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**REVIEW OF THE OPERATION OF THE CHEMICAL WEAPONS CONVENTION
SINCE THE FOURTH REVIEW CONFERENCE**



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1. INTRODUCTION

- 1.1 The Technical Secretariat of the OPCW (hereinafter “the Secretariat”), in accordance with the practice established by the First, Second, Third, and Fourth Review Conferences¹ held in 2003, 2008, 2013, and 2018 respectively, hereby submits this Note to the Open-Ended Working Group for the Preparation of the Fifth Review Conference. This Note is intended to contribute substantially to the preparatory process for the Fifth Review Conference to assist States Parties in reviewing the operation of the Chemical Weapons Convention (hereinafter “the Convention”) and in setting a strategic direction for the Organisation for the next five years and beyond.²
- 1.2 This Note comprises five sections, the first being this introduction. Section 2 contains comments by the Director-General summarising the major developments and achievements in regard to the operation of the Convention since the Fourth Review Conference. Section 3 covers developments in science and technology and identifies the most important trends in this regard. Section 4, which contains information on the operation of the Convention since the Fourth Review Conference, also contains numerous references to the impact of science and technology on the implementation of the Convention. Section 4 is generally structured to follow the articles of the Convention, but, at the same time, to reflect the four results areas identified by the Secretariat as being important for the continued relevance of the Organisation over the coming years, as indicated in the “Medium-Term Plan of the Organisation for the Prohibition of Chemical Weapons, 2020 – 2024” (EC-92/S/1 C-24/S/1, dated 22 July 2019).
- 1.3 Section 4, which covers the operation of the Convention since the Fourth Review Conference, addresses the following topics:
- (a) the role of the Convention in enhancing international peace and security;
 - (b) the contribution of the Convention to global anti-terrorism efforts;
 - (c) verification:
 - (i) general obligations and declarations related thereto;
 - (ii) destruction of chemical weapons and destruction or conversion of chemical weapons production facilities;
 - (iii) optimising the verification activities of the OPCW;
 - (iv) activities not prohibited under the Convention;
 - (v) consultations, cooperation, and fact finding;
 - (vi) Syrian Scientific Studies and Research Centre inspections; and
 - (vii) challenge inspections and investigations of alleged use of chemical weapons;

¹ Review Conference = Special Session of the Conference of the States Parties to Review the Operation of the Chemical Weapons Convention.

² Unless otherwise specified, the cut-off date for this Note is 14 October 2022.

- (d) capacity development:
 - (i) national implementation measures;
 - (ii) assistance and protection against chemical weapons;
 - (iii) economic and technological development; and
 - (iv) the OPCW Programme to Strengthen Cooperation with Africa on the Chemical Weapons Convention;
- (e) engagement with external partners:
 - (i) ensuring the universality of the Convention;
 - (ii) cooperating with other relevant international organisations; and
 - (iii) engagement with other external partners, including chemical industry and other relevant stakeholders; and
- (f) organisational governance:
 - (i) Articles XII to XV and final clauses;
 - (ii) protection of confidential information; and
 - (iii) general functioning of the OPCW.

1.4 Finally, Section 5, which contains concluding remarks by the Director-General, focuses on the future of the Organisation and the challenges ahead.

2. COMMENTS BY THE DIRECTOR-GENERAL

2.1 In May 2023, at the Fifth Review Conference, States Parties will gather in The Hague both to review the operation of the Convention since the last Review Conference and to set a path for the future. Over the past five years, the OPCW has demonstrated its resilience and adaptability in the face of unprecedented challenges. The following comments are aimed at summarising the main developments and achievements since the Fourth Review Conference, which took place in 2018.

The Chemical Weapons Convention's role in enhancing international peace and security and its contribution to global anti-terrorism efforts

2.2 The Convention has remained one of the most successful instruments of disarmament, one that completely prohibits an entire category of weapons of mass destruction (WMD) under strict international control. The OPCW has widespread political recognition and support, which ensures that the norm against the use of chemical weapons remains strong. The performance of the OPCW verification regime has reinforced confidence in the Convention, and the destruction of the remaining declared stockpiles is on course to be completed in 2023.

2.3 To address the challenges faced by the Organisation over the last five years, the Organisation has had to continue to adapt, including through mechanisms to effectively address cases of chemical weapons use. So-called “non-routine missions” have been

essential to upholding States Parties' confidence in compliance with the Convention and dissuading further chemical weapons use. At the same time, the Secretariat has maintained a high degree of preparedness to conduct investigations of alleged use (IAUs) and challenge inspections (CIs) should States Parties decide to call for them.

- 2.4 The interest in and use of chemical weapons by non-State actors is a reminder that the Organisation must continue to play a significant and meaningful role in the context of global anti-terrorism efforts. The Secretariat has continued to maintain its readiness to provide technical assistance to States Parties in the event of chemical weapons use and to deliver tailored capacity-building programmes to States Parties to equip them with tools, skills, and knowledge necessary to tackle incidents of chemical weapons use.

Verification

- 2.5 A robust and unique verification regime is one of the key features that contributes to the success of the Convention and distinguishes it from other disarmament treaties. As at 13 October 2022, the Secretariat had verified the destruction of more than 99% of the worldwide declared stockpile. This significant achievement towards demilitarisation would not be possible without the cooperation of the States Parties and the dedication of Secretariat staff.
- 2.6 Despite the challenges posed by the COVID-19 pandemic, the Secretariat has continued to verify the destruction of the declared chemical weapons stockpiles in the United States of America. In accordance with its detailed plan (EC-68/NAT.2, dated 13 April 2012), the United States plans for the destruction of its remaining Category 1 chemical weapons to be completed by September 2023.
- 2.7 In addition to the destruction of declared chemical weapons stockpiles, progress continues with respect to old chemical weapons (OCW) and abandoned chemical weapons (ACW) in the States Parties concerned. States Parties continue to discover OCW and to report this to the Secretariat. Destruction of OCW continues to take place in accordance with the Convention.
- 2.8 ACW operations in China were suspended in early 2020 because of the outbreak of the COVID-19 pandemic. Although ACW destruction operations resumed in May 2021 in China, no on-site ACW inspections have been conducted since 2020 owing to ongoing COVID-19 restrictions. ACW continue to be recovered and excavated. Destruction of these weapons continues in accordance with the Convention and the decision of the Executive Council (hereinafter "the Council") on the "Destruction Plan Beyond the Year 2022 for the Chemical Weapons Abandoned by Japan in the People's Republic of China (as Per Decision EC-67/DEC.6, dated 15 February 2012)" (EC-101/DEC.2, dated 4 October 2022).
- 2.9 The progress in the elimination of chemical weapons stockpiles should not, however, be seen as a reason for complacency in the future. The Organisation is undertaking efforts to retain knowledge and skills on matters related to the implementation of the Convention and to maintain sound expertise in the area of demilitarisation of chemical weapons for as long as the threat of the use of chemical weapons continues to exist and recoveries of OCW and ACW are made.

- 2.10 Industry verification, established pursuant to Article VI of the Convention, is designed to provide confidence to States Parties that scheduled chemicals are not being diverted for purposes prohibited by the Convention. The number of budgeted Article VI inspections has remained stable since the Fourth Review Conference through 2021. The impacts of the COVID-19 pandemic, however, meant that not all planned inspections could be completed in 2020, 2021, or 2022, despite the reduced number of Article VI inspections in 2022 and 2023 agreed upon by States Parties. In line with the criteria stipulated in the Convention, including the Verification Annex thereto (hereinafter “the Verification Annex”), and by the policy-making organs, industry inspections continue to be conducted in an effective, efficient, and consistent manner. The Secretariat has continued, in consultation with States Parties, to adapt the methodologies used in order to reflect the Convention’s requirements concerning the verification regime.
- 2.11 During the period under review, the Secretariat, through the Declaration Assessment Team (DAT), has continued its efforts to clarify all outstanding issues regarding the initial and subsequent declarations submitted by the Syrian Arab Republic in accordance with the Convention and relevant decisions of the policy-making organs. As of the cut-off date of this Note, the DAT raised and reported a total of 24 outstanding issues pertaining to the Syrian declaration under Article III. Of these, four issues had been resolved while 20 remained open. The substance of the remaining 20 issues is of serious concern as it involves large quantities of potentially undeclared or unverified chemical agents and chemical munitions.
- 2.12 The OPCW Fact-Finding Mission in Syria (FFM) has continued to study all available information relating to allegations of use of chemical weapons in the Syrian Arab Republic. Since the Fourth Review Conference, the FFM has issued five reports on alleged uses of toxic chemicals as a weapon in Douma (S/1731/2019, dated 1 March 2019); Aleppo (S/1902/2020, dated 1 October 2020); Saraqib (S/1901/2020, dated 1 October 2020); Marea (S/2017/2022*, dated 24 January 2022); and Kafr Zeita (S/2020/2022, dated 31 January 2022).
- 2.13 In addition, pursuant to the decision on “Addressing the Threat from Chemical Weapons Use” (C-SS-4/DEC.3, dated 27 June 2018), adopted by States Parties, the Secretariat established the Investigation and Identification Team (IIT). The IIT’s mandate is to identify the perpetrators of the use of chemical weapons in the Syrian Arab Republic by identifying and reporting on all information potentially relevant to the origin of those chemical weapons, in those instances in which the FFM determines or has determined that the use or likely use occurred, and cases for which the OPCW-United Nations Joint Investigative Mechanism has not issued a report. The IIT began its work in November 2018 and became fully operational in June 2019. As at 3 February 2023 three reports had been issued. The first (S/1867/2020, dated 8 April 2020) concerns three separate incidents that took place in Ltamenah, the Syrian Arab Republic on 24, 25, and 30 March 2017. The second (S/1943/2021, dated 12 April 2021) concerns one incident that took place in Saraqib, the Syrian Arab Republic, on 4 February 2018. The third report (S/2125/2023, dated 27 January 2023) focuses on the incident in Douma, the Syrian Arab Republic, on 7 April 2018. In all five instances examined, the IIT identified the Armed Forces of the Syrian Arab Republic as perpetrators of the use of chemical weapons.

- 2.14 In line with the same decision, the Secretariat has been putting into place necessary capabilities to provide technical expertise, if requested by a State Party investigating possible chemical weapons use on its territory, to participate in identifying those who were perpetrators, organisers, or sponsors, or who were otherwise involved in the use of chemicals as weapons.
- 2.15 Since the Fourth Review Conference, the Secretariat has also conducted technical assistance visits pursuant to subparagraph 38(e) of Article VIII of the Convention, which involved the analysis and identification of chemicals through the network of the OPCW designated laboratories, in relation to the possible use of those chemicals as weapons.
- 2.16 The work of the non-routine missions has demonstrated the Organisation's resilience in addressing unexpected situations and its potential to adapt and deliver in line with the Convention and the relevant decisions of its policy-making organs.

Capacity development

- 2.17 The Organisation's capacity-building activities support States Parties in their efforts to implement the Convention. The Secretariat has continued to streamline its approaches and introduce new initiatives to adapt its programmes under Articles VII, X, and XI. Capacity-building support provided by the Secretariat has continued to evolve to better respond to the specific needs of the States Parties and effectively address the new challenges. The efforts also figure prominently in the Secretariat's endeavours to enhance the synergy and coordination of the capacity-building activities. Over this period, the Secretariat expanded the participation of States Parties, promoting a shared sense of ownership and responsibility in regard to the Convention.

National implementation

- 2.18 The Secretariat intensified its efforts to encourage and support States Parties in advancing the implementation of Article VII of the Convention at a national level. This included conducting more capacity-building activities at regional and subregional levels, and thereby facilitating exchanges of views and experiences among States Parties that have similar operational challenges or structures. In addition, the Secretariat provided new, targeted assistance to States Parties through national legislative review forums, designed to support further progress in drafting implementing legislation. Furthermore, specialised capacity-strengthening activities were piloted in response to the needs requests of States Parties, in particular with regard to the fulfilment of obligations related to Article VI of the Convention.
- 2.19 Since the Fourth Review Conference, there has been further progress in the establishment or designation of National Authorities of States Parties to the Convention. Two additional States Parties established or designated their National Authority during this period, leaving only one State Party that has not fulfilled this requirement. Regarding the adoption of legislative and administrative measures, 158 States Parties have adopted national implementing legislation, of which 122 have legislation covering all the initial measures. The absence of comprehensive implementing legislation inevitably raises the risk that such States Parties' declarations are incomplete.

Assistance and protection

- 2.20 Assistance and protection against the use, or the threat of use, of chemical weapons continues to be a key pillar of the Convention. The provisions of Article X have been growing in significance in the context of an ever-changing security landscape. The Secretariat has provided expert advice on the establishment and/or further development of States Parties' capacities to respond to an emergency in the event of the use of chemical weapons or misuse of toxic chemicals. Furthermore, the Secretariat maintains a state of readiness to provide assistance to affected States Parties upon request.
- 2.21 The support offered to States Parties in the context of Article X has evolved and broadened since the Fourth Review Conference. In addition to capacity-building activities aimed at improving the preparedness of States Parties to effectively deal with incidents involving toxic chemicals, the Secretariat now supports the law enforcement community in the investigation of incidents involving the malicious use of chemicals. The focus of work in the assistance and protection area has been accordingly tailored to the needs of States Parties. It contributes to preventing the re-emergence of chemical weapons and to countering chemical terrorism by ensuring that the use of chemical weapons is discouraged through improved response and investigative capabilities.
- 2.22 Since the Fourth Review Conference, 159 States Parties have made at least one submission in accordance with paragraph 4 of Article X, while 81 States Parties have made one or more offers of assistance to the OPCW as required under paragraph 7 of Article X.

International cooperation

- 2.23 Promoting international cooperation in the field of chemical activities for purposes not prohibited under the Convention is a fundamental pillar provided for under its Article XI. It also has a unique bearing on the focus of the OPCW on preventing the re-emergence of chemical weapons by promoting chemical safety and security in the context of the peaceful uses of chemistry.
- 2.24 In order to better meet the needs of States Parties, the Secretariat has continued to identify areas for further work through needs assessment surveys. New programmes and initiatives have been launched, focusing on the following areas: integrated chemicals management (Indicative Guidelines for Chemical Safety and Security in Small and Medium-sized Enterprises and for Transportation of Hazardous Chemicals by Road, chemical safety course for laboratories); promotion of chemical knowledge (Youth Educational Programme); and enhancement of laboratory capabilities (Laboratory Assistance and Twinning Programme and tailored assistance to laboratories). Activities in the area of enhancement of laboratory capabilities have resulted in the addition of one new laboratory, the first in the Latin America and the Caribbean region, to the OPCW's list of designated laboratories.
- 2.25 Since the Fourth Review Conference, the Secretariat organised 85 capacity-building events under Article XI of the Convention, benefiting a total of 2,587 participants from 149 States Parties. Furthermore, the Secretariat has offered financial sponsorship for 44 scientific fellowships and 22 international conferences. It has also provided financial support for 89 research projects, including co-funded research projects with the International Foundation for Science. During this period, the Secretariat also donated and/or facilitated the transfer of five items of laboratory equipment between States Parties.

Chemical safety and security

- 2.26 The Third Review Conference encouraged States Parties and the Secretariat to promote the Organisation as a platform for voluntary consultation and cooperation among States Parties in the areas of chemical safety and security. In line with this recommendation and within the framework of decision C-16/DEC.10 (dated 1 December 2011) of the Conference of the States Parties (hereinafter “the Conference”), the Secretariat has conducted relevant activities in support of chemical safety and security as part of its international cooperation efforts.
- 2.27 The Secretariat’s current work in promoting chemical safety and security and countering chemical terrorism features an all-round, integrated effort involving various units of the Secretariat in the implementation of Articles VI, VII, X, and XI. The Secretariat’s activities engage a whole range of stakeholders, namely practitioners from industry, policymakers from government, first responders, and science and academia.
- 2.28 Efforts in chemical safety and security have continued to grow. By way of example, compared to the previous reporting period activities in the area of emergency response rose nearly threefold since the Fourth Review Conference. Recent developments include the launch of the Chemical Security Legislative Support Programme in 2019 and the Indicative Guidelines for Chemical Safety and Security Management in Small and Medium-sized Enterprises in 2021.

OPCW Programme for Africa

- 2.29 During the reporting period, the implementation of the OPCW Programme to Strengthen Cooperation with Africa on the Chemical Weapons Convention (hereinafter “the Africa Programme”) continued to effectively facilitate the development of key capacities in African States Parties in relation to the Convention.
- 2.30 Activity areas under the Programme include: (a) enhancing the effectiveness of National Authorities; (b) improving controls over cross-border transfers of scheduled chemicals; (c) developing assistance and protection capabilities against chemical incidents and attacks; (d) providing education on chemical safety and security management; (e) upgrading laboratory competencies across the continent; and (f) promoting the peaceful exchange of knowledge in the peaceful uses of chemistry.
- 2.31 Programme implementation continued to be guided by the relevant policy framework defined by the Convention itself, the medium-term plans, and the relevant decisions of the policy-making organs.
- 2.32 Since the last Review Conference, the fourth phase of the Programme (2017–2019) was completed successfully and, at the cut-off date of this document, the fifth phase (2020–2022) was progressing apace despite COVID-19-related challenges. A total of 155 capacity-building and technical assistance activities have been delivered by the Secretariat within the framework of the fifth phase, in line with the agreed objectives and planning. These activities, which include 81 events organised specifically for the Africa region, will have ultimately benefitted some 2,500 participants representing 44 African Member States.

- 2.33 It is noteworthy that the Africa Programme was overhauled during its fifth phase, with the introduction of several improvements and innovations in terms of the planning approach and programmatic activities. These include the revision and streamlining of the Programme's logical framework, the definition of new Programme outcomes based on the needs of African States Parties, increased synergies across the Secretariat's units on intersecting thematic issues, and intensified efforts to promote Programme visibility, partnerships, and stakeholder engagement. The sixth phase, covering the period 2023–2025, will build on the progress achieved and lessons captured from the fifth phase.

Engagement with external partners

- 2.34 Since the Fourth Review Conference, the Secretariat and States Parties have continued their efforts to call on the remaining countries outside the Convention to accede to it. Four States (the Democratic People's Republic of Korea, Egypt, Israel, and South Sudan) have yet to join the Convention.
- 2.35 The Third Review Conference acknowledged the role of education and outreach and encouraged engagement with external partners. In an interconnected and complex world, the successful implementation of the Convention must be supported by the development of partnerships with relevant stakeholders from academia, scientific communities, chemical industry, civil society, and others, to leverage their expertise to address new challenges and to maintain the Convention's role as a bulwark against chemical weapons.
- 2.36 The Advisory Board on Education and Outreach (ABEO)—established following the recommendations of the Third Review Conference—has been conducting multiple activities related to education and raising awareness about the Convention and the OPCW, both within and outside the OPCW organisational framework. The Board continued to produce educational resources and tools based on an interactive approach.
- 2.37 The Secretariat has identified a suitable provider of a new Learning Management System to better reach external audiences. This new system will be operational in the first half of 2023, thanks to funding from the European Union, and will enable States Parties, the public, and other interested stakeholders to benefit from interactive educational resources that deepen their knowledge about the Convention. In addition, a set of modules on the OPCW and its mission, the history of chemical weapons, chemical safety and security, and ethics, are being developed for use in universities in all regions. The ABEO is working closely with the Secretariat to provide its expert advice on interactive content and to ensure effective dissemination once ready.
- 2.38 Since the Fourth Review Conference, the Secretariat has undertaken numerous initiatives to increase public understanding of the Organisation and its work. The demand for such efforts has remained high after the OPCW received the Nobel Peace Prize in 2013. The work and role of the Organisation have also gained media attention in connection with the instances of chemical weapons use. Civil society has been an important partner in promoting a better understanding of the Convention. Since the Fourth Review Conference, the number of non-governmental organisations (NGOs) attending the sessions of the Conference has steadily grown.

- 2.39 The Secretariat has also strengthened links between the Organisation and the chemical industry. Partnerships with the chemical industry expanded in 2020 when the International Chemical Trade Association (ICTA) formalised relations with the OPCW. Engaging ICTA and the International Council of Chemical Associations (ICCA) has enriched the Secretariat's capacity-building activities by allowing it to tap into the unique knowledge possessed by the chemical industry, most importantly in chemical safety and security. The ongoing dialogue has facilitated the monitoring of developments in science and technology in relation to future trends in chemical industry, including new production technologies and their impact on the implementation of the Article VI verification regime. It has also contributed to raising awareness about the Convention. To this end, both ICCA and ICTA endorsed The Hague Ethical Guidelines.
- 2.40 The Organisation's increasing cooperation with other relevant international organisations has included participation in meetings and events, the exchange of best practices and, when appropriate, the sharing of resources, experience, and expertise. The OPCW has been engaging with a number of international and regional organisations or entities, including the International Criminal Police Organization (INTERPOL), the United Nations Security Council Committee established pursuant to resolution 1540, the World Customs Organization (WCO), the United Nations Office of Counter-Terrorism (UNOCT), and the United Nations Office on Drugs and Crime (UNODC), mainly in the context of capacity-building efforts to prevent the use of chemical weapons by non-State actors. The Organisation has continued its cooperation with the United Nations based on the relationship agreement concluded in 2000.
- 2.41 Interaction between the Organisation and scientific communities, such as with the International Union of Pure and Applied Chemistry (IUPAC), remains strong. The work of the Organisation has also achieved a higher profile within scientific communities, driven by the participation of Secretariat staff in scientific conferences, publications in scientific journals, and a general increase in science communication activities.

Organisational governance

- 2.42 Since the approval of the 2019 Programme and Budget, upon request from the States Parties and the policy-making organs, the Secretariat continued to apply a zero nominal growth policy to its regular budget until the preparation of the first Biennial Programme and Budget covering the period 2022–2023. The zero nominal growth policy had a significant impact on programmatic budgets in the face of increasing information technology costs, as well as annual inflationary adjustments to items such as rent and utilities. Consequently, the OPCW incorporated provisions for inflation in its regular budgets for 2022 (EUR 70.5 million) and 2023 (72.6 million). Authorised fixed-term staff levels were set at 461 in 2022 and 464 in 2023, compared to 456 posts in 2018 and 491 in 2013.
- 2.43 During the period under review, voluntary contributions by individual States Parties and international entities such as the European Union have also been instrumental in providing additional support for the Organisation's programme activities. Voluntary financial contributions received by the Secretariat continued to be an important source of financing for contingency operations and non-routine missions.

- 2.44 The Secretariat has continued to improve its internal management policies and processes, including through implementation of results-based management. In addition, the enterprise resource planning (ERP) project, launched in 2015, replaced a significant portion of the legacy applications in the administrative support domain in the period up to 2022, and will continue to do so in 2023 and beyond.
- 2.45 Business continuity will help to enhance the Secretariat's ability to deliver its services and implement its mandate in cases of disruption. A business continuity and risk management policy has been embedded in the organisational culture of the Secretariat to strengthen its resilience and adaptability.
- 2.46 A knowledge management strategy was developed at the Secretariat and has been implemented through various processes aimed at identifying, sharing, retaining knowledge in the Organisation. This strategy enables the Secretariat, among others, to preserve knowledge in its core areas, including the verification of destruction of chemical weapons as mandated by the States Parties.

