences therefore attempt to examine and inspect the progress that has been made thus far. They study the current state of stockpiled chemical weapons, make efforts at reducing the accumulated materials and factories, and try to mitigate their use in the future as well. “As a matter of general principle, the member states undertake to improve the effectiveness of strengthened review processes. This typically includes:

- (a) clarification or confirmation of the purposes of the Review Conference, Preparatory Committee, Committee of the Whole (CoW) and Open-ended Working Group (OEWG), respectively; and
- (b) agreeing to agendas, dates, institutional contacts, offer appointments, programmes of work, reporting mechanisms, rules-of-procedure, timetables, and venues.”¹³

The Review Conferences are structured over the course of two weeks, during the course of which the various State Parties come together to examine and debate the work undertaken by the OPCW, the relevance of the CWC in addressing current geopolitical and geostrategic challenges, concerns regarding specific technological issues, and other challenges that might prevent the widespread and effective adoption and application of the treaty. At the end of the conference, a political document/report is

¹³ John Hart, “Preparing For the 4th Review Conference of the Chemical Weapons Convention: Some Observations on Process and Outcomes,” *CBW Magazine*, January-July 2017.

produced by the Committee of the Whole, which is accompanied by the submission of various national documents, reports by the Technical Secretariat and the Scientific Advisory Board (SAB), as well as recommendations/suggestions/decisions made during the course of the conference. All the proceedings are documented in great detail, in order to trace a clear picture of the evolution of the CWC, and the various modes of application in evolving geostrategic contexts. The provisional agenda for the same is laid out prior to the conference, and a review that outlines the work undertaken between the various conferences is also published, in order to ensure that information is disseminated in an equitable manner.

First Review Conference

The First Review Conference was held between 28 April and 9 May 2003 in The Hague, Netherlands. It was attended by 113 State Parties, out of whom Haiti and Israel were given observer status. Angola and the Libyan Arab Jamahiriya were also provided with observer status. The conference also witnessed the participation of five international organizations, 22 non-governmental organizations and six industry associations. The Conference was chaired by Ambassador Nourreddine Djoudi of Algeria. The Conference faced several challenges that it attempted to negotiate over the course of the discussions, including budgetary pressures, enforcement mechanisms and working capital issues. In September 2001, the Executive Council established a Working Group for the Review Conferences, with the objective of preparing for the First Review Conference. There were several issues that occurred between the CWC's entry into force and the First Review Conference. These included the terrorist attacks of 9/11; budgetary constraints faced by OPCW; the replacement of the original Director-General Jose Bustani (he was removed after falling out with the US Government during 2002); and the questioning of the CWC as a mechanism requiring instant attention as opposed to more imminent threats such as the threat of biological weapons and the growth of terrorism. The financial crisis of 2001 meant that the OPCW was working on a severely limited budget, and was pushing for the establishment of a working finance capital group. The budgetary pressures stemmed from the OPCW's inability "to transfer funds leftover from the end of a given calendar year into the next, non-payment (or late payment) of annual contributions, and

the absence of a working capital fund (WCF) to smooth expenditures”¹⁴ The two key documents that emerged at the end of the First RevCon were the Political Declaration and the Review Document (aside from individual statements provided by each nation.)

Brief background to the Treaty

Key issues that had been brought up in opposition to the treaty, and concerns regarding its implementation before the First Review Conference were:

- 1) Violations might have been undetectable with ratification serving merely as a political tool
- 2) States with chemical weapons might remain outside the regime
- 3) The cost of destruction might be too high, and perhaps methods of incapacitation might work better instead.
- 4) The distinction between civil chemical materials research and military chemical materials research was not defined clearly, and might cause issues for legitimate industries.

Since 1997, significant advancements had taken place, but the rate of implementation could no longer be taken for granted. On the positive side, four countries had made the availability of chemical weapons known. Furthermore, “eleven States Parties declared a total of sixty-one current or past CW production facilities, nine States Parties declared possession of old chemical weapons, and three declared (ownership of) abandoned CW on their territory.”¹⁵ With respect to possessing CW stocks, the US and Russia were known secrets, but India and South Korea also came forward with their declarations and reinforced their commitment to the destruction of these stockpiles. The first deadline for destroying Category I Chemical Weapons had been 2007, which was further pushed back to

¹⁴ Ibid.

¹⁵ Alexander Kelle, “The First CWC Review Conference: Taking Stock and Paving the Way Ahead,” Disarmament Forum, 2002.

2012. However, even this deadline wasn't eventually met, as the report for the First Review Conference stated the need for extending the deadlines. The report states that "there has been progress in chemical weapons disarmament. However, there have been difficulties in the destruction of chemical weapons stockpiles, and the Conference has taken action on delays in some States Parties and granted extensions of destruction time limits, as provided for by the Convention."¹⁶

Furthermore, in 2001, the OPCW suffered from a severe budget crisis that culminated in a sudden leadership change. The crisis was attributed to the late reimbursement of verification costs to the OPCW by CW possessor states. All these delays led to a severe resource crunch that limited the OPCW's actions tremendously. The US and the OPCW chair, Jose Bustani, continued to play the blame game regarding financial mismanagement, and this culminated in the US successfully managing to oust Bustani. Argentinian Ambassador Rogelio Pfirter took his place and began overseeing the OPCW's functioning. A major mandate for the Review Conference was therefore the discussion of how the OPCW's finances were to be managed for maximum efficiency, in order to ensure that another such incident wouldn't occur.

A third important detail was that after 9/11 the threats of chemical terrorism became very real, and governments across the world began looking to the CWC and the OPCW as the solution to the problem. The First Review Conference was intended to take stock, over and above the annual convention of State Parties, in order to ensure that the destruction of CW stocks was taking place in a time bound manner, and to debate any challenges that might have occurred over the five years of the treaties' entry into force. "As on late February 2003, the OPCW had conducted 1,359 total inspections in 51 State Parties, including inspections of chemical weapons production and destruction facilities, abandoned chemical

¹⁶ Report of the First Review Conference, OPCW, 2003, available at <https://www.opcw.org/documents-reports/conference-states-parties/first-review-conference/>, accessed on 15 March 2018.

weapons, old chemical weapons, and chemical weapons storage facilities.”¹⁷ Furthermore, between 1997 and 2003, over 6,700 tonnes of chemical agents were destroyed. There were, however, certain disappointments regarding the timelines that had been set for the destruction of chemical weapons.