The Fifth Review Conference

- 2.47 The Organisation has continued to advance the goals of the Convention since the Fourth Review Conference. This is especially true considering the verified elimination of more than 99% of the declared chemical weapons worldwide, implementation of the industry verification regime, and the delivery of tailored capacity-building programmes. However, challenges remain. The threat of chemical terrorism and the possibility of the misuse of toxic chemicals are drivers for the Organisation's continued focus on the preventive aspects of its work, especially its priority in preventing the re-emergence of chemical weapons. Rapid developments in science and technology and the expansion of chemical industry will continue to influence the implementation of the Convention. Keeping pace with these trends will require our mission to remain open-ended.
- 2.48 The Fifth Review Conference will review the developments of the last five years and provide strategic guidance for the Organisation to prepare it to respond to existing and future endeavours. This will require a collective and constructive effort. The Secretariat has been supporting States Parties in the preparatory work for the Fifth Review Conference by providing presentations within the framework of the Open-Ended Working Group. It also submits this Note to assist States Parties in this important undertaking.

3. DEVELOPMENTS IN SCIENCE AND TECHNOLOGY

Introduction

- 3.1 Science and technology underpin the Convention and are crucial to its full and effective implementation. The OPCW's operating environment is one of rapid scientific and technological advancement. This affects how the OPCW operates both externally and internally. The worldwide availability, diffusion, and globalisation of scientific knowledge demands scientific literacy and the ability to bring practical scientific advice into decision making. Furthermore, scientific and technological issues intersect with the work of units across the Secretariat.

- 3.2 The Convention itself recognises the influence of science and technology and stipulates that the review of its operation should take into account scientific and technological developments. The Convention provides the Director-General with a Scientific Advisory Board (SAB) to enable him to render specialised advice to the Conference, the Council, and States Parties in areas of science and technology.³ The OPCW, in undertaking its verification activities under the Convention, shall consider measures to make use of advances in science and technology.⁴
- 3.3 Given both current security concerns and the rapid pace of technological change, there is a continued need for scientific expertise and literacy in chemical disarmament and non-proliferation. In this regard, effective implementation requires active engagement with scientific professionals, an efficient and responsive scientific advisory mechanism, the consideration of technological change as an opportunity to enhance capability, and a strong science-policymaker partnership.

Developments since the Fourth Review Conference

Twenty-first century science and technology

- 3.4 Emerging, converging, and disrupting technologies continue to pave the way for innovation. Academia is increasingly trending towards efforts in the applied sciences, and the chemical industry is largely embracing new technology and approaches to streamline its operations, especially against the backdrop of climate change and environmental activism. And all of this is being aided and hastened by the increasing role of social media, the breaking down of technological language barriers, and the globalisation of information. While science and technology has mostly avoided the pitfalls of misinformation and disinformation campaigns, the ongoing COVID-19 pandemic is a stark reminder of the importance of factual and objective science advice that is trustworthy, believable, and easily understood. Furthermore, there is a need for practical considerations on the impact of new developments in science and technology. New discoveries are often built up beyond expectations and rarely deliver in the near term on early promises made. Expectations on the maturity and utility of scientific discoveries and new technologies need to be managed.
- 3.5 It is an enormous task to review new chemicals and technologies that can be used in unexpected ways to challenge chemical security and the norms of the Convention. Just as important, however, is also understanding the opportunities that technological change provides. The SAB therefore always balances spending time and energy to understand both the risks and the rewards of science and technology. This requires that science be considered not solely by discipline, but rather by the capabilities that it enables from across disciplinary boundaries.
- 3.6 While the SAB constantly surveys a breadth of scientific disciplines, technologies, and innovations that may be of relevance to the Convention and its implementation, several of these have been of clear interest in recent years, either because of their direct implications for the Convention or the considerable progress that has been made in development. These include artificial intelligence, machine learning, and deep learning

³ See subparagraph 21(h) of Article VIII of the Convention.

⁴ See paragraph 6 of Article VIII of the Convention.

in chemistry and biology; autonomous vehicle (drone) technology; biotoxins; synthetic biology; and the general convergence of multiple science domains and/or technologies, such as flow chemistry with machine learning for automated synthesis or additive manufacturing with materials chemistry for product formulation.

- 3.7 In addition to considerations on new technologies, it remains a priority to make use of existing scientific knowledge and to understand gaps, and where new developments can mitigate these gaps. While there is a tendency to focus on emerging threats and next-generation challenges, there needs to be a realisation that a number of the current challenges and concerns in fact utilise old, well-known threats or techniques.
- 3.8 The SAB has approached its review of developments in science and technology with the aforementioned in mind and produced recommendations to the Fifth Review Conference (RC-5/DG.1, dated 22 February 2023). A response from the Director-General to that report has also been published (RC-5/DG.2, dated 22 February 2023).

Institutionalising scientific discourse and inputs

- 3.9 The position of Science Policy Adviser was created in the Office of Strategy and Policy and staffed for the first time in 2013. This ensured ample support for the work of the SAB (the role of Secretary to the SAB is linked to the Science Policy Adviser position) and its temporary working groups (TWGs), and greatly facilitated the OPCW's effort to deepen its outreach into relevant scientific communities. More recently, in 2022, a position was created for a Science Policy Officer to further assist the Science Policy Adviser in what is a growing portfolio of scientific work, and to ensure that the Secretariat maintains a deep, resilient source of science advice.
- 3.10 The Secretariat has facilitated the increased engagement of States Parties with the SAB, whose briefings to States Parties and the policy-making organs are regularly scheduled. This included a briefing by the SAB Chairperson to the Fourth Review Conference, the first time such a briefing was conducted. A highly interactive "Science for Diplomats" initiative supports informal discourse on science relevant to the Convention.⁵ Secretariat briefings on science and technology also regularly occur at the annual meetings of the National Authorities and the new diplomat induction workshops. These activities have raised the visibility of the SAB and helped to inform States Parties about the science and technology of relevance to the implementation of the Convention.
- 3.11 The Secretariat continues to make many of the SAB's reports and other relevant documents publicly available on its website and maintains the science and technology section on the OPCW website, which also provides access to scientific materials.⁶ Peer-reviewed journal articles related to the science advice curated by the SAB and the Science Policy Adviser continue to be published in the scientific literature as appropriate. The SAB and the Science Policy Adviser also continue, where relevant, to use social media to further disseminate this information.

⁵ For further information on the initiative, see <https://www.opcw.org/resources/science-and-technology#section--id--5894>.

⁶ See <https://www.opcw.org/resources/science-and-technology>.

Scientific Advisory Board

- 3.12 In the performance of its functions, the SAB has continued to enable the Director-General to render specialised advice to the Conference, the Council, and States Parties in areas of science and technology relevant to the Convention. The work of the SAB is described in detail in the reports of each of its sessions, which are available, along with responses from the Director-General, on the OPCW website.
- 3.13 Since the Fourth Review Conference, the SAB has held nine sessions, the most recent being its Thirty-Sixth Session in September 2022. Despite the challenges created by the COVID-19 pandemic, the SAB took the opportunity to modernise its approach. The Board began using a secure SharePoint site to store and share its working documents. In addition, it successfully held six of the aforementioned sessions virtually, ensuring there was no gap in its ability to convene and provide essential advice to the Director-General and the Organisation. This increased resilience in the approach of the SAB cannot be overstated. It has also produced an intersessional report in response to the Director-General's request to provide advice on new types of nerve agents.⁷
- 3.14 One SAB TWG completed its work and produced a substantive end-of-mandate report. The TWG on Investigative Science and Technology concluded its work after two years, encompassing five meetings with more than 100 briefings from various experts in a wide range of fields. It issued its end-of-mandate report in December 2019.⁸ This TWG, established to undertake an in-depth review of methods and technologies that could be used by OPCW inspectors for investigative work, produced 36 detailed recommendations, which have contributed to the ongoing work of the Secretariat.
- 3.15 As of October 2022, the SAB had one active TWG, on the analysis of biotoxins. This TWG was established in January 2021 with a two-year mandate. Its objective is to review the science and technology relevant to the analysis of biotoxins and considerations that need to be taken into account in investigations of their alleged use. To date, the TWG has held six meetings, with the seventh, and final, meeting set for January 2023, when the TWG will complete and adopt its end-of-mandate report.
- 3.16 As part of the preparations for its scientific report in support of the Fifth Review Conference, the SAB held two topical workshops, one on emerging technologies in the chemical industry and another on artificial intelligence-assisted chemistry.
- 3.17 In drawing on the inputs from the two TWGs, the regular sessions of the SAB, intersessional reports, and the two topical workshops, a total of 21 meetings and workshops were held with a combined participation of 546 (comprising attendees from 50 States Parties). Nineteen reports were produced, and 227 presentations and briefings were received.
- 3.18 Beyond its annual meetings, the activities of the SAB, including those carried out by the TWGs, have been supported in part by the trust fund for the Scientific Advisory Board. Since the trust fund was established in 2006, 16 States Parties (Australia, Chile,

⁷ See SAB-28/WP.1 (dated 3 July 2018).

⁸ SAB/REP/1/19 (dated 1 December 2019), available at:
<https://www.opcw.org/sites/default/files/documents/2020/11/TWG%20Investigative%20Science%20Final%20Report%20-%20January%202020%20%281%29.pdf>.

the Czech Republic, Iraq, Japan, New Zealand, Nigeria, Qatar, Saint Lucia, the Russian Federation, Saudi Arabia, Spain, Switzerland, Türkiye, the United Kingdom of Great Britain and Northern Ireland, and the United States of America) and the European Union have contributed to it. In addition, the European Union has supported the recent work of the TWGs and the two recent topical workshops through decisions of the European Council adopted in 2009, 2012, 2015, and 2019.

Engagement with other scientific advisory mechanisms

- 3.19 To make science advice to Convention policymakers more effective, the SAB and the Science Policy Adviser have shared experiences with other scientific advisory boards. This has included inviting relevant guest speakers to SAB meetings, attending science advice and science diplomacy events, participating in workshops to discuss the development of a science advisory mechanism for the Biological Weapons Convention, and participating in meetings of other international science advisory bodies. The practices of the SAB have drawn attention from other science advisory mechanisms, particularly in regard to the processes for communication with the Director-General (recipient of advice) and States Parties (key stakeholders for advice).

Engagement with scientific communities

- 3.20 The Secretariat maintains a strong relationship with IUPAC, with which it has a memorandum of understanding since 2016. Secretariat staff continue to participate in IUPAC's committees, including the Committee on Chemistry Education and the IUPAC Interdivisional Committee on Green Chemistry for Sustainable Development. IUPAC is also assisting the SAB in the preparation of its scientific report in support of the Fifth Review Conference, most recently by co-facilitating a topical workshop on artificial intelligence-assisted chemistry. The IUPAC President and OPCW Science Policy Adviser communicate regularly, and the IUPAC President addresses the Conference on a yearly basis, either in written or oral form.
- 3.21 SAB members remain active in a myriad of scientific societies and communities, and bring this expertise to bear when the Board offers advice to the Director-General. The Secretariat uses SAB expertise across the Organisation, for example to strengthen its capacity-building activities. Likewise, the Secretariat benefits from SAB member-initiated activities, where relevant staff can participate in appropriate conferences and workshops. These interactions have helped to foster greater interaction within scientific communities and help the OPCW to build and maintain relationships therein. All of this feeds into the science communication and engagement activities of the Secretariat.

Science and technology engagement with other security-focused organisations

- 3.22 The Secretariat continues to foster relationships with other security-focused organisations to explore relevant scientific and technological issues and share experiences in regard to providing practical and actionable science advice. It has participated in workshops and events organised by the Biological Weapons Convention, the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO), the Spiez Laboratory (in particular in the CONVERGENCE workshop series in 2018, 2021, and 2022), and the United Nations Interregional Crime and Justice Research Institute (UNICRI).

Future considerations

- 3.23 Scientific and technological evolution continues to progress at a rapid pace. Approaches to understanding this evolution, and mitigating any potential risks, will need to continue to adapt. The Secretariat will need to take advantage of appropriate and innovative funding strategies to properly monitor scientific and technological advances. It is inevitable that new and enabling technologies will become standard across a broad range of industries and sectors. In particular, the chemical industry is always evaluating new technologies with the aim of incorporating them into their product streams, with economic and environmental drivers weighing heavily.
- 3.24 Effective implementation of the verification regime will require keeping pace with technological change. With the end of destruction to take place within a year's time, the OPCW's mission will continue to shift to one of preventing re-emergence, with even more emphasis on strengthening the verification regime. New ways to design and produce chemicals will continue to revolutionise the chemical industry. Artificial intelligence, machine learning, and deep learning approaches will disrupt the world of fine chemicals. The use of biology to design and produce chemicals will expand. At the same time, there will be more possibilities to develop new methods to predict chemical hazards, or innovative medical countermeasures.
- 3.25 The Secretariat, in partnership with States Parties (and especially the designated laboratories), will look to utilise the newly constructed Centre for Chemistry and Technology (ChemTech Centre) to ensure that the OPCW stays fit for purpose. The ChemTech Centre will allow the OPCW to develop new methods for sampling and analysis, facilitate inspector training and readiness, and promote the sharing of scientific knowledge related to chemical weapons, among others.
- 3.26 Continued discourse between the Secretariat and the SAB, facilitated by the SAB Secretary, will be critical. Briefings from the Secretariat help the SAB to better contextualise its recommendations and facilitate the Board's work. It will also be necessary to augment the Organisation's networking with relevant scientific communities, international and regional scientific organisations, and science advice mechanisms.

4. OPERATION OF THE RELEVANT PARTS OF THE CHEMICAL WEAPONS CONVENTION SINCE THE FOURTH REVIEW CONFERENCE

A. THE ROLE OF THE CHEMICAL WEAPONS CONVENTION IN ENHANCING INTERNATIONAL PEACE AND SECURITY

- 4.1 The date of 29 April 2022 marked a milestone for the Convention, commemorating 25 years since it became a legally binding international disarmament instrument—the first of its kind to prohibit an entire class of weapon of mass destruction under strict and effective verification. Over the course of a quarter century, the implementation of the Convention's provisions and the work of the OPCW have undoubtedly made a tangible impact on international peace and security.
- 4.2 Those gains have been felt most clearly through the elimination of large stockpiles of chemical weapons. The Convention is first and foremost a disarmament instrument and an essential part of the general norm against the use of chemical weapons. While the Convention

complements the Geneva Protocol of 1925, its provisions are more comprehensive in nature. Article I stipulates not only the prohibition on the use and preparation for use of chemical weapons, but also contains a far-reaching obligation to disarm.

- 4.3 As a result of the disarmament efforts conducted under the Convention, more than 99% of stocks have been irreversibly and verifiably destroyed. This has led to the removal from global arsenals of tens of thousands of tonnes of the most lethal substances known to humankind—chemical agents that will never again be used or threatened to be used.
- 4.4 Along with a comprehensive destruction obligation, the Convention also provides for an extensive international verification regime that ensures continued confidence that States Parties are not engaging in prohibited activities. Further, the non-discriminatory nature of the system of verification adheres to the principle of equity, which has also helped to ensure that the States Parties universally accept and cooperate with the inspections.
- 4.5 Verification goes beyond just confirming the elimination of weapons stocks and production facilities, but it also encompasses the monitoring of legitimate industrial and commercial activities. More than 4,300 inspections have been conducted, promoting confidence in compliance with the Convention. Inspections of industrial plant sites and laboratories, as well as a requirement for rules controlling the transfer of dual-use chemicals, give reassurance that work is solely for peaceful purposes.
- 4.6 The peaceful uses of chemicals are promoted by Article XI, which frames general responsibilities in terms of cooperation and international trade. This has allowed for growing collaboration in related areas such as chemical safety and security, raising standards to prevent and minimise the impact of intentional or unintentional incidents involving toxic substances.
- 4.7 As the emphasis of the OPCW shifts towards preventing the re-emergence of chemical weapons, concerns about non-State actors have grown stronger. In this respect, under Article X, and in the framework of the Open-Ended Working Group on Terrorism (OEWG-T), the OPCW has been providing, among other things, a platform for States Parties and experts to exchange views on the challenges posed by the real threat of terrorism, and to put forward concrete countermeasures.
- 4.8 The Convention also foresees assistance to States Parties in the event of an attack. Protection is an important consideration for States Parties in response to threats and actions by States not Party or non-State actors (such as terrorist groups and criminal organisations). Accordingly, the Convention establishes mechanisms to aid States Parties that lack the capacity to respond adequately to an incident, and such assistance is coordinated by the OPCW and offered upon request.
- 4.9 If concerns arise over the actions of a State Party, the Convention offers States Parties, through consultation, a pathway to elucidate facts with regard to doubts about compliance. The ability of States Parties to request clarifications bilaterally is supplemented by other mechanisms through the OPCW, such as CIs. Such procedures allow for the peaceful resolution of any matter relating to the object and purpose of the Convention or any of its provisions.

- 4.10 The Convention has been confronted by major challenges over the past 25 years; however, it has proven to be flexible and agile enough to adapt to each new situation. For example, pursuant to subparagraph 5(e) of Article XV of the Convention, the Conference at its Twenty-Fourth Session adopted a decision on a technical change to Schedule 1(A) of the Annex on Chemicals to the Convention (hereinafter “the Annex on Chemicals”) (C-24/DEC.4, dated 27 November 2019) and a decision on changes to Schedule 1 of the Annex on Chemicals (C-24/DEC.5, dated 27 November 2019). In addition, during the period under review the Conference took its first decision under paragraph 2 of Article XII of the Convention (C-25/DEC.9, dated 21 April 2021).

B. THE CONTRIBUTION OF THE CHEMICAL WEAPONS CONVENTION TO GLOBAL ANTI-TERRORISM EFFORTS

Introduction

- 4.11 During the period under review, the possible use of chemical weapons by non-State actors continued to be a matter of major concern to States Parties.
- 4.12 Non-State actors have shown an interest and ability in acquiring toxic chemicals for hostile purposes, and the technical threshold to weaponise such chemicals is relatively low compared to other types of WMD. There are many challenges in ensuring that toxic chemicals are not used for hostile purposes, including the fact that many such chemicals are ubiquitous and have an industrial and commercial life cycle that permeates the fabric of society. Many toxic chemicals are also dual-use, and are therefore important for peaceful uses and are a key enabler of economic and technological development.
- 4.13 Addressing the global threat of chemical terrorism requires a coordinated and effective international response, as well as the engagement of a wide range of stakeholders, including the chemical industry, academia, national governmental institutions, and regional and international entities.
- 4.14 The full and effective implementation of the Convention contributes to global anti-terrorism efforts. In particular, the provisions of the Convention related to industry verification, national implementation measures, assistance and protection against chemical weapons, and the promotion of peaceful uses of chemistry are fundamental in that regard.
- 4.15 The Secretariat’s activities have increasingly taken into account the threat posed by non-State actors to global chemical security, so as to support States Parties wishing to enhance chemical security in their national and regional context.

Developments

- 4.16 During the period under review, the OEWG-T continued to be the primary mechanism for the Organisation to examine further the OPCW’s contribution to global anti-terrorism efforts, in accordance with the Group’s given mandate.⁹ In particular, the Group’s meetings focused on monitoring implementation of Council decision

⁹ Decision of the Council at its Twenty-Seventh Session entitled “The OPCW’s Contribution to Global Anti-Terrorist Efforts” (EC-XXVII/DEC.5, dated 7 December 2001).

EC-86/DEC.9 (dated 13 October 2017) entitled “Addressing the Threat Posed by the Use of Chemical Weapons by Non-State Actors,” which underscored the role of the Organisation, within its mandate, to prevent and respond to the threat posed by the use of chemical weapons by non-State actors.

- 4.17 At its meeting on 27 June 2022, the OEWG-T considered a set of points for consideration in anticipation of the Fifth Review Conference, covering the areas of national implementation of the Convention where chemical terrorism is concerned, risk and threat assessment, and external partnerships for countering chemical terrorism. Building on that discussion, a survey devised by the Chairperson of the OEWG-T, with support from the Secretariat, was circulated on 22 July 2022. The responses to this survey formed the basis of discussion at the OEWG-T meeting held on 30 September 2022 on how to assist in preparing for a meeting of the Open-Ended Working Group for the Preparation of the Fifth Review Conference devoted to the topic of the Convention’s contribution to global anti-terrorism efforts, held on 15 November 2022.
- 4.18 In terms of national implementation, survey responses gave weight to legislative and regulatory issues, as well as to technical needs for prevention and response. Perceived gaps in national implementation capacity included gaps in knowledge, training, and access to relevant science and technology. A number of good examples of Secretariat training and capacity-building programmes that contribute to countering chemical terrorism were also drawn from the responses, with many noting the Secretariat’s increasing focus on cross-cutting models. The responses also suggested ways in which National Authorities could be better linked with national counterterrorism agencies and how the Secretariat might assist in this regard.
- 4.19 Concerning risk and threat assessment, many responses indicated a willingness to share experiences and best practices, and there were suggestions as to how the Secretariat might facilitate this.
- 4.20 On partnerships, the responses indicated support for strengthening cooperation with the United Nations and other international and regional organisations active in counterterrorism, as well as suggestions for modalities through which to achieve this.
- 4.21 The survey also asked for potential future priorities for the OPCW in countering chemical terrorism to be reordered according to priority. The responses assigned the highest priority to having more guidelines and other tools for chemical security, followed closely by assistance to States Parties through tailored capacity-building programmes, and strengthening education and outreach efforts on chemical terrorism. The lowest priority was given to having the OPCW act as a repository of knowledge on threat and risk assessment.
- 4.22 Following a presentation of the survey responses at the OEWG-T meeting on 30 September 2022, participants raised a number of issues to be considered in the context of the Fifth Review Conference, including the need for strong legislative and regulatory frameworks; adequate preventative and response capabilities; the importance of matching ambition with resource considerations; the usefulness of tools such as table-top exercises for identifying gaps; the importance of international and regional cooperation; and the potential role of the ChemTech Centre in capacity building and training in this area.

- 4.23 At the seminar to mark the twenty-fifth anniversary of the entry into force of the Convention, held on 20 May 2022, the topic of countering chemical terrorism featured as one of the two panel discussions, with a range of speakers discussing the risk of chemical terrorism and how the OPCW can address this into the future.
- 4.24 The OPCW actively participates in the United Nations Global Counter-Terrorism Coordination Compact, to which it became a signatory in 2018, and in the Compact's Working Group on Emerging Threats and Critical Infrastructure Protection, of which it is a vice-chairperson.
- 4.25 To improve the coordinated response of the United Nations and other international organisations in the event of an attack involving a chemical or biological weapon, in 2021 the OPCW launched the third phase of a project within the framework of the United Nations Global Counter-Terrorism Coordination Compact related to the enhancement of interagency interoperability and coordinated communications in such an event.
- 4.26 Lastly, the Director-General, as requested by the Council at its Sixtieth Session (paragraph 12.4 of EC-60/3, dated 22 April 2010), has submitted annual Notes to the Council on the status of the OPCW's contribution to global anti-terrorism efforts.¹⁰ These Notes provide a more comprehensive summary of developments during the period under review.