Putting budget constraints and rising paranoia regarding terrorism aside, there were certain key methodological challenges that also presented themselves in the preparatory phase. These included the pre-reads that would need to be created, as well as the question of whether an article-by-article, or a cluster group approach would be more beneficial for the issues at hand. The working group conducted over 30 meetings in the preparatory phase while trying to outline the mandate for the First Review Conference.

Key issues debated

Some of the key issues that emerged during the discussions were:¹⁸

- 1) The need to review the CWC’s verification system.
- 2) Questions of “universality” with respect to the CWC membership.
- 3) National Implementation Measures.
- 4) Scientific and technological advancements that might pose challenges to the CWC’s implementation.
- 5) The development of the OPCW Technical Secretariat.

¹⁷ Kerry Boyd, “Six-Year-Old CWC Passes Some Tests and Fails Others”, *Arms Control*, 2003, available at <https://www.armscontrol.org/print/1239>, accessed on 15 March 2018.

¹⁸ Alexander Kelle, “The First CWC Review Conference: Taking Stock and Paving the Way Ahead,” *Disarmament Forum*, 2002.

- 6) Verification measures and the need to optimize the efficacy of such measures.
- 7) International cooperation and assistance.

The declarations aside, there were certain key concerns that would impact the way the review process was conducted. The first concern was linked to delays in the implementation of the CWC timeline. The timeline for the destruction of CW stockpiles was to be 1 per cent, 20 per cent, 45 per cent, and 100 per cent. Russia was unable to meet the demands for the first two deadlines and requested a stay on all four. The United States also requested a delay of two years on the implementation of the second deadline, given the vast quantities of chemical destruction, and the sensitive nature of the process itself.

The second key concern was that while several countries had joined the treaty, 18 states had not ratified the treaty at the time. This was due to the geostrategic instability in the Middle East. The countries that had not signed/ratified the treaty included Libya, Syria, North Korea, and other Middle Eastern countries. The latter – primarily Egypt – refused to sign the treaty until Israel was made to sign the Nuclear Non Proliferation Treaty. The geostrategic rivalries within the region impacted the way nation states approached the treaty, and in the absence of universal enforceability and reinforced methods of verification, commitment to the treaty was half hearted at best.

The Conference itself began on a relatively acrimonious note, with the US accusing Iran, Libya, Syria and North Korea of not complying with the treaty and stockpiling chemical weapons. The Iranian delegate refuted the allegations and further posited that it was the US that was flagrantly flouting the CWC mandate and using these accusations as means to divert attention from its own actions. The Iranian delegate further cited the Iran-Iraq War, and stated that CW capabilities and stockpiles that existed had all been developed during the 1980s-and 1990s, and subsequently been declared to the OPCW. Thereafter, the proceedings settled down considerably, as countries attempted to recount the measures taken over the preceding five years, since the establishment of the treaty, while also debating the relevance and applicability of the CWC's articles in the context of the First RevCon's global environment.

Given the rising threat of terrorism, the financial crash, and the changing global security paradigms, one of the biggest issues that was up for debate was the question of the universal applicability of the CWC. While referring to the clear geostrategic inequality between the varying levels of development amongst the State Parties, the universal applicability of the CWC and its mandates became a concern. The aims and tools of the treaty would have to be tempered in such a way that it addressed the power differential between the haves and the have-nots, while attempting to equalize the global security architecture by ensuring improved International Cooperation and Assistance (ICA). During the course of the Conference, it emerged that four State Parties had stated CW possession, and the destruction of the stockpiles was proceeding according to schedule in three of them. The original timeline for the destruction of stockpiles had been three years after entry into force, but at the Review Conference it was observed that Russia had only dented its CW arsenal by 1 per cent. An extension was provided to the Russian Federation and it was required to destroy all its CW stocks by 29th April 2007, ten years after the CWC's entry into force.

One of the key criticisms of the Conference was that it did not include enough multi-stakeholder representation. There wasn't enough engagement from "key stakeholders (of the) industrial, scientific and academic fields."¹⁹ While the conference was based on an extremely nationalist perspective, an important issue that was raised was that the CWC didn't yet apply to all the countries in the world. A key mandate for the OPCW was to ensure that all the countries signed the treaty by their first anniversary in 2007.

Recommendations of 1st RevCon

Some of the key points that emerged during the course of the proceedings were:

- 1) The challenge inspection and verification mechanisms proffered by the CWC were rarely used, in a global environment of suspicion, as countries were wary of retaliatory inspection challenges.

¹⁹ Ajey Lele, "CWC's First Decade", *CBW Magazine*, September-December 2007, Vol.1 No.1.

- 2) The universal applicability of the CWC would only be proven effective if international cooperation was encouraged under the aegis of the OPCW.
- 3) The major stakeholders with the largest chemical weapons stockpiles – The US and Russia – weren't undertaking destruction efforts in a time bound manner, and it was recommended that the OPCW monitor their efforts in order to ensure compliance.
- 4) Chemical terrorism was the emergent form of CW usage, as militaries no longer used them in conventional warfare. The OPCW would need to adopt a multilayered approach in order to counter such asymmetric threats, and safeguard civilians against such heinous weapons.
- 5) Industry controls were proving to be a challenge, and it was recommended that OPCW streamline its methodological approach before sampling and assessing Other Chemical Production Facilities (OCPF).

The Second Review Conference

The Second Review Conference was held a decade after the implementation of the CWC and its entry into force in April 2008. The conference was chaired by Ambassador Waleed El Khereiji of Saudi Arabia. The period between 2003 and 2008 witnessed States attempting to implement the takeaways between the first and second Review Conferences. The State Parties that had declared CW stockpiles were mandated to reduce 20 per cent of their stock by the Second Review Conference. The period also saw an examination of older chemical weapons factories, and case studies documenting the usage of chemical weapons in the Iran-Iraq War (1980-1988) by both sides. China made a note of chemical weapons factories and stockpiles that had been leftover by the Japanese, and the latter responded stating that they would start operating their destruction facilities from 2010. This period also witnessed the transference of Iraq's chemical agents to Syria, which has had devastating effects even today. As part of the Second Review Conference, "The Society for Chemical Weapons Victim Support (SCWVS), an Iranian NGO, (held) a display in the Conference centre about the effects of chemical warfare in the 1980s