Conclusions and future considerations

- 4.27 Decision EC-86/DEC.9 acknowledges that the use of chemical weapons by non-State actors poses a threat to the object and purpose of the Convention. Therefore, the Secretariat, as the body tasked with overseeing its implementation, must play a role commensurate with this threat and ensure that the Convention remains a bulwark against the re-emergence of chemical weapons.
- 4.28 To fulfil such a role, the Secretariat should, in coordinating the response to incidents of chemical terrorism, build on its current activities and the developments mentioned above, both through its capacity-building programmes and its efforts to lead the international system, including in the framework of the United Nations Global Counter-Terrorism Coordination Compact.
- 4.29 The central element of the Secretariat's work in this area will remain supporting the full and effective implementation of the Convention. In the context of countering chemical terrorism, the critical importance of national implementation was underscored in EC-86/DEC.9. This will require the Secretariat to further integrate the threat of chemical terrorism into its existing capacity-building programmes, particularly those focused on national implementation, chemical security, and assistance and protection.
- 4.30 The Secretariat's work is likely to consist of two key areas of focus: building the Secretariat's capacity to assist States Parties in countering the threat of chemical terrorism and supporting States Parties in building their own capacity, through the Organisation's international cooperation and assistance programmes and through facilitating the exchange of best practices among States Parties.

¹⁰ EC-90/DG.8 (dated 12 February 2019); EC-93/DG.10 (dated 20 February 2020); EC-96/DG.10 (dated 18 February 2021); and EC-99/DG.7 (dated 14 February 2022).

- 4.31 With regard to the first area of focus—building the Secretariat’s capacity—the Secretariat will need to further improve and augment its analytical capabilities in regard to the use of chemical weapons by non-State actors in order to better inform its policy and operational responses in support of States Parties. This could include initiating and deepening appropriate information-sharing arrangements with other relevant international organisations, using the range of information the Organisation holds to build a global threat picture, and further developing the Secretariat’s internal expertise relevant to States Parties’ capacity-building requirements in this area.
- 4.32 Concerning the second area of focus—providing support to States Parties—the focus is likely to be on the changing needs of States in fully implementing the Convention in line with the risk and threat of chemical terrorism. The potential for re-emergence of chemical weapons in this way could be mainstreamed throughout capacity-building programmes. There could also be new areas of focus, such as on assisting States Parties and their national stakeholders in undertaking risk assessments, taking on a more proactive coordination role in terms of the provision of assistance in the area of international chemical security, and facilitating the exchange among States Parties of best practices related to countering chemical terrorism, including on legal measures, chemical security practices, and response capabilities. In addition, full use should be made of the potential role of the ChemTech Centre in providing expanded and enhanced analytical, operational, and capacity-building capabilities, among other things, to help States Parties better prepare for and respond to the threat posed by non-State actors.

C. VERIFICATION

- 4.33 The verification-related activities of the Secretariat contribute to the aim of achieving disarmament of chemical weapons and prevention of their re-emergence, as well as to the provision of technical input concerning implementation of the Convention by States Parties, and their participation in capacity building and OPCW policy development. This includes evaluating national declarations, on-site inspections at both military installations and commercial chemical industry plant sites, mechanisms for consultation and clarification, as well as implementing provisions for CIs and IAUs.
- 4.34 Through the years, the Organisation has improved its capacity for more effective and efficient verification activities. New and enhanced tools for preparing and submitting declarations have been developed for States Parties, including the Declarations Handbook, Online Scheduled Chemicals Database, Electronic Declaration Information System for National Authorities (EDIS), and the Secure Information Exchange System (SIX). In addition, the OPCW Central Analytical Database (OCAD) and the technical capabilities of the OPCW Laboratory have been upgraded to the extent permitted by available resources. This evolution has been aimed at keeping the verification regime up to date with new emerging challenges and at improving the capability of the Secretariat to carry out both routine and non-routine tasks.
- 4.35 With the expected completion of the destruction of all declared stockpiles of chemical weapons, preventing their re-emergence will maintain its importance as the Organisation continues to support implementation of the Convention in the future. While the comprehensive scope of activities to be conducted to prevent such re-emergence involves more than the Convention’s verification regime, the reduction of destruction-related verification activities will result in an increased need to retain the

Secretariat's critical knowledge related to chemical weapons. Since the Fourth Review Conference, the Verification Division has put into place appropriate knowledge management activities to ensure the retention of critical chemical weapons-related knowledge and will continue to further develop such activities for that purpose.

- 4.36 During the reporting period, the number of missions carried out in accordance with Council decisions has increased substantially.

General obligations and declarations related thereto

Introduction

- 4.37 Declarations submitted by States Parties under Articles III and VI are essential contributions to the implementation of the Convention. The building and maintenance of trust among States Parties relies on the submission of timely, complete, and accurate information. The Secretariat works to support States Parties' efforts to meet their obligations under the Convention by providing detailed guidance on the compilation of declarations by National Authorities.
- 4.38 Since the Fourth Review Conference, the Secretariat has continued to process declarations from States Parties efficiently and is conducting a number of IT projects in order to establish a contemporary and comprehensive information management system and data analytics tools in order to streamline the handling of verification-related information.

Developments

Declarations from States Parties

- 4.39 Since the Fourth Review Conference, the Secretariat has not received the single pending initial declaration under Article III and/or Article VI. As at 4 October 2022, 192 States Parties had submitted their initial declarations under Article III and Article VI. Only one State Party had yet to submit its initial declarations under Article III and Article VI. The Secretariat is working with this State Party to facilitate the submission of its initial declarations as soon as possible.
- 4.40 Since the Third Review Conference, one additional State Party, the Syrian Arab Republic, declared the possession of chemical weapons, former chemical weapons production facilities (CWPFs), and other chemical weapons-related facilities on its territory.
- 4.41 Following the submission by the Syrian Arab Republic of its initial declaration, the Secretariat has undertaken a review of all information submitted therein to verify the implementation of the provisions of the Convention and the decisions of the policy-making organs. As a result of this activity, the Secretariat identified, between September 2013 and April 2014, a number of gaps, inconsistencies, and discrepancies in the Syrian initial declaration, which were raised with the National Authority of the Syrian Arab Republic. In accordance with the requirements of the Convention and relevant decisions of the policy-making organs and resolutions of the United Nations Security Council, the Director-General established the DAT in 2014 with the mandate to verify that the declaration submitted by the Syrian Arab Republic can be considered accurate and complete, as required by the Convention and Council

decision EC-M-33/DEC.1 (dated 27 September 2013). Further information on the operation of the DAT is provided under the subsection of this report entitled “Consultations, cooperation, and fact finding” (see paragraphs 4.170 to 4.190 below).

- 4.42 China and Japan have continued their cooperation in dealing with chemical weapons abandoned by Japan on the territory of China. Both States Parties continue to discover and declare ACW, bringing the total number of confirmed ACW in China to approximately 90,000 items.
- 4.43 States Parties continue to declare discoveries of OCW and to destroy them in accordance with the requirements of the Convention. Since the Fourth Review Conference, two States Parties have declared the discovery of OCW on their territory for the first time. There are currently 19 States Parties that have declared the presence of OCW, amounting to more than 151,000 OCW manufactured both before 1925 and between 1925 and 1946; it is expected that this number will continue to rise. Of these 19 States Parties, 13 have declared OCW manufactured in the period between 1925 and 1946. Such OCW must be assessed to determine their state of deterioration; if they can still be used as chemical weapons, they do not meet the definition of OCW and must be treated as chemical weapons.
- 4.44 Since 2018, the Secretariat has continued its activities concerning declarations of riot control agents. All declarations of riot control agents and their amendments, as well as all chemicals declared as riot control agents, were reviewed by Secretariat. Based on a request from the Secretariat, the SAB issued a list of chemicals to be considered as riot control agents (SAB-25/WP.1, dated 27 March 2017). This information continues to help States Parties to update their declarations of such agents.

Declarations of industrial facilities

- 4.45 Under Article VI, each State Party is obliged to submit declarations on activities not prohibited under the Convention. The number of States Parties declaring Article VI facilities has remained relatively constant over the last four years. Further details are provided under the subsection of this report entitled “Activities not prohibited under the Chemical Weapons Convention” (see paragraphs 4.112 to 4.151 below).

Processing of declarations

- 4.46 In order for States Parties to provide timely, complete, and accurate declarations, the Secretariat makes available software applications to allow for the preparing of declarations. EDIS, the successor application to the Electronic Declarations Tool for National Authorities (EDNA), was released in 2020, with the most recent version of (EDIS 2.1) released in December 2021. In preparing their annual declarations on past activities (ADPAs) for 2021, 24 States Parties used EDIS, while 24 States Parties used EDNA.
- 4.47 Regarding the transmission of declarations, SIX was implemented in 2014 to allow States Parties to, inter alia, securely submit their annual declarations. The scope of the system has since expanded to cover all documents related to Articles III and VI. It is also possible for States Parties to use the system to resolve transfer discrepancies using the Secretariat as an information hub. At present, SIX is used as a secure method for the transmission of both classified and unclassified material. As of 2 October 2022, 62 States Parties had registered to use SIX.

- 4.48 A large amount of information is collected, received, used, and stored by the Secretariat in the course of its verification-related activities. Information is a key asset that needs to be managed, in the interests of efficiency and accountability, to the highest professional standards. To facilitate and enhance the management of information and to streamline business processes for verification-related activities, an enterprise content management system has been acquired and is being implemented over a multi-year time frame.
- 4.49 In this context, until the roll-out of the enterprise content management system is completed, the Verification Information System remains the central repository for verification-related data.

Conclusions and future considerations

- 4.50 Since the Fourth Review Conference, progress has been made in the submission of initial and annual declarations by States Parties. Only one State Party has yet to submit its initial declaration. In addition, electronic tools have been made available to States Parties to prepare and submit their annual declarations in a timely matter. EDNA and its replacement, EDIS, are widely used to prepare declarations, and SIX, already adopted by 62 States Parties, allows States Parties to submit declarations in a secure way.
- 4.51 Additional efforts will continue to be made by the Secretariat to provide further support to States Parties for the timely submission of complete and accurate declarations. The Secretariat will continue to maintain the available tools and develop new ones for the identification of declarable activities and the submission of declarations in order to contribute to the optimal functioning of the Convention's verification regime.

Destruction of chemical weapons and destruction or conversion of chemical weapons production facilities

Introduction

- 4.52 Pursuant to the Convention, each State Party undertakes to destroy any chemical weapons it owns or possesses or that are located in any place under its jurisdiction or control. In addition, each State Party shall destroy or convert any CWPFs in accordance with the Convention. The Third Review Conference reaffirmed that the complete destruction of chemical weapons and the conversion or complete destruction of CWPFs are essential for the realisation of the object and purpose of the Convention.¹¹ Progress continued with respect to the destruction of OCW and ACW in the States Parties concerned, in accordance with the Convention.

Developments

Destruction of chemical weapons

- 4.53 Since the Fourth Review Conference significant progress towards the achievement of the total destruction of declared chemical weapons stockpiles has been made. The United States of America, the only remaining possessor State Party, has continued its efforts to overcome challenges related to destruction of its stockpile. It plans to fully complete destruction in 2023.

¹¹ Paragraph 9.23 of the report of the Third Review Conference (RC-3/3*, dated 19 April 2013).

- 4.54 As of 31 August 2022, a total of 70,014 metric tonnes (MT), or more than 99% of declared Category 1 chemical weapons, had been destroyed under verification by the Secretariat. The destruction of all declared Category 2 and 3 chemical weapons had been completed.
- 4.55 The United States of America has declared 27,770 MT of Category 1 chemical weapons, of which the Secretariat has verified the destruction of 98.3% as at 31 August 2022. The remaining Category 1 chemical weapons will be destroyed at two facilities: the Pueblo Chemical Agent-Destruction Pilot Plant (PCAPP) in Pueblo, Colorado, and the Blue Grass Chemical Agent-Destruction Pilot Plant (BGCAPP) in Richmond, Kentucky. The United States continues to explore explosive destruction technologies in eliminating a portion of the munitions at the PCAPP and BGCAPP. As a result, three static detonation chambers (SDCs) have been installed at the PCAPP destruction facility, while two SDCs have been installed at the BGCAPP. The United States plans for the destruction of its remaining declared Category 1 chemical weapons stockpile to be completed by September 2023.

Decision on the final extended deadline of 29 April 2012

- 4.56 The Conference at its Sixteenth Session adopted a decision on the final extended deadline of 29 April 2012 (C-16/DEC.11, dated 1 December 2011). That decision provided for a number of measures applying to possessor States Parties should the final extended deadline not be fully met.
- 4.57 Among such measures were visits to possessor States Parties by delegations representing the Council. Since the Fourth Review Conference, one visit by representatives of the Council to the PCAPP took place in 2019. Because of the impact of the COVID-19 pandemic, the planned 2021 visit to the BGCAPP was postponed. In March 2022, the United States of America hosted a virtual transparency event for the representatives of the Council. The event focused on the destruction progress at the BGCAPP and on the United States' commitment to complete the destruction before the 2023 deadline.
- 4.58 The visit and the transparency event allowed the Council's representatives to address questions about the remaining possessor State Party's programme for fulfilling its destruction obligations. Pursuant to C-16/DEC.11, the Chairperson of the Council, the Director-General, and a delegation representing the Council will continue to visit the destruction facilities in the United States of America until the elimination of all its declared stockpiled chemical weapons and will include in the visit programme, as appropriate, meetings with government officials.
- 4.59 The reporting on destruction activities and the undertaking of comprehensive reviews by the policy-making organs will provide the international community with the necessary reassurances that progress is being made by the United States of America, in accordance with its plan for destruction and planned completion date.

Chemical weapons storage facilities

- 4.60 Among the 47 declared chemical weapons storage facilities, 45 have been closed and two currently remain subject to verification in the United States of America.

- 4.61 Chemical weapons stockpiles at storage facilities will continue to be inspected by OPCW inspectors to confirm declarations and remaining chemical weapons stocks, with a view to ensuring that no undetected removal of chemical weapons from such facilities takes place.

Abandoned chemical weapons

- 4.62 China and Japan have continued to cooperate in dealing with chemical weapons abandoned by Japan on the territory of China. Excavations, recoveries, and ACW destruction operations continue to be made and are reported to the Secretariat. At its 101st Session, the Council adopted a decision on the destruction plan beyond the year 2022 for the chemical weapons abandoned by Japan in China (EC-101/DEC.2, dated 4 October 2022). This document contains information on destruction facilities and time frames for destruction, thus updating the Council decision on “The Deadline of 29 April 2012 and Future Destruction of the Chemical Weapons Abandoned by Japan in the People’s Republic of China” (EC-67/DEC.6, dated 15 February 2012) and the destruction plan beyond the year 2016 for the chemical weapons abandoned by Japan in China (EC-84/NAT.6, dated 2 March 2017) attached as Annex 2 to Council decision EC-67/DEC.6 and adopted by the Council at its Eighty-Fourth Session (paragraph 6.14 of EC-84/2, dated 9 March 2017).
- 4.63 China and Japan have continued to make progress on excavations, recoveries, and destruction operations. As at 31 August 2022, approximately 90,000 items of ACW had been recovered, of which over 62,000 had been reported as destroyed by China and Japan.
- 4.64 Haerbaling is the largest Japanese ACW burial site in China, and excavation and recovery operations continue there. Destruction operations started at Haerbaling in December 2014 using two destruction technologies: the controlled detonation chamber (CDC) and the SDC. In 2022, four new larger capacity CDCs, known as Haerbaling large chambers were installed. Owing to the COVID-19 pandemic, operations at Haerbaling were paused in early 2020 and resumed in May 2021. In addition, to date, mobile destruction facilities have completed their destruction operations in Nanjing, Wuhan, and Shijiazhuang and are expected to redeploy to Wuhan. There are further discussions ongoing as to the deployment to other locations. A mobile destruction facility in Harbin was set up and started operations in May 2019. Following a suspension of operations in 2020 because of COVID-19, operations were resumed in June 2022.
- 4.65 Pursuant to Council decision EC-67/DEC.6, two visits by representatives of the Council to the Haerbaling site have taken place since the Fourth Review Conference (in September 2019 and in September 2022). Owing to the COVID-19 pandemic, instead of a physical visit to the Haerbaling site, the visit in September 2022 was carried out in virtual format with the representatives of the Council being given presentations and updates on the ACW project, and a tour of the Haerbaling facilities through a teleconferencing platform. These visits were designed to address questions or concerns about the Chinese and Japanese programmes for fulfilling their destruction obligations by the extended deadline. Details regarding these visits, as well as the general observations and conclusions drawn by the participating representatives of the Council following their visits to China, were provided to the Council at its Ninety-Second and 101st Sessions.

Old chemical weapons

- 4.66 Information on declarations concerning the discovery of OCW is provided in paragraph 4.43 above. In relation to OCW, the issue of guidelines to determine the usability of chemical weapons produced between 1925 and 1946 remains outstanding.¹² Although the Secretariat has developed its own internal usability criteria which, since 2000, have been applied uniformly and efficiently to all States Parties declaring OCW and/or ACW from the period between 1925 and 1946, these criteria have so far not been endorsed by the Conference.

Destruction or conversion of chemical weapons production facilities

- 4.67 No new CWPFs have been declared by any State Party since the Fourth Review Conference. Currently, all of the 97 CWPFs declared by 14 States Parties have been deactivated, with 74 having been destroyed and 23 having been converted for peaceful purposes in accordance with the Convention.
- 4.68 At present, 10 converted CWPFs in three States Parties are subject to systematic verification. The five CWPFs (underground structures) located in the Syrian Arab Republic remained under verification until the end of 2020 in accordance with the “Supplement to the Combined Destruction and Verification Plans for Twelve Declared Chemical Weapons Production Facilities in the Syrian Arab Republic” (EC-M-40/DG.2/Add.1, dated 20 July 2014). The remote monitoring systems installed at four of these CWPFs were removed during the last visit in November 2020.
- 4.69 In accordance with Council decision EC-67/DEC.7 (dated 16 February 2012), which defines the verification measures applied to converted facilities more than 10 years after the issuance of a conversion certificate, eight such facilities in four States Parties remain subject to verification as at the cut-off date of this report. Pursuant to the same decision, the Secretariat has terminated the verification of four former CWPFs since the Fourth Review Conference.

Other activities

- 4.70 Since the Fourth Review Conference, the Secretariat has also conducted technical assistance visits pursuant to subparagraph 38(e) of Article VIII of the Convention, to Estonia, Georgia, and Germany.
- 4.71 Since the last Review Conference, a number of improvements have been made to reinforce the process of the retention of chemical weapons-related knowledge. A detailed overview of knowledge management efforts in the Secretariat is provided in paragraphs 4.528 to 4.559 below.

Conclusions and future considerations

- 4.72 Significant progress has been made towards the destruction of declared chemical weapons stockpiles worldwide; less than 1% remain to be destroyed. The destruction of the remaining declared chemical weapons is expected to continue in accordance with the detailed plan submitted by the only remaining possessor State Party concerned.

¹² Paragraph 5 of Part IV(B) of the Verification Annex.

- 4.73 The Secretariat will continue to verify, in an efficient and reliable manner, that destruction is carried out in accordance with the provisions of the Convention, the decisions of the Conference and the Council, relevant agreements with the State Party concerned, internal quality control documents, and verification policy guidance. The destruction of chemical weapons is an ambitious task, which continues to involve a huge human effort, many technical challenges, and high financial expenditure. To this end, there will be a continuing need to retain a level of core expertise related to chemical weapons in order to meet operational needs, as well as additional resource requirements associated with the possible ratification or accession of new possessor States Parties.¹³
- 4.74 Following the expected completion of the destruction of all stockpiled chemical weapons, it is important that the Secretariat, and in particular the Verification Division, retain expertise with regard to the verification of destruction activities should new States Parties join the Convention as possessor States in the future.
- 4.75 Chemical disarmament and security knowledge is a key product and resource that the Verification Division delivers to internal and external stakeholders as part of the Organisation's efforts to continually manage its core knowledge. Maintaining this knowledge and relevant capabilities is critical for dealing with future challenges. Additionally, this will further reinforce the Secretariat's leading role as the knowledge repository for chemical weapons disarmament expertise and chemical security issues.
- 4.76 Looking forward, the recommendations from the Third Review Conference and Council decision EC-86/DEC.9 provide a framework for ensuring that the Organisation can respond to present and future challenges. States Parties are obligated to secure, report, and destroy any chemical weapons seized from a non-State actor in accordance with the relevant provisions of the Convention, while the Secretariat requires flexible capabilities, with the ability to deploy at short notice, to conduct verification activities regarding the destruction of any such chemical weapons.
- 4.77 The destruction of chemical weapons remains a challenge, especially for States Parties with no experience in destroying them or those confronted with isolated cases of OCW or chemical weapons abandoned by non-State actors. The Verification Division will continue to operate as a platform for providing demilitarisation expertise and to facilitate the exchange of demilitarisation capacities throughout States Parties, in accordance with paragraph 12 of Article IV.

Optimising the verification activities of the OPCW

Introduction

- 4.78 In addition to verification of the destruction of chemical weapons and CWPFs, the analysis of transfer discrepancies and the verification of Article VI facilities and plant sites are of paramount importance in preventing the re-emergence of chemical weapons. Declaration-related issues are described in the subsection "General obligations and declarations related thereto" (see paragraphs 4.39 to 4.51 above), while this subsection describes steps taken to optimise verification activities in a number of key areas.

¹³ Paragraph 23 of the "Report of the Advisory Panel on Future OPCW Priorities" (Annex 2 to S/951/2011, dated 25 July 2011); page 1 of the informal summary of discussions at the ambassadors' retreat on future priorities of the OPCW, held in The Hague on 24 May 2012.

Developments

Optimisation of information management solutions supporting verification

- 4.79 As part of its information management modernisation programme, the Verification Division started with the phased implementation of an enterprise content management system to provide modern document, records, evidence, and other content and information management functionalities and workflows to effectively support verification activities. In addition to enhanced information management capabilities, the system will also enhance security and confidentiality of information, facilitate access to information on a “need-to-know” basis, streamline business processes through pre-defined workflows, and support digital transformation in general. Given the system’s scope and complexity, it is intended to be implemented in phases in different business areas (including attribution), with Phase 1 dedicated to non-routine missions.
- 4.80 The Verification Information System continues to serve as an important platform for the processing of declarations, the planning of inspections, and the analysis of verification data. Significant progress has been made with Verification Information System implementation, and it is now the key business-enabling technology platform supporting verification activities.
- 4.81 The relevant data from the Verification Information System and from other relevant data sources will be consolidated in a data warehouse as part of the Verification Analytics project. This project was initiated by the Verification Division in 2016 to expand its analytical capabilities and align them with the strategy and objectives of the Organisation. With this project, data provided by States Parties will be organised in a suitable way for automated data analysis and reporting using the modern reporting tool “Qlik Sense”.
- 4.82 In 2019, the Secretariat initiated a cross-divisional project aimed at strengthening and optimising the current implementation of Article VI verification. An outcome of this project was the Electronic Inspections Tool (eINS), focusing on delivering the digitisation of other chemical production facility (OCPF), Schedule 2, and Schedule 3 inspections and on aligning the eINS with the Verification Information System. By the first quarter of 2022, the four deliverables were completed. The Inspectorate Division is currently testing the eINS in real missions.

Optimisation of the verification of chemical imports/exports

- 4.83 Various meetings and events, such as the annual and regional meetings of National Authorities, are used as opportunities for raising awareness among States Parties of the importance of complete, timely, and accurate declarations, as required under the Convention.
- 4.84 In January 2022, the Secretariat released the revised version of the Declarations Handbook, which reflects extensive consultations with States Parties. Technical and editorial changes to the sections of the Handbook related to declarations under Article VI of the Convention and to product group codes (i.e., Appendix 4) were made.