(stemming from) attacks on the Iranian military by Iraqi forces and attacks that took place on civilian areas.”²⁰ All in all, the tone adopted for the Second RevCon was more conciliatory in nature with nation states attempting to collaborate towards the effective destruction of CW stockpiles. A surprising turn of events was that the US and Iran both softened the edge of their arguments, choosing to engage in more cooperative frameworks instead of attacking each other during the course of the general debate, as they did during the First Conference. The OPCW stated that “as on 16 March 2007, 100 per cent of declared chemical weapons production facilities had been inactivated, and 90 per cent of those facilities had been destroyed or converted for peaceful purposes.”²¹ They further mentioned that “30% of the 8.6 million chemical munitions and containers covered by the CWC had been verifiably destroyed, and almost 25% of the world’s declared stockpile of approximately 71,000 metric tons of chemical agent had also been verifiably destroyed. Since April 1997, the OPCW had conducted 2,800 inspections at 200 chemical weapon-related sites, and over 850 industrial sites in 77 States Parties.”²²

The change in leadership also made a significant difference in the way the budget was handled, and this issue was a significantly lesser concern compared to the first Special Conference of State Parties. While “consolidating”, “rebalancing” and “evolution” were key issues around which the proceedings were pivoted, certain controversial issues remained from the First RevCon. Further issues that were debated in the First Review Conference, and became essential to engage with in the Second were:

- a) The issue of Chemical Weapons Destruction posed multiple challenges as it faced problems with deadlines as well as compliance. The mandate of the CWC specified that all chemical weapons would

²⁰ *CWC Second Review Conference Report*, CBW-Events, 2008, available at <http://www.cbw-events.org.uk/contemp.html>, accessed on 16 March 2018.

²¹ David P. Fidler, “The Chemical Weapons Convention After Ten Years: Successes and Future Challenges,” *Insights*, 2007.

²² *Ibid.*

need to be destroyed by 29 April 2007. The aim was that a grace period of five years would be extended, but no further, and that States would need to make destroying stocks a priority, in order to ensure compliance with the treaty. Another controversial problem that had been raised during the First RevCon was that if there were countries that continued to remain non-signatories to the treaty, then developing mechanisms of control were futile, given the lack of universal compliance. The universality conundrum had certainly been mitigated to some extent, and the action plan showed improvements in the interim years. The number of non-compliant countries had reduced from 40 to 12, and quite a few countries from the latter were in the process of ratifying or signing their treaties while the Conference was being held.

- b) The second major issue flagged during the Second RevCon was the question of Other Chemical Production Facilities Inspections (OCPF's), and technical standards that could be used to determine how segregation of military/civilian usage was to be undertaken. One of the key criticisms of the First Review Conference was that there wasn't enough participation from stakeholders from the technical/scientific sectors, which would mean that adequate implementation would be impossible. Furthermore "While the number of facilities handling scheduled chemicals (was) in the hundreds, the number of declared OCPF's (was) over 5000 worldwide, and it (was) suggested that the geographical spread of OCPF inspections needed revision."²³
- c) The definition of what constituted CWs was another major point that emerged during the discussions. In the First RevCon the Swiss delegate had attempted to raise the question regarding Riot Control Agents and Incapacitants. He was rebuffed by the remaining State

²³ *CWC Second Review Conference Report*, CBW-Events, 2008, available at <http://www.cbw-events.org.uk/contemp.html>, accessed on 12 March 2018.

Parties, as these two are primarily used to oversee and control in-state/domestic violence. The State Parties were much less willing to agree to a complete shutdown of such agents that might serve to provide control within their territorial boundaries.

Key issues debated

In the period between the First and Second RevCons, the OPCW had effectively managed and eliminated its budgetary crisis. While the implementation of the chemical weapons destruction deadlines were not following schedule, the Director General had recommended waiting until the approach of the 2012 deadline before taking any drastic measures, involving a reassessment of the situation. The CWC had five key groupings, all of which were given titles (according to Article VIII) in order to ensure an “equitable geographical distribution”. Furthermore, in the interests of equality, one of the key points mentioned was also ensuring that the Convention was accessible in all languages across all countries. The Review Conference “recalled the decision of the Conference at its Sixth Session (C-VI/DEC.9, dated 17 May 2001 on the equal treatment of all official OPCW languages and called for further improvements.”²⁴ The general debate conducted over the first and second day of the RevCon witnessed the emergence of certain key issues that were carried over from the previous RevCon. These were:

- 1) **Universality:** Universality has been a key issue that plagued the CWC since its inception and entry into force. Without universal compliance, and an assurance of global destruction of chemical stockpiles, countries were unwilling to move forward. Countries that were not signatories to the treaty were not mandated to implement the mechanisms of the treaty, and this posed a key threat to all the countries that were attempting to destroy their chemical weapons stocks in a timely manner. Furthermore, even when countries were signatory to the CWC, the lack of ratification/the delays in

²⁴ *Report of the Second Review Conference*, OPCW, 2008, available at <https://www.opcw.org/documents-reports/conference-states-parties/second-review-conference/>, accessed on 18 March 2018.

incorporating the Convention's mandate continued to plague the member states. Finally a major issue that emerged with the destruction of old stockpiles and factories was the question of responsibility, with China raising the concern that despite approaching deadlines, the Japanese weren't doing enough to eradicate the CW factories that they had established.

- 2) Restrictions, Inspections and Verification Mechanisms and how they all tied in with the concepts of maintaining and upholding the CWC, was another key concern that was raised over the course of the general debate. Several State Parties mentioned that it would be useful to delineate and establish procedural guidelines with which the OPCW's role as an international arbiter of CW disputes could be reinforced.
- 3) Threats of chemical terrorism were an emergent issue that States were not quite sure how to mitigate. At the time, terrorism was mostly linked to national interests, and the State Parties' responsibilities were what determined how these threats were to be mitigated. The threat of Chemical terrorism and the dangers of delayed timelines led to the establishment of National Action Plans.
- 4) Incapacitants and Riot Control Agents were another key set of issues that were discussed during the course of the Conference, but given the complex nature of these materials, developing an agreement on their treatment and usage proved difficult within the brief interim of the Conference. Achieving parity was also difficult, in terms of the numbers of stakeholders involved. The Conference of the States Parties (CSP) text "was reviewed by approximately 21 member states who met in parallel. Once the 'other group's' draft document was circulated to the general conference, it became evident to many delegations that they had not been fully consulted."²⁵ Adequate

²⁵ John Hart, "Preparing For the 4th Review Conference of the Chemical Weapons Convention: Some Observations on Process and Outcomes," *CBW Magazine*, January-July 2017.

consultation was an extremely essential part of the process, without which the CWC would fall into the trap of being an unequal instrument, serving to aid the powerful and oppress the weak.