- 4.85 Within the framework of cooperation with the WCO, the Secretariat initiated the Harmonized System (HS) project for the identification by customs authorities of the most traded scheduled chemicals under the International Convention on the Harmonized Commodity Description and Coding System. This project aims to allocate unique international six-digit HS codes to the most traded scheduled chemicals to identify globally traded scheduled chemicals and, ultimately, to ensure complete and accurate trade declarations crucial to the resolution of transfer discrepancies.
- 4.86 The second phase of the HS project, which focuses on the 49 most traded scheduled chemicals, was successfully completed and resulted in the inclusion of 47 chemicals with international subheadings (six-digit HS codes) in the 2022 edition of the HS Nomenclature.

Optimisation of verification of destruction of chemical weapons

- 4.87 Verification of the destruction of chemical weapons has continued to be a major priority. Through verification, the Secretariat provides the required assurances regarding the identity and quantities of chemical weapons that have been declared, destroyed, or have yet to be destroyed—and that no chemical weapons have been diverted during the process. This has been accomplished through a combination of the continuous presence of inspectors during destruction operations, the use of monitoring and recording equipment (including equipment dedicated specifically to OPCW inspectors), and the review of relevant documentation. During the last five years, the Secretariat has continued to fulfil its responsibilities in a timely manner, and to do so at the requisite levels.
- 4.88 Currently, at the two operational CWDFs, the Secretariat verifies the destruction of chemical weapons under the “optimised verification regime”, with a team of approximately five inspectors at each facility. During the COVID-19 pandemic, the inspected State Party and the Secretariat cooperated closely to ensure the chemical weapons destruction and verification activities could continue without interruption. Based on the destruction activities to be carried out at CWDFs in the future and the adequacy and availability of monitoring equipment, the size of on-site teams may be revised. The Secretariat is constantly reviewing its verification approach and, together with the remaining possessor State Party, is further optimising activities in the field during the systematic quality assurance visits.

Optimisation of verification of industry facilities

- 4.89 Since the Fourth Review Conference, the Secretariat has continued to focus its attention on Article VI inspections, with a special emphasis on the efficiency and effectiveness of such inspections. An important element for reducing the cost of Article VI inspections is the ability of the Secretariat to conduct sequential inspections (two inspections in one mission), carried out both within a State Party and between States Parties. Since the Fourth Review Conference, these practices have become quite routine. In addition, because of the impact of the COVID-19 pandemic, this pattern was expanded in some States Parties to allow three or four Article VI inspections to be carried out over a two-week period. Even after the impacts of the pandemic eased, some of these States Parties asked that such long industry missions continue, where possible.

- 4.90 Since the Fourth Review Conference, a reduction in the average size of inspection teams for Article VI inspections has become routine. The vast majority of inspections carried out at Schedule 2, Schedule 3, and OCPF are now conducted by two-inspector teams.
- 4.91 In order to improve the quality of on-site verification reporting and the efficiency of Article VI inspections, since the Fourth Review Conference the Secretariat has been conducting an internal project on optimisation of Article VI verification. By 2022, most of the activities under the project had been completed, and were aimed at identifying concrete measures that would further improve current practices and procedures and adapt them to evolving conditions and technological advances. The following examples illustrate concrete achievements within the framework of this project:
- (a) Improved templates for preliminary findings and final inspection reports for Article VI inspections for OCPF, Schedule 3, and Schedule 2 regimes have been developed and released. These updated templates allow for the concise reporting of facts within the scope of the inspection, easy data capture, and effective data management.
 - (b) Standardised pre-inspection briefing templates for Article VI inspections have been developed. These templates contributed to the effective and efficient preparation of the inspected facility by ensuring that the information meets the States Parties' obligations and supports solely the verification activities of the inspection team.
 - (c) An assessment was conducted in regard to the feasibility of paperless processes during on-site inspection reporting and digitalisation efforts in pre-inspection and post-inspection processes at OPCW Headquarters.
 - (d) A workshop on material balance in Schedule 2 inspections for States Parties with such declarations and activities was organised.
 - (e) Training opportunities for inspection teams to keep abreast of technological developments and novel tools and methods, as well as embracing of a knowledge transfer strategy, were identified.
- 4.92 The Secretariat is of the view that improving the accuracy and completeness of declarations further would contribute to efficient, effective, and consistent implementation of the Convention.
- 4.93 In addition, progress on long-outstanding issues affecting Article VI (including the recommendations of the SAB) can result in more consistent industry verification efforts across States Parties.

Sampling and analysis during Article VI inspections

- 4.94 Sampling and analysis is one of the verification tools identified in the relevant provisions of the Convention. Since the Fourth Review Conference, the Secretariat has used sampling and analysis routinely during inspections at Schedule 2 plant sites. Sampling and analysis has been undertaken in a more limited way during Schedule 3 and OCPF inspections. The impact of the COVID-19 pandemic severely limited the number of sampling and analysis inspections. However, a return to the routine use of sampling and analysis during Article VI inspections will be achieved beginning in 2023.

- 4.95 Analytical equipment has performed well without any major problems in all the inspections. It has also been possible to use analytical equipment during Schedule 3 and OCPF inspections, which have much shorter inspection time frames. New tools and procedures to reduce the analytical burden on the inspected plant sites will be explored in the future.
- 4.96 Special attention has been paid to the protection of the confidential business information of plant sites. Inspection teams ensure that the sampling and analysis methodology is explained to site personnel, to establish confidence in the inspection procedure and to ensure transparency.
- 4.97 Confidence in and knowledge of sampling and analysis techniques and their purpose have increased since the Fourth Review Conference. This progress will continue to be evaluated to achieve further efficiencies.

Technical support provided by the OPCW Laboratory

- 4.98 The main task of the OPCW Laboratory is to enable the Secretariat to conduct sampling and analysis for verification purposes. Sampling and analysis can be conducted on site by an inspection team but also off site by a network of laboratories that have been designated for the analysis of authentic samples. To fulfil this task, the OPCW Laboratory carries out the following activities, some of which are externally accredited by the International Organization for Standardization (ISO):
- (a) testing, certification, and packing of gas chromatography-mass spectrometry (GC-MS) equipment for dispatch to missions for on-site analysis (accredited under ISO 17025);
 - (b) maintenance, expansion, and annual release of the OPCW Central Analytical Database (accredited under ISO 17025);
 - (c) conduct of proficiency tests for the designation of laboratories for the analysis of authentic biomedical and environmental samples (accredited under ISO 17043);
 - (d) receipt, handling, and dispatch of samples for off-site analysis;
 - (e) certification of analytical chemist inspectors;
 - (f) serving as the focal point for all matters related to sampling and analysis in the Secretariat;
 - (g) development and adaptation of new analytical methods for use by the Secretariat; and
 - (h) provision of scientific and technical advice on analytical techniques and the chemistry of Convention-relevant chemicals for verification activities and for other divisions and units of the Secretariat, as requested.
- 4.99 At the time of the Fourth Review Conference, the OPCW Laboratory was conducting two proficiency tests for environmental samples per year and one proficiency test for biomedical samples per year. Laboratories can be designated for either environmental or biomedical samples, or both. Despite the pandemic, both designated laboratory

networks remain healthy and robust. Noteworthy is the fact that since 31 August 2021 the Group of Latin American and Caribbean States (GRULAC) also has a laboratory designated for the analysis of environmental samples (Laboratório de Análises Químicas, Centro Tecnológico do Exército (CTEx), Brazil).

- 4.100 In 2022, the OPCW Laboratory conducted the Seventh Biomedical Proficiency Test. Since the Fourth Review Conference, numerous biomedical samples have been analysed by designated laboratories, providing essential analytical results to establish that victims had been exposed to chemical warfare agents.
- 4.101 Environmental proficiency tests continue at a rate of two per year. It was learned from authentic samples returned from missions that trace and ultra-trace concentrations of relevant chemicals can be encountered. To address this issue, the OPCW Laboratory continues to provide “optional” trace samples (which do not affect the score of the actual test) in proficiency tests to allow participating laboratories to test and enhance their skills and capabilities in analysing relevant chemicals at very low concentrations.
- 4.102 The threat posed by toxins—toxic chemicals normally produced by living organisms—remains high. Accordingly, the OPCW Laboratory, with financial support from the European Union, has conducted six exercises on the analysis of the Schedule 1 toxin ricin, a related protein toxin (abrin), and the Schedule 1 toxin saxitoxin. It plans to continue these exercises, aiming for a future official proficiency test on toxin analysis.
- 4.103 The OCAD continues to be released on a yearly basis with an ever-increasing quantity of data covering a continuously growing number of chemicals. Since 2019, tandem mass spectrometry (MS/MS), including high resolution MS/MS data, has been approved as the fifth technique to be included into OCAD for off-site use (see EC-91/DEC.1 and EC-91/DEC.2, both dated 11 July 2019). It was noted that MS/MS, especially with high-resolution instrumentation, has been used more widely in recent years. It was therefore considered that a dedicated database would enhance the analytical capabilities of laboratories, particularly regarding trace analysis and chemical attribution. With regard to the changes to Schedule 1 of the Annex on Chemicals approved under Article XV of the Convention by the Conference at its Twenty-Fourth Session, 34 data sets on newly scheduled chemicals have been validated and included into the latest release of the OCAD (v24_2022). This will significantly enhance the capabilities for both on- and off-site analysis and identification of these newly scheduled chemicals.
- 4.104 The development of analytical instruments continues at a rapid pace. Apart from miniaturisation and easier use, the trend seen is mainly on increasing instrument sensitivity (allowing for the analysis of lower concentrations of chemicals of interest) and analysis speeds (allowing the analysis of more samples at the same time). These developments are particularly relevant for off-site analysis. The OPCW Laboratory has followed such developments and continues to make efforts to add new relevant instrumentation to the available toolkit. Major additions of instruments to the OPCW Laboratory since the Fourth Review Conference include a second high-resolution Orbitrap mass spectrometer.

- 4.105 The Laboratory Information Management System (LIMS) was implemented in November 2021 at the OPCW Laboratory. LIMS is a commercially available software package that has been modified extensively by the Laboratory in close consultation with the manufacturer, in order to meet the OPCW's specific needs. Those needs include management of authentic samples and tracking-associated information, management and calibration of equipment, and assistance in the proficiency testing programme. Since LIMS can also cross-reference between physical items (samples, instrument, chemicals, etc.) and the activities that have been carried out in respect to these items (i.e., by whom, when, and where), it will also serve as a process control tool, facilitating the OPCW's ability to demonstrate that requirements such as chain of custody and quality management standards have been met.

Conclusions and future considerations

- 4.106 The optimisation of verification is underpinned by the analysis of declarations, which forms the basis for a consistent, global, and sustainable verification regime. The Secretariat will put efforts into its preparatory work to make verification as efficient as possible. Improving the quality of inspections (at lower cost) will be achieved by further increasing sequential (industrial) inspections, optimising staff, and standardising reporting. The Secretariat will also continue to report in a transparent and qualitative way. All of the efforts made in the field of verification optimisation are described in the annual Verification Implementation Reports.
- 4.107 On-site sampling and analysis constitutes an objective and powerful verification tool to check for the absence of undeclared scheduled chemicals. This activity, performed in addition to other regular inspection activities, should become more routine as new technologies are explored.
- 4.108 In the view of the Secretariat, the number of sampling and analysis inspections since the Fourth Review Conference has struck a balance between the verification requirements of the Convention and the availability of resources within the Secretariat, particularly given the impact of the COVID-19 pandemic. The Secretariat has begun discussions on the future of sampling and analysis efforts to find streamlined equipment and procedures to allow these activities to continue in a more efficient and effective (and less burdensome) way in the future.
- 4.109 The Secretariat has undertaken, and will continue to undertake on a regular basis, an assessment of its verification activities with the aim of improving and optimising them. The cooperation and support of the States Parties are of equal importance in improving the efficiency of verification activities, while maintaining the required degree of confidence, credibility, and transparency. This will allow the Secretariat to continue to meet its verification responsibilities within available resources.

Future considerations – the OPCW Laboratory

- 4.110 The OPCW continues its efforts to stay abreast of new developments in science and technology, especially those that are relevant to the sampling and analysis of Convention-relevant chemicals. While making very good progress in this regard on different levels, the need to conduct research projects on a limited scale and to collaborate on such projects with partners at designated laboratories or in academia is

considered important. This should also include the possibility to host qualified scientists as postdoctoral fellows or other types of laboratory fellowships. Developing a capability to make and handle small amounts of Schedule 1 chemicals is also considered important for the future. The infrastructure for such activities has been included within the design of the new ChemTech Centre (see paragraphs 4.467 to 4.470 below). Once the OPCW Laboratory has moved to the ChemTech Centre, this “microsynthesis facility” will be further developed. Because of highly stringent safety and security requirements, it is expected that the actual operationalisation process of this facility will take at least two years.

- 4.111 At the same time, the OPCW Laboratory, together with the Safety and Analytical Chemistry Cell of the Inspectorate, continues to maintain the Secretariat’s infrastructure for sampling and analysis and to support routine as well as contingency missions, as required.

Activities not prohibited under the Chemical Weapons Convention

Introduction

- 4.112 Article VI of the Convention regulates activities concerning toxic chemicals and their precursors for purposes not prohibited under the Convention. In light of this, each State Party is required to subject its Schedule 1, Schedule 2, and Schedule 3 facilities and its OCPFs to the verification measures that are based on declarations and inspections.

Developments

Article VI declarations

- 4.113 Each State Party is obliged to submit declarations on activities not prohibited under the Convention. The Third Review Conference stressed the importance of the timely submission of these declarations in an accurate and complete manner and reiterated that declarations provided by States Parties are the cornerstone of the Convention’s verification regime.¹⁴ In this context, the Third Review Conference encouraged the Secretariat to provide appropriate assistance, upon request, to National Authorities with a view to meeting their declaration obligations.¹⁵

Status of submissions

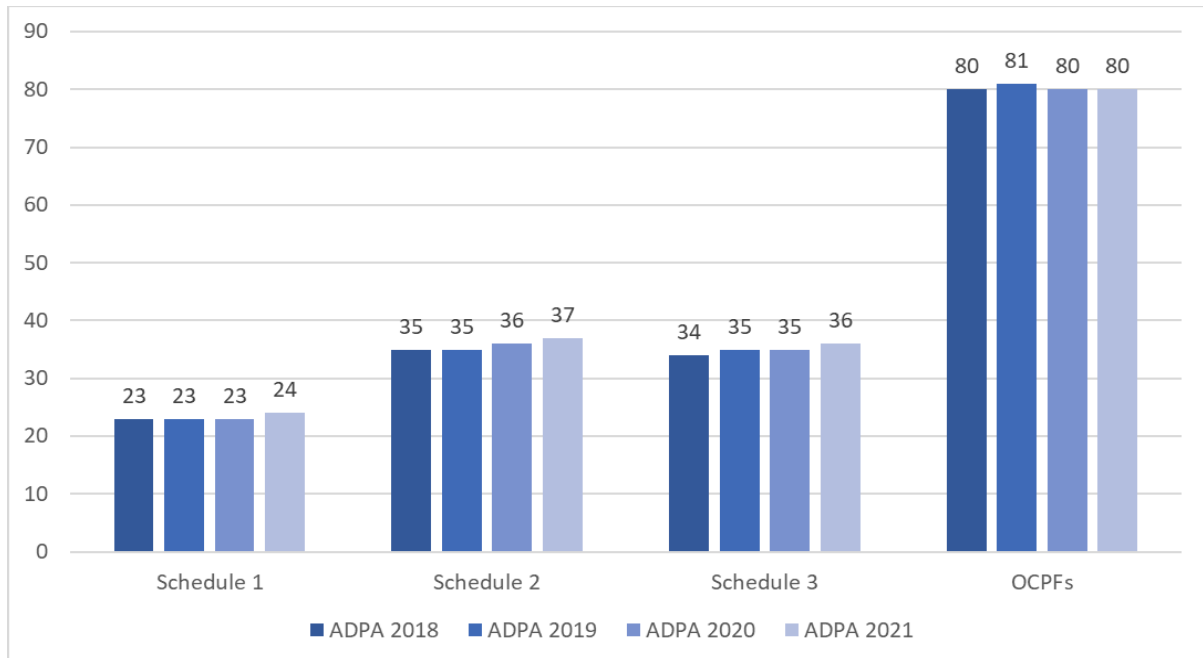
- 4.114 While there has been a significant improvement in the number and percentage of on-time submissions of ADPAs since the Fourth Review Conference, the impact of the COVID-19 pandemic seems to have severely affected the capability of States Parties to submit their declarations on time.
- 4.115 For ADPA 2021, 67 (82%) out of 82 States Parties submitted their ADPAs on time, compared to 84 (90%) out of 93 for ADPA 2018, which was the highest number and percentage of declarations submitted on time since 1997.

¹⁴ Paragraphs 9.72 and 9.83 of RC-3/3*.

¹⁵ Subparagraph 9.79(a) of RC-3/3*.

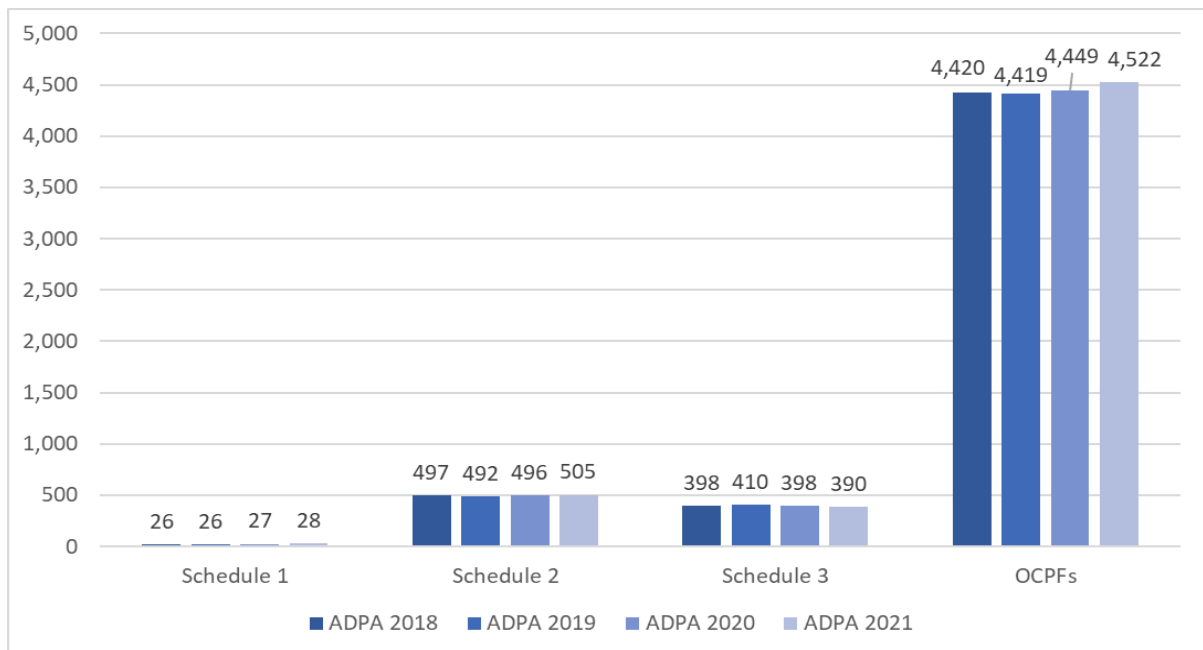
4.116 The number of States Parties declaring Article VI facilities has remained relatively constant over the last four years, as seen in Chart 1 below.

CHART 1: NUMBER OF STATES PARTIES DECLARING ARTICLE VI FACILITIES



4.117 The number of declared Schedule 2 plant sites, Schedule 3 plant sites, and OCPFs has remained relatively stable in the period since the Fourth Review Conference. The number of Schedule 1 facilities declared for 2021 increased slightly (by 8%) compared to the number declared for 2018 (see Chart 2 below).

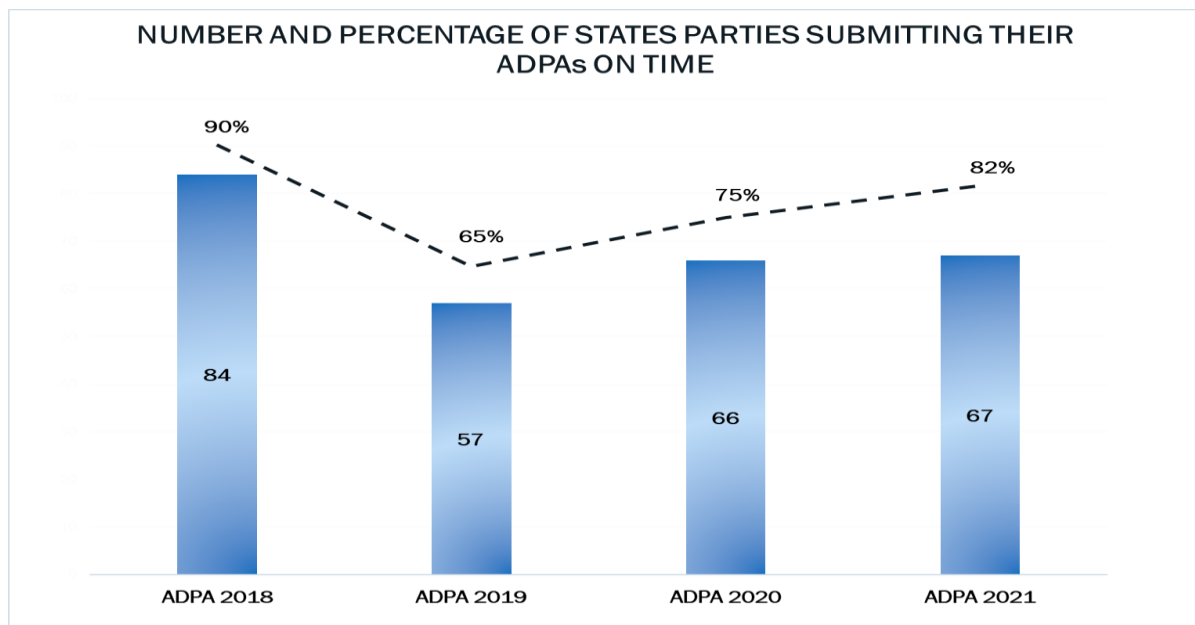
CHART 2: NUMBER OF DECLARED PLANT SITES



Late submissions

- 4.118 The importance of the timely submission of initial and annual declarations was stressed by the Third Review Conference,¹⁶ since late declarations have a significant impact on verification activities.
- 4.119 At its Fifty-First Session, the Council adopted a decision in which, inter alia, it called upon States Parties that had yet to do so to take the necessary measures to ensure that their declarations were submitted in accordance with the deadlines provided for in the Convention. It also requested those States Parties that anticipated difficulties in regard to timely submission of their declarations to inform the Secretariat of the circumstances of such difficulties (EC-51/DEC.1, dated 27 November 2007). In accordance with that decision, since the Fourth Review Conference the Secretariat has prepared regular status reports to the Council on the decision's implementation.¹⁷
- 4.120 The Secretariat has held bilateral meetings with representatives of States Parties that have submitted their annual declarations late. These meetings were held specifically to stress the importance of timely submissions and to offer advice and assistance. While this resulted in a measurable increase in the number of States Parties submitting their declarations on time, the impact of the COVID-19 pandemic lowered this number for ADPA 2019, and since then the number and percentage of States Parties submitting their ADPAs on time has again increased (see Chart 3 below).

CHART 3: ON-TIME SUBMISSION OF ANNUAL DECLARATIONS ON PAST ACTIVITIES



¹⁶ Paragraph 9.83 of RC-3/3*.

¹⁷ EC-90/DG.6 (dated 16 January 2019); EC-91/DG.11 (dated 17 June 2019) and Corr.1 (dated 17 July 2019); EC-93/DG.6 (dated 17 January 2020) and Corr.1 (dated 24 January 2020); EC-94/DG.13 (dated 24 June 2020); EC-96/DG.5* (dated 21 January 2021); EC-97/DG.11 (dated 15 June 2021); EC-99/DG.6 (dated 27 January 2022); and EC-100/DG.11 (dated 16 June 2022).

Assistance to States Parties

- 4.121 The Secretariat has continued its efforts to cooperate with States Parties to ensure that declarations submitted in accordance with the Convention are complete and accurate. It has also provided appropriate assistance to States Parties upon request. Every year a number of inspected facilities are found to be non-inspectable. While this is partially due to the timeline for declarations, the Secretariat will continue engaging with the States Parties to enhance their capacity in declaring their facilities in an accurate way.
- 4.122 The Third Review Conference encouraged the Secretariat to continue to develop and update existing databases on declarable chemicals in order to provide practical assistance in the identification of declarable activities.¹⁸ An updated version of the Handbook on Chemicals, which was released in 2022 and supersedes the previous 2019 version, includes the updated HS codes that have been in effect since 1 January 2022. Furthermore, the Secretariat has released the “OPCW Online Scheduled Chemicals Database 2022”, which is more exhaustive and contains information on more than 35,000 scheduled chemicals.

Number of inspections

- 4.123 Since the Third Review Conference, the policy guidelines for determining the number of Article VI inspections remained unchanged, based on the Council’s decision from 2011 (EC-66/DEC.10, dated 7 October 2011). The Council decided that the guidelines in that decision should be taken into account in a balanced manner, recognising that the number of Article VI inspections would continue to be determined pursuant to both the requirements of and the limits set by the Convention. The Conference at its Sixteenth Session, welcoming the Council’s decision, decided that the number of Article VI inspections should be 219 for 2012. The subsequent decisions on the Programme and Budget of the OPCW set the inspection numbers at 229 for 2013 (C-17/DEC.4, dated 27 November 2012), and 241 for 2014 (C-18/DEC.6, dated 4 December 2013).
- 4.124 As a result of these decisions, the last time the total number of inspections was increased was in 2014, and that number remained stable through 2021. However, the COVID-19 pandemic had a significant impact on the number of Article VI inspections that were possible in 2020 and 2021. Among the four categories of Article VI inspections, the number of Schedule 1 inspections has remained stable. In 2021, the number of Schedule 2 inspections was increased to address the continued growth in this declared industry. At the same time, the number of OCPF inspections was correspondingly adjusted. In regard to inspections for 2022 and 2023, the Conference at its Twenty-Sixth Session decided to reduce the number of Article VI inspections temporarily to the levels reflected in Table 1 below.

TABLE 1: NUMBER OF INSPECTIONS – 2018 TO 2023

Year	Schedule 1	Schedule 2	Schedule 3	OCPF	TOTAL
2018	11	42	19	169	241
2019	11	42	19	169	241
2020	11	42	19	169	241
2021	11	49	19	162	241
2022	11	49	10	110	180
2023	11	49	10	130	200

¹⁸ Paragraph 9.86 of RC-3/3*.

Schedule 1 chemicals and related facilities

- 4.125 There are currently 28 declared and inspectable Schedule 1 facilities in 24 States Parties that are subject to systematic verification, including nine single small-scale facilities, 18 other facilities for protective purposes, and one other facility for research, medical, or pharmaceutical purposes.
- 4.126 Of the 345 Schedule 1 inspections conducted since entry into force of the Convention, the 55 (11 per year) that have taken place since the Fourth Review Conference have reported no uncertainties as specified in the Verification Annex.
- 4.127 The Convention mentions verification through on-site inspection and monitoring with on-site instruments. Because of the nature of the facilities and the activities carried out during Schedule 1 inspections, the Secretariat previously had not used on-site monitoring instruments. However, since 2017, the Secretariat has occasionally used the FirstDefender (Raman technology) as a health and safety tool while verifying inventories during Schedule 1 inspections.

Schedule 2 chemicals and related facilities

- 4.128 Although the number of inspectable Schedule 2 plant sites has remained fairly stable since the Fourth Review Conference, this number has increased by more than 40% since entry into force of the Convention.
- 4.129 Among the Schedule 2 inspections conducted since the Fourth Review Conference, no uncertainties as specified in the Verification Annex have been reported.
- 4.130 Since 2006, sampling and analysis activities based on GC-MS have been incorporated as a routine verification tool each year on average during 10 Schedule 2 inspections. Since 2012, sampling and analysis has been incorporated successfully into a limited number of Schedule 3 or OCPF inspections each year. Effective verification has been achieved through these inspections and the Secretariat has gained valuable experience in effectively conducting sampling and analysis under a broad range of conditions.

Schedule 3 chemicals and related plant sites

- 4.131 Since entry into force of the Convention, the OPCW has conducted 521 inspections at Schedule 3 plant sites. All of the Schedule 3 plant sites that are subject to inspection and have yet to be inspected are in one single State Party. This situation exists because of the annual inspection limits set on Schedule 3 and OCPF inspections in Parts VIII and IX of the Verification Annex.
- 4.132 No uncertainties as specified in the Verification Annex have been reported for Schedule 3 inspections. Discrepancies between declared and verified information have been identified in a significant number of inspections, and have been in relation to the name, address, owner/operator of the plant site, number of plants, the main activities of the plant site, and the purpose and range of production.

- 4.133 Analysis of the inspection results indicates that Schedule 3 plant sites usually lack flexibility in terms of their ability to be converted for the production of other scheduled chemicals, lowering the potential risk for Schedule 3 plant sites in general.
- 4.134 The Secretariat has selected Schedule 3 plant sites for inspection pursuant to the provisions of the Convention and the decision of the Council at its Seventeenth Session (EC-XVII/DEC.7, dated 1 December 1999). This methodology has achieved a wide geographical distribution of inspections so as to cover all States Parties declaring at least one Schedule 3 plant site.
- 4.135 Subsequent Schedule 3 inspections of plant sites that had already been inspected were initiated in 2004. In accordance with the policy guidelines for determining the number of Article VI inspections (laid out in EC-66/DEC.10), priority has been given to plant sites that have not yet received inspections. Although the rate of subsequent inspections as a percentage of the budgeted number of Schedule 3 inspections was 47% at the time of the Fourth Review Conference, that figure has now risen to 70%.

Other chemical production facilities

- 4.136 Since entry into force of the Convention, the Organisation has conducted a total of 2,466 OCPF inspections. No uncertainties as specified in the Verification Annex have been reported.
- 4.137 Pursuant to the provisions of the Convention, the Secretariat randomly selects OCPFs for inspection, taking into account an equitable geographical distribution and emphasising facilities most relevant to the object and purpose of the Convention. For this purpose and to avoid inspecting plant sites not subject to inspection, it is vital for accurate declarations to be submitted in a timely manner.
- 4.138 The site selection process laid out in Note S/962/2011 (dated 8 September 2011) has been used to select OCPF plant sites for inspection since January 2012. In order to reduce the likelihood of a recently inspected OCPF plant site from being selected again for inspection, the Secretariat made a minor adjustment to this site selection algorithm to reflect the input of States Parties as expressed in the Industry Cluster.

Conclusions and future considerations

- 4.139 Article VI inspections have been conducted at nearly 3,000 industrial facilities in 80 States Parties since entry into force of the Convention. These inspections have contributed to ensuring that toxic chemicals and their precursors are developed, produced, otherwise acquired, retained, transferred, or used only for purposes not prohibited under the Convention, and to building confidence among States Parties.
- 4.140 The OCPF regime covers plant sites with a variety of characteristics and activities. Inspections have demonstrated that some OCPFs are relatively dedicated, equipped with conventional technology, and not suitable to produce any chemicals other than those for which they were originally designed. Other OCPFs are relatively flexible and suitable for producing a wider range of chemicals.

- 4.141 The current OCPF site selection methodology has been in effect since January 2012, with a few minor adjustments made in 2019. Compared to the previous methodology, it is designed to select more OCPFs of higher relevance to the object and purpose of the Convention and fewer OCPFs of lower relevance. The Secretariat's annual report on the performance of the revised methodology continues to show that the methodology achieves these basic goals. The Secretariat also reports each year on the performance of the revised methodology in light of the policy guidelines established by the Council in EC-66/DEC.10. It should be noted that policy guideline 1(c) has, to date, not been achieved.¹⁹ The views of the Council on this issue would be welcome.
- 4.142 Up until 2020, 27 States Parties had already had all of their OCPF plant sites inspected. It is expected that in the coming few years, an additional 20 States Parties will receive an inspection to their final uninspected OCPF plant site. The drastic drop in the number of States Parties with uninspected OCPF plant site constitutes a "tipping point", as a result of which only 30 States Parties will have uninspected OCPF plant sites and will reach their inspection "cap" more frequently than in the past seven years. On the other hand, the States Parties with all of their OCPF plant sites already inspected and with no plant sites in the other regimes might only rarely receive an Article VI inspection. The Secretariat foresees that once this "tipping point" is reached it will be difficult to select the budgeted number of uninspected OCPF plant sites.
- 4.143 In general, the Article VI declaration process is working reasonably well and significant advances have been made. However, as highlighted above, concerns remain regarding the timeliness, accuracy, and completeness of declarations, which have a negative impact on the implementation of the verification regime.
- 4.144 As resources permit, the Secretariat will continue to take advantage of all appropriate opportunities to conduct bilateral meetings with representatives of States Parties on declaration-related issues.
- 4.145 The Secretariat will also continue to provide advice and assistance to States Parties on request. In addition, work will continue on the development of tools and aids to support States Parties, including continued upgrades to EDIS, the Declarations Handbook, and other tools, as well as the development of e-learning modules.
- 4.146 The Director-General asked the SAB to consider a number of issues related to industry verification, including:
- (a) technologies and methodologies used for other verification purposes that could benefit the Convention's verification regime;
 - (b) methodologies that could assist States Parties in ensuring that all declarable plant sites are identified for declaration;
 - (c) key technical components of a consistent approach to declaring complex mixtures of discrete organic chemicals;

¹⁹ Policy guideline 1(c) of EC-66/DEC.10 states that "the length of time between two Article VI inspections in any one State Party should not exceed approximately eight years".

- (d) verification aspects of the meaning of “production by synthesis”;
 - (e) effective use of sampling and analysis for verification purposes; and
 - (f) methodologies for keeping abreast of developments in science and technology.
- 4.147 The SAB Temporary Working Group on Verification undertook an in-depth study of the above-mentioned issues and issued a report containing a number of recommendations.²⁰
- 4.148 Several of these topics and SAB recommendations have been discussed at great length within the Industry Cluster and at other related venues. The Secretariat will continue to support the policy-making organs as they look to reach decisions that would appropriately deal with these recommendations.
- 4.149 Since all of the Schedule 3 plant sites that have not yet been inspected are located in one single State Party, the guidelines on the number of Article VI inspections, the budgeted number of Schedule 3 inspections, and the annual limitation on Schedule 3 and OCPF inspections within a State Party have resulted in cases of short intervals between subsequent Schedule 3 inspections at a given plant site. In these cases, Schedule 3 plant sites are receiving inspections more frequently than Schedule 2 facilities. To deal comprehensively with this issue, a corresponding reduction in the total number of Schedule 3 inspections was implemented beginning in 2022.
- 4.150 The revised OCPF site selection methodology remains an interim measure and continues to be assessed based on the experience gained since its introduction. A definitive OCPF site selection mechanism can be established only when a decision is taken on the appropriate implementation of subparagraph 11(c) of Part IX of the Verification Annex regarding proposals by States Parties. Paragraph 25 of Part IX of the Verification Annex requires that the Conference decide on which basis proposals by States Parties should be taken into account as a weighting factor in the selection process. This should be part of a broader discussion on the performance of the current OCPF site selection methodology.
- 4.151 Article VI declarations and inspections complement the broader obligations of States Parties under the Convention and play an important role in strengthening confidence among States Parties in complying with Article VI. They also help increase awareness, among both National Authorities and the chemical industry, of the Convention and the risks associated with toxic chemicals, acting as a deterrent against the re-emergence of chemical weapons and the misuse of toxic chemicals. States Parties and the Secretariat will continue to work together to improve all aspects of the Article VI verification regime.

²⁰

SAB/REP/1/15 (dated June 2015), available at:
https://www.opcw.org/sites/default/files/documents/SAB/en/Final_Report_of_SAB_TWG_on_Verification_-_as_presented_to_SAB.pdf.

Consultations, cooperation, and fact finding

Bilateral consultations

- 4.152 Article IX provides for consultations among States Parties to clarify and resolve concerns about compliance. Bilateral consultations and exchanges of information between interested States Parties have continued to take place during the past five years without formal requests for intervention from the Council.

Clarification through the Executive Council

- 4.153 Since entry into force of the Convention, no State Party has had recourse to the clarification mechanisms under the purview of the Council, as provided for in paragraphs 3 to 7 of Article IX.

OPCW Fact-Finding Mission in Syria

- 4.154 The FFM was established on 29 April 2014 based on the general authority of the Director-General to seek to uphold at all times the object and purpose of the Convention. The same month the terms of reference of the FFM were mutually agreed upon by the OPCW and the Government of the Syrian Arab Republic.
- 4.155 The FFM was endorsed by States Parties in Council decisions EC-M-48/DEC.1 (dated 4 February 2015) and EC-M-50/DEC.1 (dated 23 November 2015), by the United Nations Security Council in resolution 2209 (2015), and further by the Conference at in decision C-SS-4/DEC.3. Financial and in-kind contributions have been provided by over 30 States Parties and the European Union to support all OPCW activities related to the Syrian Arab Republic.
- 4.156 In both EC-M-48/DEC.1 and EC-M-50/DEC.1, the Council supported the FFM's scope of work by expressing support for the continuation of the work of the FFM, in particular studying all available information relating to allegations of use of chemical weapons in the Syrian Arab Republic, including that provided by the Syrian Arab Republic as well as by others. These decisions also emphasised the limitations of the FFM's mandate by stating that the task of the FFM does not include the question of attributing responsibility for alleged use.
- 4.157 As at 30 September 2022, the activities of the FFM since its establishment had included 110 deployments investigating 77 separate incidents. The Mission had interviewed 617 individuals and collected 473 samples. Nineteen findings reports had been issued to States Parties. The FFM reported 20 events of likely or confirmed use of chemical weapons. Of these cases, 14 were related to chlorine, three to sulfur mustard, and three to sarin.
- 4.158 Pursuant to Conference decision C-SS-4/DEC.3 with regard to instances in which "the OPCW Fact-Finding Mission in Syria determines or has determined that use or likely use occurred, and cases for which the OPCW-UN Joint Investigative Mechanism has not issued a report", the FFM has continued to periodically hand material over to the IIT since the issuance of its last summary update.

- 4.159 Following the finalisation in July 2020 of the pilot transfer of FFM material to the International, Impartial, and Independent Mechanism to Assist in the Investigation and Prosecution of Persons Responsible for the Most Serious Crimes under International Law Committed in the Syrian Arab Republic since March 2011 (IIIM), pursuant to paragraph 12 of C-SS-4/DEC.3 and the memorandum of understanding between the OPCW and the IIIM regarding the provision of access, storage, and handling of information and evidence, the FFM is continuing preparations to make further transfers to the IIIM.
- 4.160 In keeping with the relevant decisions of the Council, the FFM has continued to study all available information from all sources relating to allegations of use of chemical weapons in the Syrian Arab Republic. The Director-General has continued to report to the Council on the activities of the FFM as part of his monthly reports in accordance with EC-M-33/DEC.1 and to the United Nations Security Council pursuant to resolution 2118 (2013). The Secretariat has also provided detailed reports to States Parties on the findings of the FFM.

Investigation and Identification Team

- 4.161 In decision C-SS-4/DEC.3, the Conference at its Fourth Special Session condemned the use of chemical weapons by anyone, under any circumstances, and reaffirmed that those responsible for the use of chemical weapons should be held accountable. In paragraph 10 of that decision, the Conference decided that the Secretariat should put in place arrangements to identify the perpetrators of the use of chemical weapons in the Syrian Arab Republic by identifying and reporting on all information potentially relevant to the origin of those chemical weapons in those instances in which the FFM determines or has determined that use or likely use occurred, and cases for which the OPCW-United Nations Joint Investigative Mechanism has not issued a report. In the decision, the Conference further affirmed that whenever chemical weapons use occurs on the territory of a State Party, “those who were the perpetrators, organisers, sponsors or otherwise involved should be identified” and it underscored “the added value of the Secretariat conducting an independent investigation of an alleged use of chemical weapons with a view to facilitating universal attribution of all chemical weapons attacks”.
- 4.162 Accordingly, pursuant to C-SS-4/DEC.3 the Secretariat established the IIT, which began its work in November 2018 and became fully operational in June 2019.
- 4.163 The IIT mandate is to identify the perpetrators of the use of chemical weapons in the Syrian Arab Republic by identifying and reporting on all information potentially relevant to the origin of those chemical weapons, in those instances in which the FFM determines or has determined that use or likely use occurred, and cases for which the Joint Investigative Mechanism has not issued a report.

Developments

- 4.164 The IIT provides regular reports on its investigations and findings to the Council and to the United Nations Secretary-General.
- 4.165 The IIT has issued three reports: the first concerns three separate incidents that took place in Ltamenah, the Syrian Arab Republic on 24, 25, and 30 March 2017 (S/1867/2020); the second concerns one incident that took place in Saraqib, the Syrian Arab Republic, on 4 February 2018 (S/1943/2021); and the third focuses on the incident in Douma, the Syrian Arab Republic, on 7 April 2018 (S/2125/2023).

- 4.166 In all five instances examined, the IIT identified the armed forces of the Syrian Arab Republic as perpetrators of the use of chemical weapons.
- 4.167 As laid out in paragraph 12 of C-SS-4/DEC.3, the Secretariat has further put in place appropriate measures to preserve and provide information to the IIIM—the body established by the United Nations General Assembly in resolution 71/248 (2016)—as well as to any relevant investigatory entities established under the auspices of the United Nations.

Conclusions and further considerations

- 4.168 Pursuant to paragraph 12 of C-SS-4/DEC.3, the IIT continues to preserve and provide information to the IIIM and stands ready to provide information to any other relevant investigatory entities established under the auspices of the United Nations.
- 4.169 The IIT has continued investigating the incidents in the Syrian Arab Republic in Al-Tamanah (12 and 18 April 2014), Kafr Zeita (18 April 2014), and Marea (1 September 2015), and will issue further reports in due course.

Declaration Assessment Team

Introduction

- 4.170 Following its accession to the Convention on 14 September 2013,²¹ the Syrian Arab Republic submitted, on 19 September 2013, a disclosure of its chemical weapons programme. As required under Council decision EC-M-33/DEC.1, the Syrian Arab Republic submitted, on 2 October 2013, further information to supplement its disclosure and, on 23 October 2013, submitted its initial declaration under Article III of the Convention.
- 4.171 Since September 2013 the Secretariat has undertaken a review of all information submitted by the Syrian Arab Republic to verify the implementation of the provisions of the Convention and the decisions of the policy-making organs. As a result of this activity, between September 2013 and April 2014 the Secretariat identified a number of gaps, inconsistencies, and discrepancies in the Syrian initial declaration which were raised with the National Authority of the Syrian Arab Republic.

Developments

- 4.172 During the Fortieth Meeting of the Council in April 2014, several States Parties voiced their concerns over the completeness and accuracy of the Syrian Arab Republic's initial declaration. In furtherance of the ongoing efforts by the Secretariat and in accordance with the requirements of the Convention and relevant decisions of the policy-making organs and resolutions of the United Nations Security Council, the Director-General established the DAT. The mandate of the DAT is to verify that the declaration submitted by the Syrian Arab Republic can be considered accurate and complete, as required by the Convention and Council decision EC-M-33/DEC.1.

²¹ The Convention entered into force for the Syrian Arab Republic on 14 October 2013.

- 4.173 The first round of technical consultations between the DAT and the Syrian Arab Republic took place from 22 to 28 April 2014. The DAT presented to the Syrian National Authority the working methodology and the criteria for the assessment of the completeness and accuracy of the Syrian initial declaration. This methodology, which was agreed by the Syrian Arab Republic, was communicated to the Council at its Seventy-Seventh Session in October 2014 through the first report on the work of the DAT.²²
- 4.174 Considering the reported absence of documentation supporting the Syrian Arab Republic's explanation of the gaps in the declaration, additional transparency measures were also agreed between the Secretariat and the Syrian Arab Republic. These measures include visits to sites and locations of interest as well as written statements and interviews with the relevant individuals associated with the Syrian chemical weapons programme.
- 4.175 Since April 2014, the DAT activities included, inter alia, 24 rounds of consultations²³ and more than 150 technical meetings with the Syrian National Authority, 51 interviews with 43 individuals linked to the Syrian chemical weapons programme, and 39 visits to 14 chemical weapons-related sites, during which 164 samples were collected and analysed by OPCW designated laboratories. Throughout its engagement with the Syrian Arab Republic, the Secretariat has kept the Council and the States Parties informed about the work of the DAT through regular briefings, presentations, and reports.
- 4.176 The work of the DAT was endorsed by the Council, in particular at its Seventy-Sixth and Eightieth Sessions (respectively EC-76/6, dated 11 July 2014 and EC-80/4*, dated 8 October 2015). The Council also adopted the following three decisions that relate to the activities of the DAT:
- (a) EC-81/DEC.4, in which the Council expressed its concern regarding the Director-General's "Report on the Work of the Declaration Assessment Team Regarding the Declaration and Related Submissions by the Syrian Arab Republic" (EC-81/HP/DG.1, dated 22 February 2016), and requested the Director-General, in parallel with the efforts of the DAT, to meet with officials of the Syrian Arab Republic with a view to: (1) addressing the unresolved issues, including the gaps, inconsistencies, and discrepancies identified by the Secretariat in its report (EC-81/HP/DG.1); and (2) underscoring the importance of fully verifying that the declaration and related submissions of the Syrian Arab Republic are accurate and complete, as required by the Convention and EC-M-33/DEC.1. The Council also requested the Director-General to inform it of the outcome of this engagement in advance of its Eighty-Second Session, and to report to it at all future sessions any unresolved issues regarding the Syrian declaration and related submissions. The Council also called on the Syrian Arab Republic to cooperate fully with the Director-General's engagement and the continuing activities of the DAT;

²² EC-77/P/S/1 (dated 2 October 2014).

²³ In accordance with Council decision EC-81/DEC.4 (dated 23 March 2016), the Director-General engaged in three rounds of high-level consultations with the Deputy Foreign Minister of the Syrian Arab Republic.