Recommendations of 2nd RevCon

Key recommendations that emerged during the course of the second RevCon were:

- 1) Engagement with the issue of Chemical Terrorism
- 2) Discussion of Incapacitants and RCAs and a determination of their usage in order to ensure that there was no global threat to stability in that regard.
- 3) Engaging with increased stakeholders from the scientific and technological community in an attempt to build a more holistic and inclusive Convention draft.
- 4) Keeping the Technical Secretariat's equipment up to date to ensure that verifications and inspections are effective.
- 5) Exhorting the State Parties to fulfill their responsibilities as per the Convention by providing timely funds and inputs.

The Third Review Conference

The Third Review Conference was held from 8-19 April 2013 at The Hague, and overseen by Ambassador Krzysztof Patulej. The interim period between the Second and Third RevCons witnessed a resurgence of chemical weapons, used by non state actors and as modes of asymmetric warfare. The presence and usage of chemical weapons in Syria during the course of its civil war is now a known fact, but who it can be attributed to is still debated avidly. As of 2018, the OPCW has confirmed that chemical weapons were used at least 34 times during the war. Reports further state that at least 1,283 people have been killed by chemical attacks in Syria. The UN Mission conducted an investigation of the proceedings in Syria, and stated that chemical weapons had been used in Syria. The UN decided to investigate 7 of the 16 allegations reported, as they did not receive sufficient

information on the rest of the allegations.²⁶ It confirmed that chemical weapons were in fact used in Syria to varying degrees and capacities. The most overt evidence of usage was at Ghouta, where the “United Nations Mission collected clear and convincing evidence that chemical weapons were used against civilians, including children, on a relatively large scale on 21 August 2013.”²⁷ The Third Review Conference witnessed key thematic shifts from chemical weapons destruction and arms control to non-proliferation. The Review Conference was also attended by the UN Secretary General, Ban Ki Moon, who reiterated the importance of the OPCW in maintaining the global security architecture. This collaborative approach could also be attributed to the OPCW-UN collaboration on the investigation and control of the situation in Syria.²⁸

In the events leading up to the Third RevCon, the Working Group published a review of the operations undertaken since the Second RevCon. These provided an overview of the key debates that had emerged in the Second Special Conference of the State Parties, and the destruction of chemical weapons that had occurred since. The report outlined the relative successes witnessed by the Convention in terms of multilateralism, general obligations, the universality debate and the verification process. The report stated that the verification mechanism was supported by 188 countries, and that it was the key to “ensuring that chemical weapons never re-emerge and, more generally, to promoting confidence among States Parties.”²⁹ The report further stated that almost three quarters of the world’s

²⁶ *United Nations Mission to Investigate Allegations of the Use of Chemical Weapons in the Syrian Arab Republic*, United Nations Report, 2013.

²⁷ *Ibid.*

²⁸ Fact Finding Mission, Department of Foreign Affairs and Trade, Australia, 2013, available at https://dfat.gov.au/about-us/publications/international-relations/australian-safeguards-non-proliferation-office-annual-report-2012-2013/current-topics/part03_outcomes_of_the_third_review_conference_of_the_cwc.html, accessed on 19 March 2018.

²⁹ Working Group, OPCW, *Review of the Operation of the Chemical Weapons Convention since the Second Review Conference*, 2012.

chemical stockpile had been eradicated. But a key concern was that the CWC was not on track to meet its target of the destruction of CW stocks by 2012.

The discussions preceding the Third RevCon clearly indicated a shift of emphasis from a “CW disarmament agenda to more of a development agenda or cooperation and assistance agenda.”³⁰ This would necessitate the OPCW’s collaboration with key civil society elements and several multi-stakeholders.. Developing such an inclusive approach has proved challenging, to say the least, and remains a key concern even today.

Key issues debated

The agenda for the Third Review Conference was based on the issues raised in the Second Review Conference, and the activities of the CWC in the interim. The agenda³¹ was focused on issues of universality, the role of the CWC in maintaining peace and security, and the implementation and challenges of particular articles of the Convention. There was also a stronger focus on the emergence of the threat of non state actors and chemical terrorism, with an attempt to outline actions States could undertake to secure themselves, and ensure that their stockpiles were not being used to manufacture and proliferate terror. Several themes emerged during the general debate. These included:

- 1) The Syria Investigation: This was the most imminent topic of discussion, with states and governments demanding an examination of the state of CW usage and stockpiling in the region. Some countries referred to the fact that the Government of Syria was obligated under the Geneva Protocol to cooperate with the Convention, and destroy its stockpiles as soon as possible. Russia

³⁰ Mohamed Daoudi, John Hart, Ajey Lele, and Ralf Trapp, “The future of the Chemical Weapons Convention”, SIPRI Policy Paper 35, 2013.

³¹ Conference of State Parties, Provisional Agenda for the Third Special Session of the Conference of State Parties, OPCW, The Hague, 2013.

demanded an investigation of the Syrian Government, the US reiterated the fact that the Syrian crisis was one of the biggest threats to global security, and Canada repeated its offer of donating \$2 million to the efforts being undertaken by OPCW and the UN.

- 2) **Use of Riot Control Agents and Incapacitation Agents:** A second issue that was discussed in greater detail, in view of the Syrian Crisis was the usage of Riot Control Agents and Incapacitation Agents by governments and countries across the world. The use of toxic agents as control mechanisms by governments was an issue raised by Switzerland during the course of the First Review Conference itself, but it didn't gain any merited discussion until the Third RevCon. Various State Parties gave their points of view during the debate. For example, while UK recommended against the usage of incapacitating agents and RCAs, Germany stated that they maintained the former for domestic law maintenance purposes. The US noted that the development of Riot Control Agents could be used to develop weapons as well.
- 3) **Universality:** While welcoming the five new member states - the Bahamas, the Dominican Republic, Guinea Bissau, Iraq, and Lebanon - that had joined since the Second RevCon, the Committee of the Whole (COW) outlined the importance of universal compliance and applicability. It noted that non-adherence was a major cause for concern, as it provided space for non-state actors to intervene, and restart the Chemical Armageddon. In order to prevent this, the COW further urged State Parties to ratify their agreements, intensify their efforts towards chemical weapons destruction, and continue annual reviews of efforts at outreach and policy.
- 4) **Chemical Weapons Destruction:** The third RevCon's report reiterated the non-discriminatory nature of the CWC, and encouraged member states to keep those tenets in mind while undertaking the destruction and conversion of CWPFs within national jurisdictions. Furthermore, "The Third Review Conference noted that, as on 31st March 2013, 55,474.00 MTs (79.90%) of declared Category 1 chemical weapons

had been destroyed under strict verification by the Secretariat.”³² But there was tremendous work that remained to be done in the future as well. The report further outlined that CW destruction, and the destruction of CWPFs would need to continue, in accordance with the CWC’s mandates.