- (b) EC-83/DEC.5 (dated 11 November 2016), in which the Council demanded in paragraph 6 that “the Syrian Arab Republic comply fully with its obligations under the Convention, Council decision EC-M-33/DEC.1, and United Nations Security Council resolution 2118 (2013), including the expeditious resolution of all outstanding issues regarding its initial declaration and related disclosures”. In subparagraph 12(b) of the same decision, the Council decided that the Director-General shall “report to the Council at all future sessions, pursuant to paragraph 40, Article VIII, of the Convention, any unresolved doubts, ambiguities or uncertainties regarding the compliance of the Syrian Arab Republic with the Convention”; and
- (c) EC-94/DEC.2 (dated 9 July 2020), in which the Council in paragraph 5 decided, *inter alia*:

to request, pursuant to paragraph 36 of Article VIII of the Convention, that the Syrian Arab Republic complete all of the following measures within 90 days of this decision in order to redress the situation:

- (a) declare to the Secretariat the facilities where the chemical weapons, including precursors, munitions, and devices, used in the 24, 25, and 30 March 2017 attacks were developed, produced, stockpiled, and operationally stored for delivery;
- (b) declare to the Secretariat all of the chemical weapons it currently possesses, including sarin, sarin precursors, and chlorine that is not intended for purposes not prohibited under the Convention, as well as chemical weapons production facilities and other related facilities; and
- (c) resolve all of the outstanding issues regarding its initial declaration of its chemical weapons stockpile and programme.

- 4.177 Pursuant to paragraph 6 of Council decision EC-94/DEC.2, the Director-General issued a report on the implementation of that decision (EC-96/DG.1, dated 14 October 2020), which stated that the Syrian Arab Republic had not completed any of the measures specified in paragraph 5 of EC-94/DEC.2 within the 90-day period designated therein.
- 4.178 As the cut-off date of this Note, the Syrian Arab Republic had not submitted declarations as required under subparagraphs 5(a) and 5(b) of EC-94/DEC.2. Furthermore, the Syrian Arab Republic had not resolved the outstanding issues regarding its initial declaration of its chemical weapons stockpile and programme, as required under subparagraph 5(c) of EC-94/DEC.2.
- 4.179 The Secretariat’s engagement with the Syrian Arab Republic on issues pertaining to the Syrian Article III declaration resulted in some notable outcomes, including the declaration of one additional CWPF and four new research and development facilities; acknowledgement and declaration of five new chemical agents; information about the repurposing into conventional munitions of a large number of previously undeclared chemical weapons

munitions; quantities of chemical agents and precursors; amendments correcting quantities of certain declared chemical agents and precursors; and supplementary information regarding various other aspects of the chemical weapons programme.

- 4.180 Notwithstanding these outcomes, gaps, discrepancies, and inconsistencies remain in the Syrian Article III declaration. The DAT reports these shortcomings in the Syrian declaration as outstanding issues. As of the cut-off date of this Note, the DAT had raised and reported a total of 24 outstanding issues. Of these, four had been resolved while 20 remained open. The outstanding issues have been grouped into three clusters:
- (a) the role of the Syrian Scientific Studies and Research Centre (SSRC) in the Syrian chemical weapons programme (one issue);
 - (b) the results of analyses of samples collected at multiple locations in the Syrian Arab Republic, including indicators of eight previously undeclared chemical warfare agents (five of which have been acknowledged and declared by the Syrian Arab Republic), which suggest that undeclared chemical weapons may have been researched, developed, produced and/or weaponised (16 issues); and
 - (c) other chemical weapons-related activities, including unilateral destruction, use in testing activities, and/or spillage of large quantities of chemical agents, precursors, or munitions before entry into force of the Convention for the Syrian Arab Republic (seven issues).
- 4.181 The substance of the remaining 20 issues is of serious concern as it involves large quantities of potentially undeclared or unverified chemical agents and chemical munitions.
- 4.182 In October 2020, the Secretariat shared its assessment with the Syrian Arab Republic regarding one CWPF declared by the Syrian Arab Republic as never having been used for the production of chemical weapons. The review of all the information and other materials gathered by the DAT since 2014, including samples, indicates that production and/or weaponisation of chemical warfare nerve agents took place at this CWPF. Accordingly, the Secretariat requested the Syrian Arab Republic to declare the exact types and quantities of chemical agents produced and/or weaponised at the site in question, in line with the relevant provisions of the Convention. Such a declaration had not been submitted by the Syrian Arab Republic as at the cut-off date of this Note.
- 4.183 The last round of consultations between the DAT and the Syrian National Authority took place in Damascus in February 2021. Between 30 April 2021 and the cut-off date of this Note, all efforts to organise the twenty-fifth round of consultations between the DAT and the Syrian National Authority in Damascus remained unsuccessful.
- 4.184 Consequently, in May 2022 the Secretariat proposed the resumption of the practice of addressing declaration-related issues through exchange of correspondence, even if such exchanges demonstrably bring fewer outcomes as compared to the DAT's deployments to the Syrian Arab Republic. This had already been the case in the period between June 2016 and April 2019.²⁴ This proposal was agreed to by the Syrian Arab Republic in May 2022.

²⁴

See the report by the Director-General to the Eighty-Second Session of the Council (EC-82/HP/DG.2*, dated 30 June 2016).

- 4.185 Accordingly, in September 2022, the Secretariat provided the Syrian Arab Republic with the list of pending declarations and other documents requested by the DAT since 2019 that could assist in resolving the 20 outstanding issues. As at the cut-off date of this Note, the Secretariat still had not received any such pending declarations or other documents from the Syrian Arab Republic.

Conclusions and future considerations

- 4.186 In keeping with Council decisions EC-81/DEC.4, EC-83/DEC.5, and EC-94/DEC.2, the Director-General has continued to report to the Council on unresolved issues regarding the Syrian declaration and related submissions. In accordance with EC-M-33/DEC.1, the Director-General has also continued to report to the Council on the work of the DAT as part of his monthly reports entitled “Progress in the Elimination of the Syrian Chemical Weapons Programme”, and to the United Nations Security Council pursuant to resolution 2118 (2013). The DAT has continued to provide its technical reports to the States Parties.
- 4.187 Considering the identified gaps, inconsistencies, and discrepancies that remain unresolved, the Secretariat assesses that the declaration submitted by the Syrian Arab Republic still cannot be considered accurate and complete in accordance with the Convention, Council decisions EC-M-33/DEC.1 and EC-94/DEC.2, and United Nations Security Council resolution 2118 (2013).
- 4.188 The Secretariat remains fully committed to verifying the full implementation by the Syrian Arab Republic of all its declaration requirements and to assisting the Syrian Arab Republic in fulfilling its obligations under the Convention, the decisions of the OPCW policy-making organs, and United Nations Security Council resolution 2118 (2013).
- 4.189 Until such time as efforts to organise the twenty-fifth round of consultations are successful, according to the Secretariat’s proposal, activities will continue through exchange of correspondence and submission of pending declarations, documents, and information by the Syrian Arab Republic.
- 4.190 The Director-General will continue to report to the Council and to the United Nations Security Council on the work of the DAT and on the status of all unresolved issues regarding the Syrian declaration and related submissions, while the DAT will continue to provide its technical reports and briefings to the States Parties.

Syrian Scientific Studies and Research Centre inspections

- 4.191 On 11 November 2016 the Council decided that “the Secretariat shall conduct inspections, including sampling and analysis, twice a year at the Barzah facilities of the Syrian Scientific Studies and Research Centre (SSRC) and twice a year at the Jamrayah SSRC facilities on dates to be determined by the Secretariat with full and unfettered access to all buildings at these sites and all rooms within these buildings”, and that “the Syrian Arab Republic shall facilitate promptly, and fully cooperate with, these inspections”.²⁵

²⁵

Paragraph 11 of EC-83/DEC.5.

- 4.192 Since the beginning of 2017 and up to the cut-off date of this Note, the Secretariat had conducted a total of nine rounds of inspections of the Barzah and Jamrayah facilities of the SSRC. The latest round of inspections of the Barzah and Jamrayah facilities of the SSRC was conducted from 11 to 18 September 2022. The Council has been regularly informed by the Secretariat regarding the results of these inspections.
- 4.193 During the third round of inspections at the Barzah facilities of the SSRC in November 2018, a Schedule 2.B.04 chemical was detected, which could be a hydrolysis product of nerve agents. The Secretariat engaged with the Syrian Arab Republic on this matter through an exchange of correspondence. The Syrian National Authority provided some information which was assessed by the Secretariat as insufficient. The Syrian Arab Republic has yet to provide sufficient technical information or explanations that would enable the Secretariat to close this issue.

Challenge inspections and investigations of alleged use of chemical weapons

Introduction

- 4.194 CIs and IAUs are key elements of the Convention, which are aimed at mitigating the risk of activities prohibited by it. CIs and IAUs are initiated under the provisions of Articles IX and X of the Convention and are governed by the provisions contained in Parts X and XI of its Verification Annex.

Developments

- 4.195 Since the entry into force of the Convention, no CI or IAU has been requested by a State Party.
- 4.196 Since the Fourth Review Conference, the Secretariat has continued its efforts to ensure readiness to conduct a CI or an IAU. The measures taken by the Secretariat are listed below:
- (a) A cadre of inspectors in the Capacity-Building and Contingency Planning Cell (CBCP) maintain the Secretariat's readiness to provide assistance and protection against the use of chemical weapons, as well as lead and support the conduct of non-routine missions, including CIs and IAUs, in accordance with Articles IX and X of the Convention or the mandate of the Council.
 - (b) Inspectorate training programmes since the Fourth Review Conference continued to maintain the mandatory requirements under the Quality Management System for the conduct of inspection activities and for the preparation of inspectors and inspection team leaders to perform inspection duties for CIs, IAUs, or other non-routine missions. The trainings were focused on maintaining and increasing readiness capabilities for the conduct of CI and IAU activities in both permissive and high-risk, conflict-prone environments.
 - (c) The Secretariat continues to regularly update its existing training programmes and to develop and implement new ones aimed at strengthening and adapting capabilities to conduct non-routine missions such as CIs and IAUs. Training and exercises promote the enhancement of Inspectors' individual skill sets and improve organic capabilities within a multidisciplinary team. Training courses focused on command and control in contingency operations, investigative

techniques, forensic awareness, emerging threats, research and information management, and advanced interview and negotiations skills. Training in the form of seminars, workshops, and table-top exercises is organised internally by the Secretariat but also provided by external providers, tailoring content to OPCW needs whenever possible.

- (d) The Secretariat has drawn on lessons learned from past CI and IAU exercises, as well as the practical experience gained from the FFM, non-routine missions mandated by the Council, and technical assistance visits, to further supplement its preparedness for CIs and IAUs.
- (e) The Secretariat has streamlined and supplemented the former Operations Centre with new technology and appropriate staffing to create a Situation Centre (SitCen) capable of actively managing CI and IAU missions, along with the routine and other non-routine missions taking place at any given moment. The SitCen provides 24-hour mission support, develops and maintains a comprehensive common operating picture, ensures secure and reliable communications, and provides information analysis to facilitate senior management decision making in support of CIs, IAUs, or any other non-routine missions. Additionally, to provide an initial analysis of the alleged use of chemical weapons, the SitCen maintains Secretariat experts on standby outside normal duty hours.
- (f) The Secretariat has informed States Parties of the procurement of several items of approved inspection equipment that conform to the operational requirements and technical specifications approved by the Conference. This equipment has helped to increase the operational readiness and capabilities of the OPCW, particularly in respect of possible cases of CIs, IAUs, and other non-routine missions.
- (g) For the analysis of samples generated by a CI, an IAU, or other non-routine mission, the Secretariat maintains two mechanisms to conduct analysis: (1) mobile deployable chemistry laboratories for on-site analysis to identify chemical weapons-related chemicals by analytical chemist inspectors; and (2) a network of laboratories designated by the Director-General that are available to carry out off-site analysis of samples in support of a CI, an IAU, or other non-routine mission.

Conclusions and future considerations

4.197 The Secretariat will continue to be committed to improving its preparedness to conduct a CI, an IAU, or other non-routine mission by addressing several facets of staffing, preparedness, and interagency cooperation and technology, including:

- (a) ensuring in the Secretariat the appropriate level of knowledge, skills, and experience required for the successful conduct of contingency operations in a constantly evolving security environment, taking into account new and emerging chemical threats;
- (b) working with other relevant United Nations and international organisations to facilitate knowledge sharing and interagency cooperation;
- (c) continuing the development and facilitation of relevant training programmes and technologies at the Technology and Training Hub of the ChemTech Centre;

- (d) concluding bilateral agreements with interested States Parties to provide independent air transport on short notice to ensure the rapid deployment of teams; and
- (e) continuing to receive more pre-approved flight clearances for non-scheduled aircraft to further solidify the Secretariat's preparedness to conduct CIs, IAUs, and other non-routine missions in the future.

4.198 The ChemTech Centre will enhance the Secretariat's ability to respond to a CI, an IAU, or other non-routine mission by enabling two initial activities:

- (a) enhanced inspector training: An effort will focus on the development of advanced skills for conducting IAUs, and by doing so, increase the pool of staff capable of participating in the conduct of non-routine missions. The Secretariat will first integrate the knowledge and experience gained from its non-routine missions. This knowledge and experience will then be integrated into the inspector training programme and will be used in internal training activities and in support of capacity-building activities, to the benefit of States Parties; and
- (b) development of test and validation capabilities for equipment: this effort, aimed at improving OPCW preparedness while keeping abreast of technological advancements and ever-changing operational requirements, will focus on the establishment of a test and validation capability for new technologies. Bearing in mind the speed of such advancements and the current procedure to update the list of approved inspection equipment (C-I/DEC.71*, dated 30 November 2010), a leaner approach might be needed to ensure the feasibility of frequent updates of the list.

4.199 The Secretariat continues to encourage States Parties to jointly organise and host exercises and training that can enhance the investigative and response capabilities required for CIs or IAUs in complex environments. Furthermore, the Secretariat urges States Parties to openly share research and development on technologies pertaining to personal protection equipment, medical countermeasures, identification, and decontamination regarding emerging chemical threats.

4.200 Consideration should be given, through the continued development of the SitCen and associated analytical capabilities, to further developing the Secretariat's ability to better understand the global threat environment pertaining to the use of chemicals as weapons. These capabilities would not only directly support the Secretariat's routine and non-routine operations but also inform policy development, particularly in relation to countering the threat from non-State actors.

D. CAPACITY DEVELOPMENT

4.201 The ability of States Parties to fulfil their obligations and to exercise their rights is a prerequisite for the full and effective implementation of the Convention. In this regard, technical assistance provided by the Secretariat is essential, and derives from subparagraph 38(e) of Article VIII of the Convention, which stipulates that the Secretariat shall, inter alia, provide "technical assistance and technical evaluation to States Parties in the implementation of the provisions of this Convention, including evaluation of scheduled and unscheduled chemicals".

- 4.202 In terms of international cooperation and assistance, the Secretariat, through its International Cooperation and Assistance Programme, continued to serve as an international platform for specialised and technical assistance for the implementation of the Convention. The Secretariat's wide range of programmes and projects were aimed at contributing to enhancing States Parties' capacity in three programmatic areas: national implementation of the Convention (Article VII); assistance and protection against the use or threat of use of chemical weapons (Article X); and international cooperation in areas of peaceful chemistry for the economic and technological development of the States Parties (Article XI).
- 4.203 Since the Fourth Review Conference, significant progress has been made in all programmatic areas. The Secretariat also introduced new initiatives to adapt its capacity-building programmes in an environment marked by an evolving security context and challenging operational settings. The overview provided in the latter part of this section describes the developments in each mandated area.
- 4.204 While these diverse activities are tailored to specific capacity-building priorities and stakeholders, in the period since the Fourth Review Conference the Secretariat intensified its efforts to plan and manage them in an integrated manner, based on the needs identified together with National Authorities and in line with the principles of results-based management. This new approach is explicitly manifest in the design and delivery of the fifth phase (2020–2022) and preparation of the sixth phase (2023–2025) of the Africa Programme, as well as in increased efforts in promoting chemical safety and security across mandated areas.
- 4.205 In addition, the Secretariat has undertaken regular exercises to conduct systematic needs assessments, to monitor and measure progress towards achieving the targeted outputs, and to assess the impact of those outputs. These exercises were carried out in consultation and coordination with National Authorities and relevant stakeholders. A range of tools has been developed and used to better understand the needs of States Parties, and to evaluate the Secretariat's programme delivery in terms of the impact and results achieved.
- 4.206 During the period under review, because of the operational restrictions associated with the COVID-19 pandemic, the Secretariat recalibrated and adapted its programmes to an online modality and continued to provide technical assistance through a wide range of capacity-building activities using IT-enabled tools and platforms. Such practice has contributed in turn to enhancing the resilience of the OPCW capacity-building programmes and to further enhancing their efficiency.
- 4.207 The Secretariat has also been intensifying its efforts to further incorporate gender and diversity perspectives in its portfolio of capacity-building programmes. This mainly involves women and youth perspectives through specific initiatives highlighted later in this section.

National implementation measures

Introduction

- 4.208 The provisions of Article VII contain general obligations for the national implementation of the Convention. To ensure the proper functioning of all the Convention's mechanisms (including verification and other measures aimed at preventing the re-emergence of chemical weapons), it is essential that all States Parties establish and enforce the administrative and legislative measures that are required to be implemented under the Convention. These measures not only give legal basis to the prohibitions of the Convention at the national level but also help to build confidence among States Parties.

Developments

- 4.209 In the period since the Fourth Review Conference, two additional States Parties have established or designated their National Authority, leaving only one State Party that has not fulfilled this requirement. States Parties have notified the Secretariat of their legislative and administrative measures taken to implement the Convention as required under paragraph 5 of Article VII, with nine States Parties having provided copies of the texts of adopted measures. A summary of these developments is provided in Table 2 below.

TABLE 2: STATUS OF IMPLEMENTATION OF ARTICLE VII OBLIGATIONS

Obligations	As at 31 July 2018 (193 States Parties)	As at 31 July 2022 (193 States Parties)	Progress
National Authority designated or established	190 (98%)	192 (99%)	+2
Article VII (5) submission received	162 (84%)	172 (89%)	+10
Text of adopted measures provided	145 (75%)	154 (80%)	+9
Legislation covers all key areas/initial measures	122 (63%)	122 (63%)	0

- 4.210 As at cut-off date of this Note, 36 States Parties had informed the Secretariat that they had adopted legislation covering some of the initial measures. Thirty-five States Parties have yet to report on the adoption of legislation. The Secretariat continues to work and liaise with these 71 States Parties that have yet to adopt comprehensive implementing legislation. As a result of various legislative assistance programmes, 61 out of these 71 States Parties have developed draft implementing legislation, five of which have submitted their draft bills before their respective parliaments.

Implementation support programmes

- 4.211 Following the recommendations of the Third Review Conference, the Secretariat has continued to develop its implementation support programmes and tools in line with the comprehensive approach to national implementation. The portfolio of legislative

assistance has been broadened and amended in accordance with States Parties' new or evolving requirements, and includes the following:

- (a) the Internship Programme for Legal Drafters and National Authority Representatives, which assists States Parties in the development of draft national implementing legislation that is in line with the provisions of the Convention while meeting the requirements of the respective national legislative bodies and being suitable for submission to them. Since the Fourth Review Conference, five States Parties have participated in two such sessions. While the need for drafting assistance has decreased over time, the Secretariat is increasingly responding to requests for a detailed review of national draft implementing legislation and is providing relevant comments thereon to States Parties;
- (b) the Influential Visitors Programme, through which States Parties are assisted in promoting the adoption of national implementing legislation. Key national decision makers from States Parties that are at an advanced stage of the adoption process are invited to OPCW Headquarters to receive detailed information and briefing sessions, to support them as advocates for the implementation of the Convention in their countries. Since the Fourth Review Conference, Togo has participated in this programme;
- (c) stakeholder forums on the adoption of national implementing legislation, which help to sensitise national stakeholders on the importance of adopting national implementing legislation in relation to the Convention. Since November 2018, two global stakeholder forums have been held to follow up on progress in the legislative adoption process and to update road maps towards adoption of implementing legislation. Altogether, 18 States Parties attended the two forums;
- (d) national legislative review forums, which are country-specific and assist in clarifying the status of national Convention implementing legislation and in identifying gaps in respective legislative frameworks and possible approaches to address them. Outcomes often include recommendations to revise or amend existing laws or regulations or to develop new ones. Since the launch of the initiative in 2020, seven States Parties have benefitted from it. One result is that Armenia developed and adopted amendments to its legal framework that fulfilled all requirements under the Convention; and
- (e) regional training on legislative and regulatory issues on chemical security, which seeks to enhance national capacities in analysing legal and regulatory frameworks, and to apply risk assessment methodologies for the development of chemical security measures. With a complementary intent and as a new initiative, regional workshops on best practices in developing legislative and regulatory frameworks on chemical security were conducted in 2022, which facilitated States Parties' exchange of relevant views and experiences in the subject area.

4.212 Apart from legislative support the Secretariat has continued to assist the National Authorities in strengthening their capacities to effectively implement the Convention through the following programmes:

- (a) general or basic training courses for National Authorities, to inform national personnel involved in the implementation of the Convention on its main tenets. Following the Fourth Review Conference, 81 States Parties participated in four basic courses. Since 2022, the hitherto global format of this training was enhanced by offering two regional editions, following the recommendation that capacity development activities should better match the needs of States Parties and allow for enhanced South-South, regional, and subregional cooperation. The regional format also provided space for States Parties to share experience and add content with which other participants easily identified. The successful regional format will be applied to two more regions in 2023. The global training courses will remain a valid modality, to be employed in response to relevant operational needs; and
- (b) courses related to obligations under Article VI of the Convention, which aim to strengthen capacities of National Authorities to: (1) submit annual declarations in an accurate and timely manner; and (2) receive and escort OPCW inspections. Since November 2018, 96 States Parties have attended at least one of eight such training courses. The Secretariat has also continued to conceptualise and deliver innovative, specialised capacity building in relation to Article VI. In response to expressed interest from States Parties with significant declarable and inspectable activities, the Secretariat provided platforms for exchange and engagement on key verification-related issues between relevant States Parties and with the Secretariat. Since the Fourth Review Conference, a pilot forum on verification issues for Schedule 2 plant sites was conducted, while a second pilot forum on supporting the identification and resolution of transfer discrepancies was due to be delivered before the end of 2022.

4.213 Global and regional meetings of National Authorities provide an opportunity for States Parties to receive updates on the status of implementation of the Convention, to share related experiences and best practices, and to discuss national capacity-building needs with the Secretariat. Since November 2018, four global meetings and 16 regional meetings have been held. As in previous years, the global annual meeting in 2019 was conducted in person allowing for engagement and direct interaction between States Parties and the Secretariat. The 2020 and 2021 global meetings were held remotely because of the restrictions imposed by the COVID-19 pandemic. These meetings continued to be useful in strengthening relationships among States Parties, as well as between States Parties and the Secretariat.

4.214 The Mentorship/Partnership Programme for National Authorities offers a platform for bilateral exchange and cooperation between States Parties. The Secretariat advises on the design, implementation, and follow-up of each partnership programme. The focus of this programme is primarily on States Parties lacking national implementing legislation covering all initial measures. It also targets States Parties seeking to draw on the implementation experience of National Authorities with a more advanced implementation status. These partnerships have been implemented since 2018, with actual exchanges paused owing to travel restrictions. This programme is anchored in a robust, albeit imperfect, results framework which needs further strengthening.

- 4.215 The Secretariat assists in building and strengthening capacities of other relevant national stakeholders, in particular customs authorities. Six training courses for customs officials and for representatives of customs training institutions have been held in global as well as regional formats, including some which have focused on lessons learned.
- 4.216 With a view to assisting National Authorities in building effective partnerships for implementation of the Convention, the Secretariat provides outreach and advocacy support for relevant national stakeholders, such as the chemical industry, in the form of a global annual gathering of National Authorities and chemical industry representatives. Since November 2018, four such meetings have been held, each attracting a progressively increasing number of States Parties (from 25 in 2019 to 70 in 2022).
- 4.217 The Secretariat is updating and upgrading the e-learning modules developed in response to the Third Review Conference's recommendation to develop e-learning tools so as to render them more accessible, interactive, user-friendly, and relevant. This will strengthen the Secretariat's capacity to provide enhanced learning opportunities, particularly on subjects pertaining to the implementation of obligations under Articles VII, X, and XI of the Convention, through a blended approach of integrating remote technology and in-person training.
- 4.218 The Secretariat continues to engage with States Parties to identify implementation-related capacity-building needs and to respond in a relevant, agile, and effective manner. The Secretariat systematically reviews and assesses feedback from States Parties in relation to capacity-building support provided. Where possible and appropriate, qualitative, longer-term assessments of potential outcomes of capacity-building activities are conducted.

Reporting mechanism

- 4.219 As requested by the Third Review Conference, the Secretariat continues to prepare and submit its annual reports on the status of implementation of Article VII to the policy-making organs. In 2013, States Parties agreed to a new set of criteria—the so-called initial measures—to be used by the Secretariat to monitor the status of implementation of the Convention. The initial measures comprise the minimum set of legislative measures deemed necessary for a non-possessor State Party that has no declarable chemical production facility on its territory. They offer a comprehensive and objective overview of the implementation of the Convention by States Parties and provide solid guidance to the Secretariat for the delivery of targeted technical assistance to States Parties. These new criteria were first used in the annual report on the implementation of Article VII in August 2013, and the same criteria have since been used for all subsequent reports.
- 4.220 The information contained in the reports is based on a self-assessment undertaken by States Parties in response to the note verbale that is circulated by the Secretariat, together with matrices inquiring on their status of implementation. Nonetheless, the Secretariat reviews the submissions made by States Parties to ensure their consistency with documents on record. Further, the Secretariat has streamlined the reporting format and has made the annual reports more concise and analytical.

- 4.221 In 2020, the Secretariat launched an online platform for States Parties to submit their updates on the status of implementation of Article VII. States Parties are increasingly making use of the platform for their submissions, and this is yielding positive results, including enhanced accuracy of submissions. Previously submitted information can be accessed by the respective State Party and compared with updates, and this has led to a reduction in inconsistencies in the information provided. The platform also serves as a complementary institutional knowledge management tool for States Parties, and the Secretariat will continue to promote its use.

Challenges to the enactment of implementing legislation

- 4.222 Since the Fourth Review Conference, some progress has been made by States Parties in enacting implementing legislation, though significant gaps remain. The adoption of national legislation is a slow and challenging process that is beyond the control of the Secretariat. It requires the full engagement of all relevant stakeholders, whose political will and commitment are critical to the successful adoption of legislation. States Parties have cited several reasons for delays, including the following:
- (a) prioritisation in the national agenda: the adoption of the legislation may not be considered a priority, in light of overarching concerns that rank higher in the political agenda, such as security or economic issues;
 - (b) lack of stakeholder coordination: coordination and related awareness of responsibilities and obligations among the relevant stakeholders may be insufficient, resulting in a disruption of follow-through on the legislative adoption process. Some States Parties reported challenges in interagency coordination as a result of the pandemic restrictions in 2020, 2021, and 2022;
 - (c) complexity: the limited availability particularly of technical expertise may affect the drafting of the legislation. Subsequently, effective outreach towards relevant political and other stakeholders on national obligations under the Convention may be affected by limited outreach/advocacy experience; and
 - (d) continuity of knowledge: frequent staff turnover and inadequate knowledge management systems are likely to hamper the systematic advancement and follow-up of the legislative drafting and adoption process.

Conclusions and future considerations

- 4.223 The OPCW is shifting its focus to preventing the re-emergence of chemical weapons, which entails addressing and/or mitigating threats of the possible use of toxic chemicals for malicious purposes (or purposes prohibited under the Convention). Against this backdrop, full implementation of the Convention at national level is even more critical. The key areas for capacity-building support in relation to Article VII of the Convention will be the adoption of comprehensive national implementing legislation by all States Parties; capable and competent National Authorities and customs authorities; effective coordination of relevant national stakeholders; and full awareness at national level of the Convention's importance for preventing the re-emergence of chemical weapons.

- 4.224 Targeted outreach and engagement activities will be undertaken to approach the countries that have yet to initiate the process of drafting comprehensive national legislation or have legislation that covers only some of the initial measures. The role of national implementing legislation in addressing current and emerging threats related to toxic chemicals will be emphasised. States Parties will be assisted in the development and/or review of relevant regulations, including through the sharing of best practices and dedicated advisory support.
- 4.225 In particular, the Secretariat will increase its outreach to small countries, including small island developing States, to stress the urgency of adopting Convention-related implementing legislation. Many of these countries have no large chemical industries or significant trade in chemicals and may therefore have other priorities dominating their national agendas. At the same time, some of them are major transport hubs, and should therefore be aware of relevant risks for becoming part of trafficking routes—owing to possibly weak regulatory and enforcement mechanisms for chemical imports and exports control.
- 4.226 States Parties' prioritisation of implementation of the Convention could be incentivised by highlighting the benefits offered under the Secretariat's International Cooperation and Assistance Programme, and by emphasising the readiness of the Secretariat to support States Parties through relevant capacity-building activities.
- 4.227 Outreach and engagement with the chemical industry, chemical trade associations, and customs administrations is critical to effective implementation of the Convention. The Secretariat will continue to pursue proven cooperation modalities and explore new ones, in particular by providing advocacy and communication support to National Authorities in their engagement with these stakeholders.
- 4.228 States Parties' specific needs related to national implementation are best addressed through tailored capacity-building activities that strike a balance between global, regional, and national approaches. Experience has shown that dedicated support at the national level is most effective for States Parties that have already advanced in implementation and then require either strong political momentum or targeted technical advisory assistance to reach full implementation.
- 4.229 National Authorities play an important role in assessing the quality and outcomes of the capacity-building support provided by the Secretariat. Looking ahead, an even stronger interaction and exchange on the long-term impact of such support is required between the Secretariat and National Authorities. Closer cooperation would include regular assessments of national needs and gaps, and of the status and progress of national implementation, i.e., the fulfilment of national obligations under the Convention and the related reporting to the Secretariat. A results-based management or logical framework approach will continue to be applied.
- 4.230 To ensure sustainability and effectiveness of capacity-building activities, States Parties must take full ownership of the Secretariat's implementation support, and commit to it. The National Implementation Framework (NIF)—a strategic assessment and planning tool for national implementation—was developed following the Fourth Review Conference to enable and facilitate the necessary buy-in from States Parties. However, the NIF's refinement and eventual roll-out to States Parties was hampered by the pandemic. To advance its use, the application of the NIF is foreseen to be piloted in selected States

Parties across all regions. Subsequently, it will be adjusted according to feedback and lessons learned by States Parties as well as by the Secretariat. In the longer term, the NIF is expected to lead to development and realisation of national action plans for implementation of the Convention. The development of relevant methodologies and tools could form an increasingly important part of support activities in relation to Article VII.

Assistance and protection against chemical weapons

Introduction

- 4.231 Assistance and protection against the use or threat of use of chemical weapons continues to be the one of key pillars of the Convention and has growing significance in the context of an ever-evolving security landscape.
- 4.232 Through its provisions, Article X makes significant contributions to countering the threats associated with the use of chemical weapons, be they chemical warfare agents or toxic industrial chemicals. It does so by providing expert advice and assistance on establishing or further developing States Parties' emergency response capabilities through a broad programme of capacity-building activities and other interventions. Furthermore, it ensures the Secretariat's readiness to provide and coordinate assistance in case of a request from a State Party under paragraph 8 of Article X in the event of the use or threat of use of chemical weapons.
- 4.233 The Secretariat continues to assist States Parties by means of an information exchange platform—the Protection and Assistance Databank (PAD)—and several assistance programmes and project activities which are detailed through regular reporting to the policy-making organs.

Developments

- 4.234 The support offered to States Parties in the context of Article X has evolved and broadened since the Fourth Review Conference. In addition to capacity-building activities aimed at improving preparedness of States Parties to effectively deal with incidents involving chemical warfare agents and toxic industrial chemicals, capacity-building activities also support the law enforcement community in the investigation of incidents where toxic chemicals are intentionally used. The focus of work in the assistance and protection area has shifted to contributing to the broader themes of preventing re-emergence of chemical weapons and countering chemical terrorism by ensuring that the use of chemical weapons is deterred through improved response and investigative capabilities. Not only does this approach ensure better outcomes and lessen the impact of incidents, but it should also serve to dissuade non-State actors from using toxic chemicals for purposes prohibited under the Convention.

Exchange of equipment and information concerning means of protection

The International Support Network for Victims of Chemical Weapons

- 4.235 The Third Review Conference acknowledged, with appreciation, the establishment of the International Support Network for Victims of Chemical Weapons and of a voluntary trust fund for that purpose, both on the basis of a decision by the Conference (C-16/DEC.13, dated 2 December 2011). In accordance with the decision, activities undertaken in the

context of the network are financed solely from voluntary contributions through the trust fund. The balance of the voluntary trust fund stood at EUR 135,596 according to the latest status report on the implementation of Article X (EC-101/DG.11, dated 7 September 2022 and Corr.1, dated 4 October 2022).

- 4.236 Following the Fourth Review Conference, the “Practical Guide for Medical Management of Chemical Warfare Casualties”, which was initially launched in 2015 in English, was translated into the other official languages of the OPCW (Arabic, Chinese, French, Russian, and Spanish), and additionally into German, Persian (Farsi), and Turkish. In 2019, an updated version of this guide was published, including new relevant information.
- 4.237 In 2020, the Secretariat gathered a group of experts from States Parties to initiate the drafting of a companion book to address the long-term effects on victims of exposure to chemical weapons. The companion book is in its final revision and is expected to be published in the coming months.

The Instructor Development and Exchange Programme

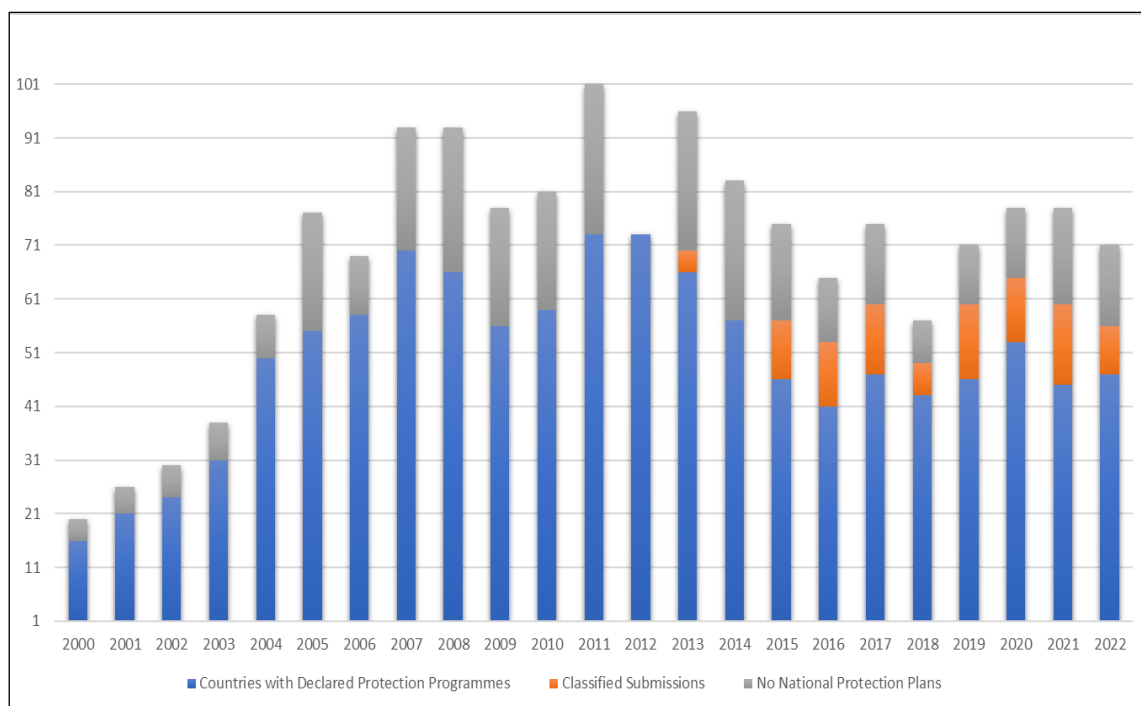
- 4.238 To support the Secretariat’s capacity-building efforts, the Instructor Development and Exchange Programme was further broadened and strengthened to integrate new knowledge and skills obtained in the area of assistance and protection within and across the different geographical regions.
- 4.239 The several facets of this Programme include the use of the train-the-trainers approach, the conduct of specialised training, the performance of evaluation practices, and the use of a tailored approach to specific regions. This has resulted in an efficient and sustainable use of available resources. The Programme contributes to the enhancement of individual skills and has played a significant part in increasing the number of qualified instructors who have also collaborated in the conduct of regional and subregional assistance and protection training programmes.
- 4.240 In the same vein, the Secretariat is seeking to improve the efficiency of its programmes and in this context to upgrade, beginning in 2023, the international training cycle into a specialised training cycle for instructors, by collaborating with advanced training partner institutions and using the OPCW ChemTech Centre. It is also planned to further rely on the instructors from different regions to support the e-learning component of capacity-building activities, and to engage trained instructors in supporting training programmes at the regional and subregional levels, including a chemical emergency response capacity-building exercise (CHEMEX Africa) in 2023.

Information on national protective programmes

- 4.241 Between entry into force of the Convention and 4 October 2022, 159 (82%) of the 193 States Parties had made at least one submission as required under paragraph 4 of Article X relating to national programmes for protective purposes.
- 4.242 The rate of annual submissions peaked in 2011 with 101, but unfortunately in 2022 a downward trend continued with only minimal variations in the number of States Parties meeting these obligations. Of the 71 submissions received from States Parties in 2022, 15 declared not having any national protective plan.

- 4.243 Noting the concern with the low number of submissions, States Parties, as required under paragraph 4 of Article X, are requested to make their annual submissions of information on their national programmes related to protective purposes in a timely fashion using the online PAD; the Secretariat can provide assistance to ensure the timely completion of their submissions. States Parties are also encouraged to include, on a voluntary basis, additional information on their effective national practices, for example in regard to gender and diversity aspects of protective programmes and chemical emergency response.

CHART 4: NUMBER OF SUBMISSIONS UNDER PARAGRAPH 4 OF ARTICLE X



Capacity building and provision of expert advice to States Parties

- 4.244 With the central aim of providing expert advice to raise and/or establish a protective capability against chemical weapons and to facilitate regional coordination, the Secretariat continues to conduct capacity-building activities across all regions and in several subregions, in partnership with donors and with the assistance of States Parties. In this regard, success was achieved in Africa, Asia, Eastern Europe, and Latin America and the Caribbean, where the capacity of existing training providers was strengthened and new partner institutions that could readily support this approach were identified. Furthermore, to supplement existing training curricula additional activities have been conducted, including, inter alia, table-top exercises, practical field exercises, and scenario-based training. The scenarios included major public events organised in States Parties, such as the Africa Cup of Nations 2022 in Cameroon and the FIFA World Cup 2022 in Qatar, where work relating to chemical emergency response took place under the guidance of experts from the Secretariat.

- 4.245 In an effort to improve coordination with States Parties when setting their priorities for regional capacity-building activities, the Secretariat in 2014 introduced a more broadly targeted approach to its activities, with the annual training cycles conducted at the regional level playing a central role. The selection of participants for capacity-building activities was aligned with the annual training cycles to ensure that participants completed the entire training cycle (basic course, advanced course, and exercise) within a calendar year.
- 4.246 With the purpose of optimising resources and meeting the diversified needs of States Parties, the Secretariat provided training by integrating various capacities at the national or subregional level, and assisted States Parties in building integrated national or subregional emergency first response teams (composed of army, police, firefighting, emergency medical, and civil defence personnel) to serve as a team of future trainers and instructors. The Secretariat also expanded its courses to be delivered in other languages, including Arabic, Portuguese, and Russian.
- 4.247 In addition to fostering geographical and linguistic balance, the Secretariat strongly encouraged gender diversity across its programmes with an aim to attract more female first responders to training programmes, both as trainees and instructors.
- 4.248 In the African region, the Secretariat continued to deliver training activities and projects that contributed to fostering subregional response capacity and supporting African States Parties in the development of protective measures to respond to incidents involving chemical warfare agents, toxic industrial chemicals, and related threats. These activities and projects were pursued within the framework of the fourth and fifth phases of the Africa Programme (2017–2022), and have actively engaged the regional economic communities in Africa and their Member States. The pilot project using this approach involved the East African Community (EAC), and led to Uganda hosting a regional chemical, biological, radiological, and nuclear (CBRN) partner training centre.
- 4.249 In addition, the fifth phase of the Africa Programme marked in 2021 the inception of the Online Self-Assessment Tool (OSAT) as a pilot project in Africa, with technical and financial support from the Government of the United Kingdom of Great Britain and Northern Ireland. The OSAT aims to help Member States, initially those in the Southern African Development Community (SADC), to assess chemical safety and security risks from hazardous chemicals, to audit existing response capacities, and to identify capability gaps and improvement measures, including those that the OPCW could help address. Following completion of the design phase, the implementation phase of the OSAT project was launched in March 2021 with the financial support of France, Germany, the United Kingdom, and the European Union. As of 31 August 2021, 15 States Parties from the SADC region had engaged in self-assessments using the OSAT, identifying gaps in their national chemical emergency preparedness and response capabilities. Based on the findings and with the support of the Secretariat, 11 of these States Parties have already designed a set of necessary improvement measures to upgrade their national programmes for protective purposes. The Secretariat will continue to work alongside its partners to promote the OSAT with a view to contributing to the further development of national programmes for protective purposes.
- 4.250 For future development, the sixth phase of the Africa Programme (2023–2025) builds on the progress made and results achieved within the framework of previous phases, and includes four targeted results areas under objective 3—“enhancing protection and response capabilities against chemical incidents and attacks”. Accordingly, over the next

three years (2023–2025), the Secretariat will endeavour to achieve the following targeted results for specified numbers of African States Parties:

- (a) enhanced state of preparedness and expertise to respond to chemical emergencies;
- (b) strengthened national programmes for protective purposes;
- (c) developed and sustained preparedness of hospitals to receive and treat casualties of chemical emergencies; and
- (d) developed and sustained capabilities to investigate chemical incidents and attacks.

4.251 The COVID-19 pandemic necessitated a pivot from face-to-face to online training. The Secretariat, as far as possible, has consolidated the experience and learning from operating online to ensure that it is captured, to ensure that the Secretariat has at its disposal a broader range of delivery methods. In 2022, the Secretariat developed a hybrid training cycle concept, which moves classroom-based training to an online (synchronous and asynchronous) modality and allows maximum time for face-to-face practical training. It is anticipated that this new hybrid concept will optimise resources and make for more effective knowledge transfer.

4.252 The Secretariat has implemented a bespoke approach to assess the current and future needs of States Parties, both at the national and regional level. The approach is based on a qualitative analysis of data provided by policymakers, first responders, and technical experts from States Parties. The data is gathered through collaborative processes, such as the newly developed OSAT, a joint review process to develop necessary improvement measures and national implementation plans, informal consultations, meetings of experts, and coordination at the regional and subregional level through the engagement of regional and subregional organisations.

4.253 A recently developed medical action plan is also being implemented and aims to assist States Parties with medical antidotes, treatments, and advice on protective measures against chemical warfare agents and toxic industrial chemicals, ensuring the fulfilment of the OPCW's role under Article X, with no conflicts with the mandates of other international organisations. The medical action plan provides the foundations to harmonise and systematically approach medical education, treatment, and follow-up of affected individuals, enhancing States Parties' medical preparedness and response against chemical warfare agents and toxic industrial chemicals. As part of this plan, the Chemical Response Actions for Safety and Health (CRASH) pilot training was designed, and is aimed at providing training on the essentials of medical management of such emergencies to untrained emergency personnel who require immediate training. CRASH is applicable at the regional and subregional level.

Protection and Assistance Databank

4.254 The Secretariat, through Note EC-88/S/5 (dated 14 June 2018), informed the Council of its efforts to re-engineer submissions under paragraph 4 of Article X by implementing the online PAD, which was successfully tested and launched in 2020. The Secretariat informed the Council that the PAD had been fully implemented (EC-97/S/2, dated 15 June 2021) and that a user manual for the platform had been

circulated (EC-100/S/2, dated 9 June 2022). All information available in the databank is non-confidential and is visible to users. For States Parties using other available means to provide their submissions under paragraph 4 of Article X in a protected format, the Secretariat will update the PAD to reflect that the national submissions have been made for the year in question and indicating only whether that State Party has declared the existence of a national programme related to protective purposes. In early 2022, the Secretariat circulated Note Verbale NV-ICA/APB-340/22 (dated 4 April 2022) to all States Parties requesting that they review and update their paragraph 7 submissions, and for those States Parties yet to provide any offers of assistance, to submit an offer of assistance.

Provision of assistance by States Parties

- 4.255 The Third Review Conference urged all States Parties that have yet to do so to make offers of assistance to the OPCW, as required by paragraph 7 of Article X. Between entry into force of the Convention and 4 October 2022, 81 States Parties had met this obligation. In all, 48 States Parties have made contributions to the Voluntary Fund for Assistance, in accordance with subparagraph 7(a) of Article X.
- 4.256 As of 30 June 2022, the balance in the fund amounted to EUR 1,572,974. A total of 46 States Parties had fulfilled their obligations under subparagraph 7(c) of Article X. Two States Parties had concluded agreements with the OPCW concerning the procurement of assistance on demand, in accordance with subparagraph 7(b) of Article X and subparagraph 34(b) of Article VIII.

The OPCW's capacity to respond to a request for assistance

- 4.257 The Third Review Conference encouraged the Secretariat to take measures to further strengthen its capacity to respond promptly to requests for assistance under Article X.
- 4.258 To this end the Secretariat has continued to organise annual workshops for the coordination of assistance under Article X, with discussions focused on such aspects as delivery response mechanisms, capacity building, and networking at international, regional, and subregional levels. These workshops have contributed significantly to the streamlining of activities conducted and designed by the Secretariat, as well as to discussions on the way forward. They have also proven to be an effective tool for enhancing the implementation of Article X and for assessing the effectiveness of the relevant OPCW programmes.
- 4.259 In-house and external training sessions are planned to be conducted for the members of the Secretariat's Assistance Coordination and Assessment Team (ACAT), enabling them to maintain and create readiness to provide assistance in the event of a request from a State Party. The training courses will cover the role of ACAT members, the planning of resources, procedures involved during operations, on-site coordination with other international organisations and national agencies, and other practical information related to field missions based on the guidelines of the United Nations Office for the Coordination of Humanitarian Affairs (UNOCHA) and the United Nations Disaster Assessment and Coordination Team.