- 5) Verification and Prohibition: The report outlined the challenges that populated the global disarmament landscape, and reiterated that verification and inspection measures were extremely essential for keeping the disarmament ethos alive. It was extremely important for State Parties to collaborate with the OPCW in order to ensure that misuse and proliferation of chemical weapons for military purposes wasn’t taking place. The report further encouraged the State Parties to send in their declarations regarding stockpiles and factories, and contribute towards building a more transparent security architecture. The report also outlined the various practices that were not prohibited under the CWC.

Recommendations of 3rd RevCon

The general debate brought out various issues regarding the CWC and its application. The basic apprehensions included issues of chemical terrorism, and the delays in the destruction of chemical stockpiles. The biggest challenge towards the drafting of the final output document was the use of chemical weapons in Syria.³³ The Committee of the Whole stated that:

- 1) Libya, Russia and the US were unable to meet the deadlines for the destruction of their chemical stockpiles.
- 2) Challenges involving chemical weapons and warfare were changing, given the shifting geopolitical situation and responses, and the role

³² Committee of the Whole, Third Review Conference: COW Report, OPCW, 2013, available at https://www.opcw.org/fileadmin/OPCW/CSP/RC-3/en/rc3cow01_e_.pdf, accessed on 13 September 2018

³³ CBW-Events, Third Review Conference Compiled Reports, 2013, available at <http://www.cbw-events.org.uk/contemp.html>, accessed on 13 September 2018.

of the OPCW and the CWC would need to be reformed to deal with emergent threats.

- 3) The international community was at risk of chemical weapons being acquired by non state actors, and the COW report reiterated the need for CWC compliance to prevent such willful or unconscious weapons proliferation.
- 4) Eight States were still not party to the CWC, which caused potential vulnerabilities and difficulties in universally destroying the threat from chemical weapons.
- 5) It was recommended that the State Parties, the Secretariat and the OPCW work with academia and civil society networks to develop transparent measures of scientific and technological advancement.
- 6) The Secretariat was encouraged to engage with measures such as International Public Sector Accounting Standards (IPSAS) to improve its budgetary status, and the organization, on the whole, was further encouraged to keep its approach flexible in order to ensure its current relevance.

India and the CWC

India has made committed efforts towards stopping the proliferation of chemical and biological weapons across the world. It has reaffirmed repeatedly that “disarmament is a primary goal of the Chemical Weapons Convention and should remain the priority, till the complete destruction of all chemical weapons is achieved”. With respect to the CWC in particular, Ambassador Venu Rajamony, who is the country’s permanent representative to the OPCW, has also stated that “India views the (CWC) as a unique, non-discriminatory disarmament instrument which serves as a model for the elimination of an entire category of weapons of mass destruction.”³⁴

³⁴ See ‘India Expresses Concern over Allegation on Use of Chemical Weapons’, *The Times of India*, 14 March 2018, available at <https://timesofindia.indiatimes.com/india/india-expresses-concern-over-allegation-on-use-of-chemical-weapons/articleshow/63304349.cms>, accessed on 17 September 2018.

India signed up with the CWC in January 1993 and ratified it in 1997. A few years after signing the treaty, India had declared that it owned 1044 tons of sulfur mustard. Not only did India make decisive efforts towards eliminating its stockpile, it also tried to present a positive example to other possessor states. On 29 April 1997, India also established the National Authority for Chemical Weapons Convention (NA CWC) in order to further facilitate chemical stockpile destruction. India's chemical industry has played a very constructive role over the years towards ensuring that CWC is adhered to. A large sector of the Indian economy is dependent on the chemical industry. Nonetheless, India has been firm about its position, and has unequivocally stated across fora that chemical weapons represent a dehumanizing, apocalyptic threat, and must be eliminated at all costs. The dangers of chemical terrorism, however, remain rampant.

While chemical terrorism poses a significant threat to most countries across the world, India and other such chemical industry dependent countries also run the added risk of being targets of chemical theft. Raw materials might be stolen, and chemical plants might be jeopardized by malicious actors. In 2009, the National Disaster Management Authority (NDMA) published a report on the management of chemical disasters, and reiterated the difficulties, in order to take the necessary steps to sufficiently secure India's borders against chemical terrorist threats. Even today, challenges remain such as difficulties in vulnerability assessments, inadequate ability to track the sale and purchase of hazardous chemicals, and inadequate surveillance mechanisms to track the movement of hazardous chemicals. Therefore, it is extremely essential for India to re-examine its chemical management process, and renew its determination towards ensuring the safety of civilian chemical materials as well.

Since then, however, India has made significant advancements towards investing in chemical safety. These include safeguarding the country against chemical terrorism as well as industrial accidents. These measures have also been implemented while exporting chemicals, as compliance with the Special Chemicals, Organisms, Materials, Equipment and Technologies (SCOMET) requirements has enabled India to become a member of the Australia Group in 2017.

In 2009, India completed the destruction of its chemical stockpile, and has played a key role in supporting the OPCW endeavours towards

stopping global chemical terrorism. Furthermore, in 2013, India offered \$1 million to the OPCW to help with the Syrian crisis. India also hosted the 12 OPCW Regional Meeting of National Authorities in Asia in 2014. The meeting was held with the intent of examining the universality of the CWC, and the future direction of the OPCW. In 2015, India also signed a 10 year defence framework agreement with the United States, in order to develop further defensive capabilities including a chemical and biological hazard suit. The resurgence of a tussle between Russia and the West has been evinced by the proposal made by the former, regarding a joint investigation into the Salisbury incident. In order to avoid getting caught in the squabble, India abstained from voting on the proposal altogether. “Overall, six countries voted in favour of Russia’s proposal, which included Pakistan, China, Iran and Azerbaijan.”³⁵ While explaining India’s position, Venu Rajamony, who is India’s permanent representative to the OPCW, stated that “all investigations of alleged use of chemical weapons should be conducted strictly in accordance with the provisions of the Convention.”³⁶ On this particular incident, though India abstained from voting, the position of India becomes clear in the joint statement of Indian and British Prime Ministers Narendra Modi and Theresa May: “In the wake of the appalling nerve agent attack in Salisbury, the UK and India have reiterated their shared interest in strengthening the disarmament and non-proliferation regimes against the spread and use of chemical weapons.”³⁷

³⁵ Devirupa Mitra, ‘India Abstains on Russian Proposal for Joint Probe Into Salisbury Attack’, *The Wire*, 6 April 2018, available at <https://thewire.in/diplomacy/india-opts-to-be-neutral-as-uk-and-russia-continue-to-spar-over-the-skripal-case>, accessed on 13 September 2018.

³⁶ Statement by Ambassador Venu Rajamony, Permanent Representative of India to the OPCW at the Fourth Special Session of the Conference of the States Parties, 27 June 2018.

³⁷ See ‘UK- India Joint Statement during the visit of Prime Minister to UK (April 18, 2018)’, Ministry of External Affairs, available at https://www.mea.gov.in/bilateral-documents.htm?dtl/29829/UKIndia_Joint_Statement_during_the_visit_of_Prime_Minister_to_UK_April_18_2018, accessed on 13 September 2018.

The Forthcoming Review Conference

The Fourth Review Conference is slated to be held in November 2018. It will examine the developments that have occurred between the Third Review Conference and now. There are several key issues that will need to be discussed, and strategies for arms control and chemical weapons destruction will need to be evaluated and reassessed. Recommendations from the first three review conferences ought to be re-examined if insights regarding how the CWC is faring in terms of implementation are to be achieved. The changing state of the geopolitical world order, the shifting nature and increased emergence of asymmetric/hybrid warfare, and the usage of existent chemical stockpiles by NSAs will all need to be discussed, if a viable action plan is to be devised. Thus far reports and verification mechanisms have proved that approximately 96 per cent of declared chemical weapons stockpiles have been destroyed. The recent resurgence in the use of chemical weapons as tools of war, however, has been a more challenging issue. The consistent usage of CW in Syria and the region has been one of the key debates, with countries claiming that the CWC's control over the situation is weakening. Currently there are 192 State Parties that are signatories to the treaty. Israel has signed the treaty but not ratified it, while Egypt, North Korea and South Sudan have neither signed nor ratified the treaty. 7 April 2018 witnessed another chemical attack in the Douma province of Syria, where OPCW inspectors are currently collecting samples in order to determine whether or not chemical weapons were used in the region. The OPCW has been monitoring the usage of chemical weapons in Syria since 2014, and they have stated that so far CWs have been used at least 34 times if not more in the region.

In 2017, the OPCW marked the Completion of the Destruction of Russian Stockpiles³⁸ but the challenges facing the world today have changed

³⁸ "OPCW Marks Completion of Destruction of Russian Chemical Weapons Stockpiles", *OPCW*, 2017, available at <https://www.opcw.org/news/article/opcw-marks-completion-of-destruction-of-russian-chemical-weapons-stockpile/>, accessed on 21 March 2018.

significantly since 1993. The mere elimination of State Parties' stockpiles – while an excellent step towards disarmament – no longer serves as a guarantor maintaining the sanctity of the security architecture. The war in Syria is just one way in which the modern chemical threat has reinvented itself, and today more than ever, nation states need to be aware of the dangers of negligence. Without collaborative efforts, these challenges cannot be mitigated, as States would need to put aside their suspicion for the sake of countering such emergent threats together. In February this year, the US and Russia disagreed on the issue of chemical weapons use in Syria, with the US blaming Russia for blocking efforts at inspection and destruction.³⁹ Furthermore, the attack on the Russian spy, Sergei Skripal⁴⁰ and his daughter further undercut the trust and confidence that would be needed to tide the world over such a global crisis. International cooperation and assistance; protocol for protection against non state actors, malignant actors and weapons of asymmetric warfare should all form part of the discussion of the Fourth Review Conference. Furthermore, the OPCW also needs to re-examine its mandate in the changing global environment. While anti-terrorism is not part of its mandate, it would still need to come up with a mechanism regarding how it can deal with rogue chemical stockpiles, and what its role should be in arbitrating asymmetric conflicts and disputes. Certain theorists would argue that to an extent, the CWC has been an effective deterrent preventing the usage of chemical weapons by terrorists. Nonetheless, it has not been entirely successful in eradicating the scourge altogether. “By keeping a tab on the production of chemicals that have commercial purposes but may also be used for making weapons,

³⁹ See Julian Borger and Patrick Wintour, ‘Syria Chemical Attack: US and Russia Fail to Reach UN Agreement as Tensions Rise’, *The Guardian*, 10 April 2018, available at <https://www.theguardian.com/world/2018/apr/10/russia-hits-back-over-syria-chemical-attack-with-call-for-un-inquiry>, accessed on 13 September 2018.

⁴⁰ Riccardo Labianco, “Russian Spy Attack Shows International Law on Chemical Weapons is Not Fit for Purpose,” *The Conversation*, 2018, available at <http://theconversation.com/russian-spy-attack-shows-international-law-on-chemical-weapons-is-not-fit-for-purpose-93315>, accessed on 13 September 2018.

the CWC effectively curtails the misuse of these products by terrorist elements.”⁴¹ However, in the cases where the weapons have already been acquired by malicious actors, the CWC is still struggling to come up with an effective response.

Key Challenges

There are several challenges that remain for the Fourth Review Conference. These are connected to the shifting geopolitical environment, the changing nature of threats, and the delays in the destruction of chemical stockpiles. When contacted, various experts⁴² in the field responded by pointing out the key challenges that remained:

- 1) Achieving total demilitarization has proved difficult in the past, and remains a challenge for the Fourth Review Conference.
- 2) Adapting industry verification systems to adapt to and account for changes in science technology, trade, and industry.
- 3) Working on building international cooperation towards a world free of chemical weapons.
- 4) Developing a holistic approach regarding the controversy of chemical weapons usage in Syria.
- 5) Providing assistance to State Parties in the case of attacks by non state actors, in a meticulous and organized way.

The biggest challenge for the Fourth Review Conference is defining the role of the OPCW and the CWC in the current context. Furthermore, a

⁴¹ Mirza Sadaqat Huda, “The Third Review Conference of the State Parties of the Chemical Weapons Convention: Relevance for South Asia,” *CBW Magazine*, Vol. 5, Nos. 3-4, July-December 2012.

⁴² The experts contacted were: Colonel H.R.Naidu Gade, Chief Consultant CBRNe India; John Hart, SIPRI; and Ralf Trapp, Consultant CBW Arms Control and Disarmament.

key challenge will be negotiating the multi-stakeholder collaborations that would need to be implemented in order to deal with the crisis in Syria in a more holistic manner. While bodies such as the OPCW Fact-finding Mission and Declaration Assessment Team (DAT) continue to function and provide data regarding ground statistics, the OPCW-UN Joint Investigative Mechanism in Syria ended on November 2017. There are other collaborative mechanisms that have emerged in the interim such, as the “International Partnership against Impunity for the Use of Chemical Weapons”, hosted by the French Foreign Ministry. The initiative seeks to develop a website that collates and presents information on all parties involved in supporting the usage of chemical weapons in Syria. Furthermore, there are also several other key stakeholders such as the International, Impartial and Independent Mechanism to Assist the Investigation and Prosecution of Persons Responsible for the Most Serious Crimes under International Law Committed in the Syrian Arab Republic (IIIM), and the Independent Commission of Inquiry into Syria (UN Human Rights Council) dealing with the crisis as well.

Developing a mutually interactive and collaborative approach is the need of the hour, and the OPCW could mediate these troubled terrains in a well-defined fashion. Dealing with challenges like chemical terrorism would require a firm reassessment of the current mandate, and a dedicated action plan for the future. “The balance and focus of the CWC regime are changing. At least two visions may be realized: one of an OPCW focused on CW threats, with most resources allocated accordingly; the other for the OPCW to serve as a model of international outreach and capacity-building for the peaceful uses of chemistry.”⁴³

Twenty years later, the challenges, context and problems with the CWC have changed significantly. While it still remains one of the most

⁴³ John Hart, “Preparing For the 4th Review Conference of The Chemical Weapons Convention: Some Observations on Process and Outcomes,” *CBW Magazine*, January-July 2017.

comprehensive conventions, with a rigorous review mechanism, there is always room for improvement in terms of the implementation process.

Recommendations

There are several actions that can be taken to strengthen the CWC and improve its role in maintaining chemical weapons peace across the world. Certain improvements that can be made include the following:

1. Continuing use of chemical weapons in the Syrian theatre is bound to be the key theme for the forthcoming Fourth Review Conference, slated to be held in November 2018. However, it also needs to be ensured that the Syrian events should not be allowed to overshadow the proceedings totally. This conference provides an opportunity to decide on the course of action for the coming five years, and hence a range of important issues needs to be debated.
2. Finding a solution to the problem of attribution. Determining culpability is one of the biggest challenges in the WMD spectrum, and with the rise of non state actors, and terrorist usage of chemical stockpiles, these challenges have gotten harder over time. Developing solutions/processes to find the perpetrator would be a difficult task, and apart from technology it would require designing some specific modalities acceptable to all.
3. Success of any review conference would be judged by the 'end result' it achieves. Hence, it is important to be cognizant of the happenings in the field of disarmament in the recent past. In this regard, it is vital to factor in the reality (more as a note of caution) about the outcome (near failure) of the 8th Review Conference of the Biological and Toxin Weapons Convention (BTWC). On similar lines, there is a possibility that certain States could have a different viewpoint on certain issues with regard to the CWC too. Hence, there is a need for the CWC administration to ensure the constructive engagement of all stakeholders, both before and during the conference, to avoid any obstruction.
4. The United States (US) is yet to fully destroy the declared stockpiles of the chemical weapons on their inventory. They have large

stockpiles, and the timelines for their destruction are known. However, the OPCW needs to maintain the pressure on the US agencies involved towards destruction, and also provide adequate assistance, if needed, to ensure that timely destruction does happen.

5. Presently, Syria's civil war is being fought on multiple fronts. Actually, it is not a war amongst two warring factions, but there are many factions and multiple actors belonging to different alliances involved in this. All this clearly indicates the asymmetric nature of modern day battlefields. There is a need for a fresh assessment with regard to the usefulness of existing CWC mechanisms to address these issues. It needs to be considered whether these mechanisms are adequate, and if not, then what possible options could be envisaged.
6. Matters like chemical weapons stored in a few bunkers in Iraq (some bunkers contain large quantities of unfilled chemical munitions), and victims of chemical weapons attacks in Iran, need more focussed attention. Wider discussions should also happen on issues like Riot Control Agents (non-lethal weapons) and the impact of modern chemistry on them.
7. There is a need for the Technical Secretariat to expand their work on education and outreach. Regular chemical disaster management exercises are required to be organized in various states in West Asia to raise the level of awareness amongst the masses.
8. Engaging with the building blocks and foundations that currently exist, and strengthening their role, is a priority and not an option. Dealing with the Scientific Advisory Board (SAB) recommendations, using the background from the Technical Secretariat, and engaging with various multilateral models of confidence building and cooperation would all serve to enable the system to function more efficiently.
9. Developments in modern chemistry could be both a boon and a bane for the society. States could be encouraged to strengthen their National Implementation Measures (ref Article VII of CWC) which could help in preventing undesirable elements from getting access to technology.

10. Developing a proactive approach to issues, instead of responding to crises as and when they come, is another major organizational challenge. The OPCW needs to take into account the changing nature of threats, and try to adjust its mandate and role accordingly.
11. The case of Syria clearly indicates that the “red line” in case of use of chemical weapon has already been breached, and there exists a possibility that such acts could happen in other parts of the world too. Also, it would be naïve to assume that all States which have signed the CWC as non-possessor states, actually do not have chemical weapons (there is a possibility of covertly maintained stockpiles), or the wherewithal to produce chemical weapons with them. Such issues would be extremely tricky to handle within the boundaries of the CWC, but some fresh thinking needs to begin in this context.
12. Incidents like the Salisbury incident on 4 March 2018, involving a toxic chemical/nerve agent, indicate the varying nature of threats in present times. A mechanism could be established for providing assistance to State Parties in the case of attacks by non state actors.
13. There is a need to debate issues concerning adaption of industry verification systems, to adapt to and account for changes in science technology, trade, and industry.
14. There is a need to evolve proactive approaches to address possible challenges in future, instead of doing fire fighting when crises arise. At present, the OPCW’s mandate is becoming more and more dynamic, and it is important to re-interpret the convention to take into account certain ground realities.
15. Future planning for the OPCW is mandatory. It is expected that the key issues for the coming five years could be mostly governed by the technological developments happening in the chemical realm. From the security perspective, the changing nature of warfare, and willingness of some actors to use chemical weapons would be a major challenge. Hence, there is a need for the OPCW to identify solutions well in advance, to address such issues.

16. The United Nations General Assembly had proclaimed (resolution 63/209) the year 2011 as the International Year of Chemistry. The OPCW had played a very constructive role towards these celebrations. Now the time has come to work on specifics, and the OPCW can take the initiative to support cutting-edge research in Green Chemistry.
17. Analytical chemistry is another area which could be of major focus for the OPCW in the coming years. The OPCW could take the initiative in education, training and research for various aspects of this branch of chemistry for its stakeholders. The skills could be developed towards toxicology, drug development, forensic analysis etc.
18. In order to popularise and expand the work on non-proliferation, arms control and disarmament issues globally, the OPCW could take an initiative to establish a coalition of Nobel peace prize winners in this field, like International Atomic Energy Agency (IAEA), the International Campaign to Abolish Nuclear Weapons (ICAN) and individuals like Mr Obama.
19. Advocating against landmines has become the legacy of Princess Diana. Her tireless efforts in this area have probably played an important role towards the success of the Ottawa Mine Ban Treaty. A treaty against chemical weapons is already in place. However, participation of any globally known and respected celebrity could help to popularise the issue and the cause.
20. To understand and plan for the future more clearly, OPCW can make investments into forecasting techniques like social network analysis (SNA), modelling & simulation, scenarios writing, net assessment, counterfactual etc.
21. Over and above encouraging cooperation and collaboration between State Parties, it would also be helpful for the OPCW and its various organs to engage with civil society thinkers for fresh ideas. Engaging in more Track 1.5/2 dialogues, building common information databases and engaging with relevant stakeholders across the world would all serve to strengthen the efforts.

There are several issues and challenges regarding the ways in which scientific advancement affects the functioning of the OPCW, as well as what falls under the ambit of the CWC altogether. This includes the following.

- 1) The CWC must find ways to prevent Article II.9 (d) of the Convention from being viewed as a license to develop incapacitating chemical agents.⁴⁴
- 2) Progress in the field of science and technology leads to the discovery of new materials as well as innovations in the usage of current materials. Furthermore, the knowledge base employed towards making civilian innovations in peace could just as easily be redistributed towards military machinations in times of war. The emergence of new chemicals and chemical processes would add challenges to the ways in which the CWC controls the spread and exchange of currently prevalent industry chemicals as well.
- 3) Innovations and discoveries might change the ways in which chemical plants operate, and therefore any supervisory mechanism would necessarily need to keep itself aware of the changes taking place and amend itself accordingly.
- 4) New technologies may challenge “established verification procedures and methodologies and require adaptations in the way routine verification is conducted.”⁴⁵
- 5) Unfortunately, the threat of use of chemical weapons continues to persist in the Syrian theatre. There is a possibility that some non state actors in other parts of the world could get motivated towards the use of chemical weapons.

⁴⁴ Malcolm Dando, *Neuroscience and the Future of Chemical Weapons*, Palgrave Macmillan, 2015.

⁴⁵ Mohamed Daoudi, John Hart, Ajey Lele and Ralf Trapp, “The Future of the Chemical Weapons Convention”, SIPRI Policy Paper 35, 2013.

- (6) Finally, new technologies might also affect the ability of inspectors to successfully and conclusively determine whether or not the inspected industrial activity poses a significant chemical threat.

In order to combat these problems, the OPCW would need to engage not just in a current spectrum examination of policy recommendations, but also in a scientific investigation of potential future threats that might occur, and the various ways in which they can be mitigated, in order to maintain a relatively peaceful world order.

Non-proliferation and demilitarization will remain key topics of debate during the Fourth RevCon. This is due to the fact that even as the State Parties convene for the Fourth Review Conference, there remain a small percentage of chemical weapons that are undestroyed due to various socio-political reasons. But another point of concern that should be discussed is the role of the OPCW in arbitrating not just current chemical crises but future ones as well. In order to successfully do so, it will be necessary for the Organization to keep itself abreast not just of the developments in science and technology but also the potential ramifications of those developments, and the ways in which they could affect the brittle equilibrium maintained today.

Developing techniques towards the establishment of preparedness and response mechanisms is another way in which the CWC can reinvent itself, not just as an archaic model of the past but as a forward facing treaty of the future. Issues that emerged before the Third Review Conference included complexities such as:

- (a) State-based armed conflicts and also the use of CBRN materials by non state actors.
- (b) Overlapping preparedness and response mechanisms to both counter deliberate releases of chemicals, and deal with natural events or industrial or transport accidents.²⁴⁶

⁴⁶ Ibid.

These issues haven't changed fundamentally or been addressed significantly, and it would be extremely useful to develop a holistic understanding of the ways in which they affect geopolitics today.

Conclusion

The global security conditions, developments in science and technology, and the chemical industry have all changed considerably since the emergence of the CWC in 1993. In order to remain relevant for the times, and develop a holistic approach to chemical threats, the OPCW and the CWC will have to evolve and redefine their mandate. At present, there is a danger looming in the form of chemical threats from non state actors, and a possibility of use of such weapons by state actors (possibly who are signatories to the CWC as non-possessory states but still could have developed such weapons covertly). The crisis in Syria continues unabated and no definitive solution is in sight. This is where the OPCW and the CWC can enter, in order to develop more holistic and proactive approaches to chemical attacks. Further, the OPCW needs to address the issues that have been niggling thorns in its implementation since its inception. Questions of universality – in terms of compliance as well as application – inspection mechanisms, verification mechanisms, the destruction of CWPFs and OCPFs, as well as the determination of safe practices for the sake of scientific development and technological advancement, all need to be reassessed in the context of changing geopolitical paradigms. Presently, possibly the OPCW needs to redefine its purpose owing to changing realities.

The Chemical Weapons Convention (CWC) is an arms control treaty that outlaws the production, stockpiling, and use of chemical weapons and their precursors. This convention came into force on 29 April 1997. This convention is the effort of some 20 years of negotiations at the Conference of Disarmament (CD). It has the best defined and intrusive verification regime ever developed. The implementing body for the CWC is an intergovernmental organisation known as Organisation for the Prohibition of Chemical Weapons (OPCW). As per the convention, the review conferences should continue to be held every five years. The 4th CWC Review Conference would be held during November 2018 at The Hague, Netherlands. This paper reviews the entire journey of the CWC through the lens of the three preceding review conferences. The paper also presents various options for debate and discussions for the forthcoming review conference.

Group Captain Ajey Lele (Retd) is Senior Fellow at the Institute for Defence Studies and Analyses.

Natallia Khaniejo was a Research Intern at the Institute for Defence Studies and Analyses.



INSTITUTE FOR DEFENCE
STUDIES & ANALYSES

Institute for Defence Studies and Analyses

No.1, Development Enclave, Rao Tula Ram Marg,
Delhi Cantt., New Delhi - 110 010

Tel.: (91-11) 2671-7983 Fax: (91-11) 2615 4191

E-mail: contactus@idsa.in Website: <http://www.idsa.in>