- 4.260 Recognising the need for cooperation with relevant international organisations and agencies in response situations, the Secretariat has maintained contacts with international organisations such as INTERPOL, the International Atomic Energy Agency (IAEA), UNOCHA, the United Nations Department of Safety and Security, and other agencies that would potentially be present during an emergency response. The Secretariat continues to maintain its ability to manage international response by organising training and exercises in cooperation with States Parties and relevant international organisations.
- 4.261 While the Secretariat has extant memorandums of understanding with key international agencies and organisations, it will continue to seek opportunities to participate in international exercises organised by the International Humanitarian Partnership which are aimed at promoting cooperation and coordination between the responding agencies and at reconciling the individual organisations' tasks and mandates. The readiness and ability to quickly respond to requests for assistance from States Parties is a key enabler for the Secretariat. In this regard, the International Cooperation and Assistance Division of the Secretariat should work alongside the Inspectorate Division to maintain and further enhance preparedness.

Conclusions and future considerations

- 4.262 In terms of the full and effective implementation of Article X, progress since the Fourth Review Conference continues and opportunities for further improvement will present themselves in the coming years.
- 4.263 The Secretariat will further build on the new targeted approach to national capacity development and assistance. The approach is multifaceted and aimed at improving national and regional protective capacities, strengthening cross-regional cooperation and partnerships, and enhancing Secretariat capacities to deliver tailor-made assistance.
- 4.264 The OSAT, launched in 2021, provides a solid basis to further advance the approach and will help National Authorities to assess the risks posed by hazardous chemicals, to audit existing response capacities, and to identify improvement measures. These measures could then form a national action plan and be integrated into a broader action plan to counter WMD and CBRN threats, supporting an inclusiveness and complementarity in addressing them.
- 4.265 Subsequently, the Secretariat is expected to be in a position to support the implementation of the improvement measures, including through better targeted training programmes, and to help address other improvement measures at the national and/or subregional levels.
- 4.266 To this end, the declining rate of annual reporting on national programmes for protective purposes, as required by paragraph 4 of Article X, should be reversed both quantitatively and qualitatively. Though the Secretariat continues to remind States Parties of their obligations, both collectively and individually, States Parties may wish to assist in encouraging the full implementation of this obligation by voluntarily adding further information on effective national practices, including on gender and diversity aspects of chemical emergency response, through focused meetings of the regional groups, or by means of a separate report on the topic to the Council, which could serve to further support timely reporting.

- 4.267 The further transition to risk-based capacity and capability development at all levels is another highlight of the Article X implementation activities. The Secretariat's efforts have included a reinforced hybrid training cycle and new specialised capacity-building programmes and training courses. Apart from these efforts, however, the steady and seamless transition from the delivery of existing generic assistance at the international and regional level to risk-based, tailor-made capacity building at the subregional and national level will depend on the engagement and inputs from interested States Parties and several other critical drivers, the expanded application of the OSAT, enhanced collaboration and partnerships internally and externally, and increased leverage of the e-learning instrument described above.
- 4.268 In terms of the content of Article X capacity-building programmes, in addition to the hybrid training cycle and the broad application of the OSAT, which will provide for a broader training scope and content and cost-efficiencies, there are several areas as well as new tools and instruments designed by the Secretariat that could be explored in the coming years to enhance the support to States Parties in the field of assistance and protection.
- 4.269 Following the successful programmes aimed at developing the capacity of police first responders to operate in contaminated environments, the Secretariat will continue to tailor training for these responders to capture their specific and crucial roles in chemical incident response. New training modules on law enforcement, and deterrence and prevention of the use of chemical warfare agents and toxic industrial chemicals will provide law enforcement authorities with the necessary tools to prevent the malicious use of such chemicals and the acquisition of chemical weapons, as well as help to improve sampling techniques and maintain the chain of custody.
- 4.270 As the medical action plan is implemented, a number of actions will be undertaken, which are aimed at supporting the OPCW's role in enhancing medical capabilities in States Parties and building up a continuous education cycle for medical professionals. It is expected that these efforts, such as harmonisation and standardisation of medical content under the medical action plan, could contribute effectively to strengthening the medical capabilities at the global level.
- 4.271 The experience gained from the Major Public Events Programme will be leveraged to develop a fully fledged platform for sharing experiences among States Parties to address chemical risks during the conduct of major public events.
- 4.272 To enhance preparedness to support and advise States Parties on chemical incidents, States Parties may consider jointly hosting exercises and trainings on response capabilities. These exercises could include the participation of other international organisations in view of possible integration.
- 4.273 Furthermore, drawing on the successful activities in support of discussing gender-related challenges in chemical emergency response, the Secretariat will further expand dialogue and training opportunities for female first responders.
- 4.274 As part of the broader Secretariat effort to increase its monitoring and evaluation efforts and to provide States Parties with results-based reporting, assistance and protection activities will continue their transition to a programme-focused approach with the attendant logical and results framework. This development will allow for increased transparency and more comprehensive reporting for the States Parties.

Economic and technological development

Introduction

- 4.275 Promoting international cooperation in the field of chemical activities for purposes not prohibited under the Convention, as provided for in Article XI of the Convention, is a fundamental pillar of the International Cooperation and Assistance Programme. It also has a unique bearing on the recalibrated focus of the OPCW towards preventing the re-emergence of chemical weapons by promoting chemical safety and security in the context of the peaceful uses of chemistry.
- 4.276 The Third Review Conference reaffirmed that full, effective, and non-discriminatory implementation of Article XI is essential for the realisation of the object and purpose of the Convention. It also commended Conference decision C-16/DEC.10, recognising that the decision provides guidance for the full, effective, and non-discriminatory implementation of Article XI and identifies avenues for further work that would advance its objectives.

Developments

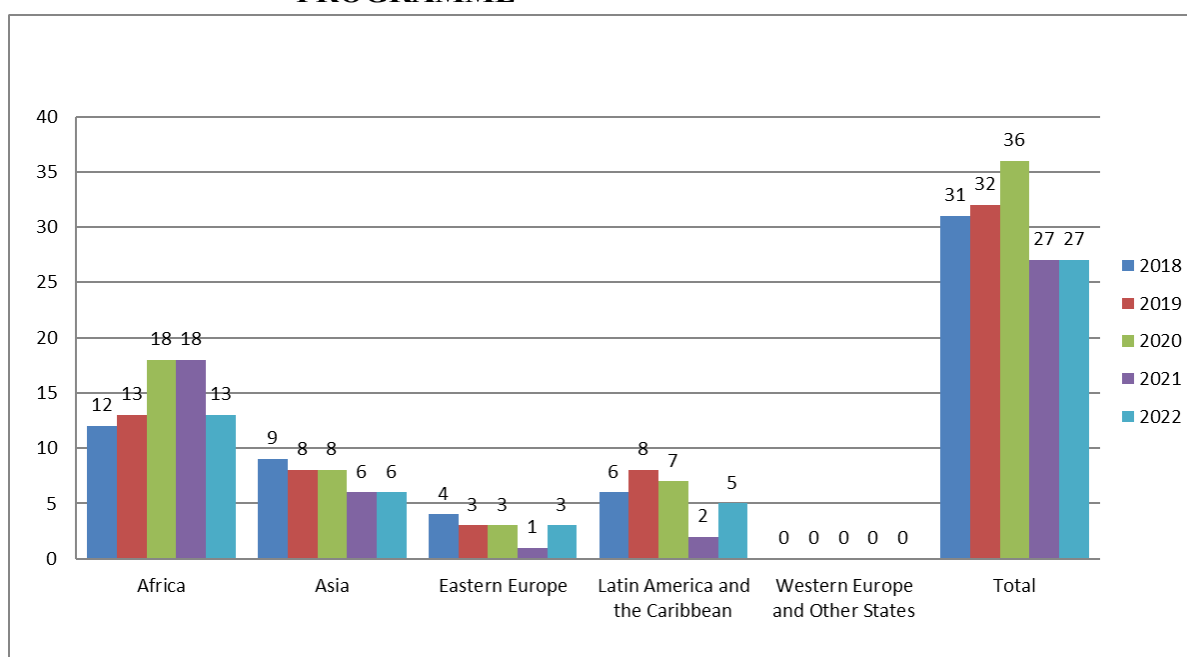
- 4.277 Since the Fourth Review Conference the Secretariat, in coordination with the States Parties, further developed its programmes under Article XI of the Convention and enhanced the effectiveness of their delivery according to the guidelines defined by the Third Review Conference and in other relevant mechanisms (such as C-16/DEC.10).
- 4.278 During the reporting period, the Secretariat organised 128 capacity-building programmes, and supported 34 conferences and 105 research activities under Article XI of the Convention, benefiting a total of 3,162 participants from various States Parties. These activities included six editions of the flagship Associate Programme for 153 participants. The Secretariat also organised 60 courses, seminars, and workshops under the Chemical Safety and Security Management Programme (for 1,756 participants), and 43 analytical skills development and laboratory assistance courses (for 598 participants).
- 4.279 Furthermore, the Secretariat has offered sponsorship for 54 scientific fellowships and 34 international conferences. It has also provided financial support for 105 research projects, including projects co-funded with the International Foundation for Science. The Secretariat also donated equipment and/or facilitated the transfers for seven equipment exchanges.
- 4.280 In order to better meet the needs of the States Parties, the Secretariat has continued to identify areas for further work through needs assessment surveys. Since 2018 it has also launched new programmes and initiatives, namely: the Education Training Programme on Peaceful Uses of Chemistry for Youth (one online and one in-person event, with 75 participants); the Toolbox on Chemical Safety and Security (two workshops attended by 44 participants, with one guideline issued and another in progress); the OPCW-IUPAC Safety Training Programme for GRULAC States Parties (two e-learning editions, with 27 participants); four twinning projects (benefitting four laboratories seeking OPCW designation); a workshop on general aspects of chemical safety and security in laboratories (one online and one in-person workshop); and the Project on Assessing and Enhancing Capacity of Analytical Laboratories from African

and GRULAC States Parties (seven laboratories received support through eight workshops, seven training courses, eight evaluation visits, and two grants for equipment and chemicals). Furthermore, the Secretariat has published a collection of papers in the field of toxic chemicals in the environment summarising the achievements of OPCW-funded research.

Fostering integrated chemicals management and chemical safety and security

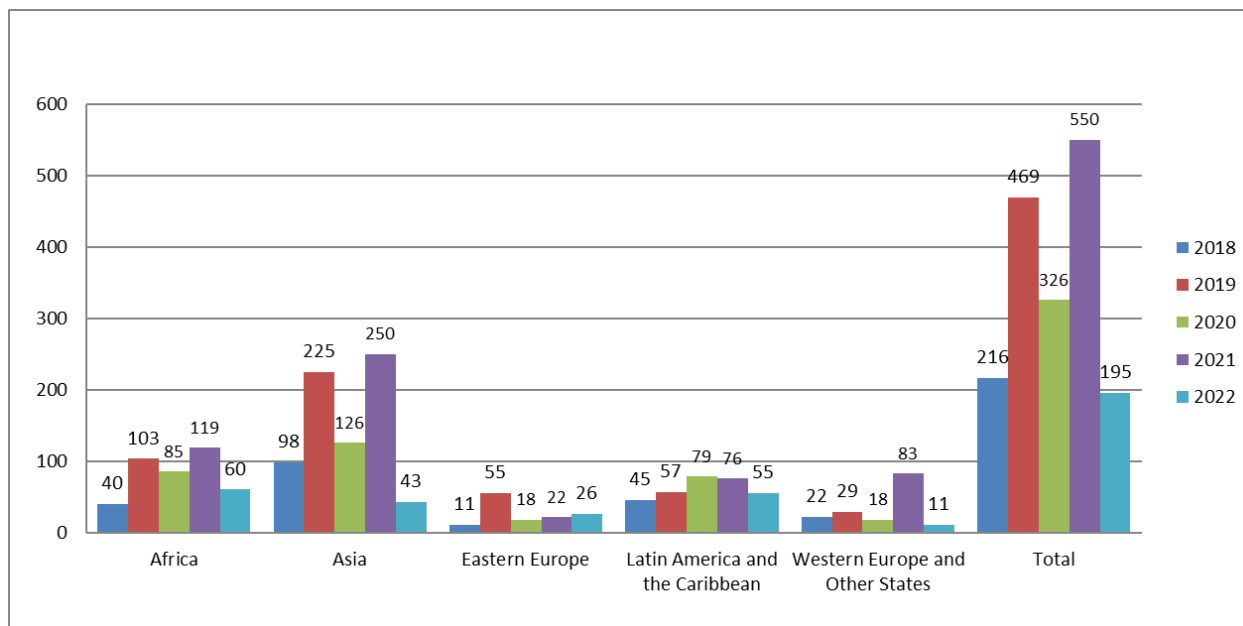
- 4.281 The Secretariat has continued to provide comprehensive training through the Associate Programme. Chart 5 below provides an overview of participation in the Programme since 2018.

CHART 5: NUMBER OF PARTICIPANTS IN THE ASSOCIATE PROGRAMME



- 4.282 The Secretariat has also continued to engage States Parties in national capacity-development activities related to: chemical risk assessment and threat management; mitigation methods; hazard communication; and chemical disaster risk reduction. Since 2009, more than 3,500 experts have been trained. Chart 6 below gives an overview of participation in the Chemical Safety and Security Management Programme since 2018.

CHART 6: NUMBER OF PARTICIPANTS IN THE CHEMICAL SAFETY AND SECURITY MANAGEMENT PROGRAMME



- 4.283 In the field of chemical safety and security management for industry, progress was made during the review period by consolidating a programmatic approach to enhance synergy and complementarity of activities. With needs assessments as a central driver, the Secretariat continuously improved its results-oriented approach in training and capacity building, and also opened a new area of support to States Parties through tools and guidelines. New topics, such as supply chain vulnerability and explosion protection, were introduced as the focus of six dedicated training events and workshops since 2019.
- 4.284 The first product from the Toolbox on Chemical Safety and Security were the “Indicative Guidelines for Chemical Safety and Security in Small and Medium-sized Enterprises to Foster the Peaceful Uses of Chemistry”, which were issued in June 2021.²⁶ The non-binding document provides such enterprises, which often lack the resources for safety and security management, with a compilation of best practices developed by a group of experts. Further development of the toolbox is continuing with a set of non-binding guidelines on the transportation of hazardous chemicals by road.
- 4.285 A new programme on chemical safety and security for laboratories has also been introduced. In 2021, the first edition of the “Workshop on General Aspects of Chemical Safety and Security in Laboratories” was organised online, followed by an in-person training in 2022. The programme addressed a global audience and provided an update on the current standards, policies, and best practices in chemical safety and security in both research and industrial experimental work setups.

²⁶

Available at:

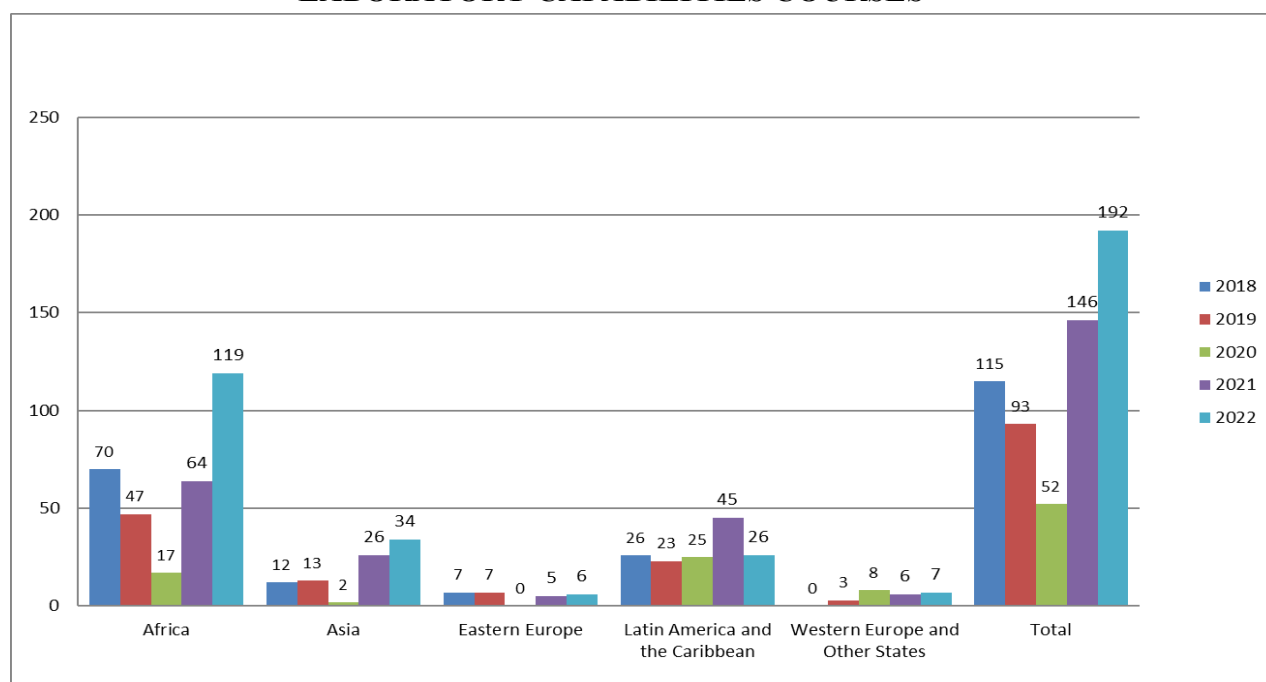
https://www.opcw.org/sites/default/files/documents/2021/06/OPCW%20Indicative%20Guidelines%20CSSM%2029062021%20Final_1.pdf.

- 4.286 The “Safety Training Programme E-learning for States Parties in the Latin America and Caribbean Region” was introduced as a new initiative and organised in 2021 and 2022. It provides information on the current standards, policies, and best practices in occupational safety, chemical hazards, handling, storage, transportation of chemicals, and waste management.
- 4.287 The Secretariat continued its regular training events targeting specific regions, including through the series of regional seminars on chemical safety and security management, the “Seoul Workshop on the Peaceful Development and Use of Chemistry for Asian Member States”, and the course on chemical safety and security management in laboratories dedicated for the GRULAC region.
- 4.288 Global events continued during the review period, and included the executive programme on integrated chemicals management and the Wuppertal course on loss prevention and safety promotion in the chemical process industries. The Wuppertal course altered its focus in 2021 and 2022 to explosion protection and error/safety management in the chemical process industries.

Enhancing analytical laboratory capabilities

- 4.289 The Secretariat continued its capacity-building activities in support of States Parties’ efforts to develop their analytical skills and laboratory capabilities to analyse Convention-related chemicals by organising a variety of analytical skills development courses and analytical chemistry courses (see Chart 7 below). The Secretariat also organised dedicated programmes for tailored laboratory assistance aimed at leveraging the network of designated laboratories.

CHART 7: NUMBER OF PARTICIPANTS IN ENHANCEMENT OF LABORATORY CAPABILITIES COURSES

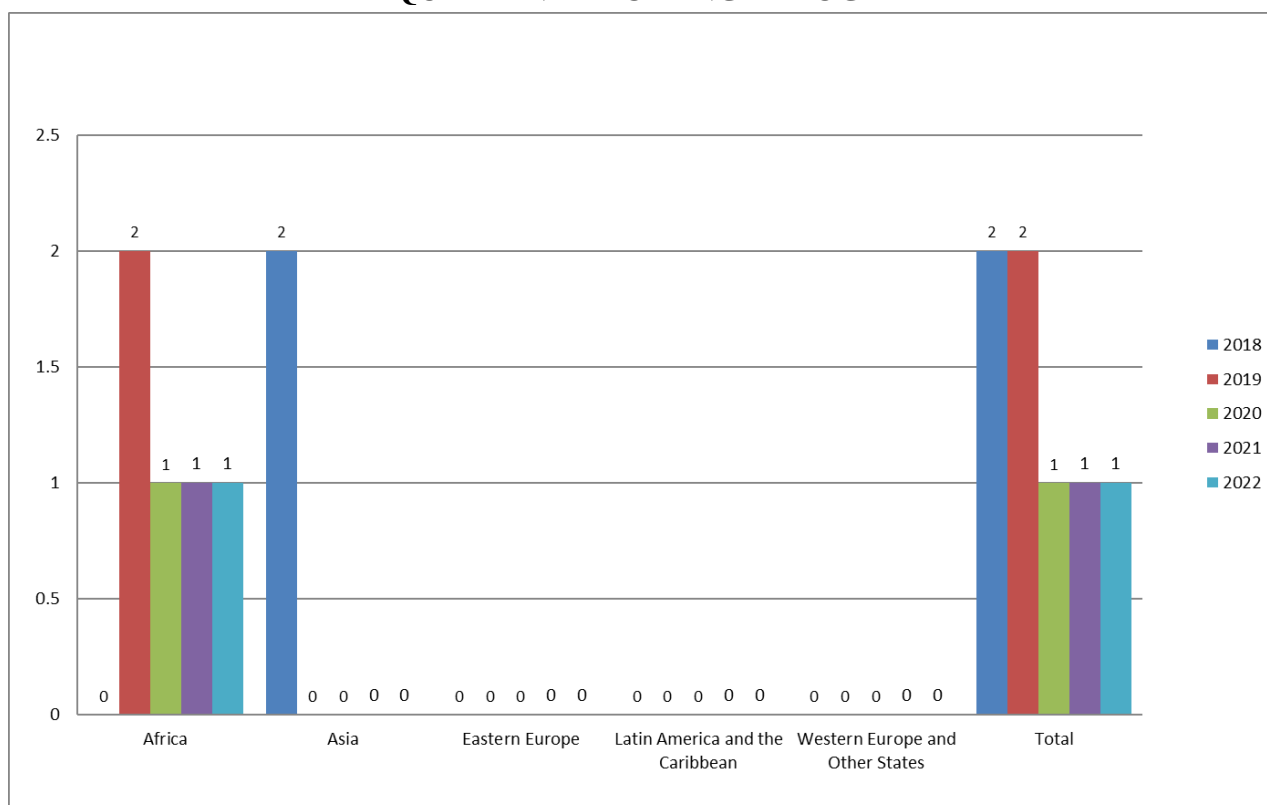


4.290 The Secretariat made noteworthy progress with the Laboratory Twinning Programme, which is designed to assist laboratories from States Parties with economies that are developing or in transition and are seeking OPCW designation status. Since 2018, eight laboratories have been paired in four twinning projects, two of which have been formally initiated and two of which are in the final preparation phase.

4.291 Since 2019, the Secretariat has augmented its tailored support to States Parties in Africa and Latin America and the Caribbean, focusing on the development of capacities of national laboratories that are seeking OPCW designation. Out of seven laboratories receiving assistance under the project, one laboratory obtained OPCW designation status in 2021, thus becoming the first OPCW designated laboratory in the GRULAC region.

4.292 In addition, the Secretariat continued to facilitate transfers of used but functional equipment between States Parties under the Equipment Exchange Programme (see Chart 8 below).

CHART 8: NUMBER OF PIECES OF EQUIPMENT EXCHANGED UNDER THE EQUIPMENT EXCHANGE PROGRAMME



Promoting scientific and technological cooperation and knowledge exchange

4.293 The Secretariat has continued its efforts to promote and facilitate further scientific and technological cooperation through the Programme for Support of Research Projects, the Conference Support Programme, and the Fellowship Programme (see Charts 9 to 11 below).

CHART 9: NUMBER OF PROJECTS SUPPORTED UNDER THE PROGRAMME FOR SUPPORT OF RESEARCH PROJECTS (DIRECTLY FUNDED, APPROVED BY YEAR)

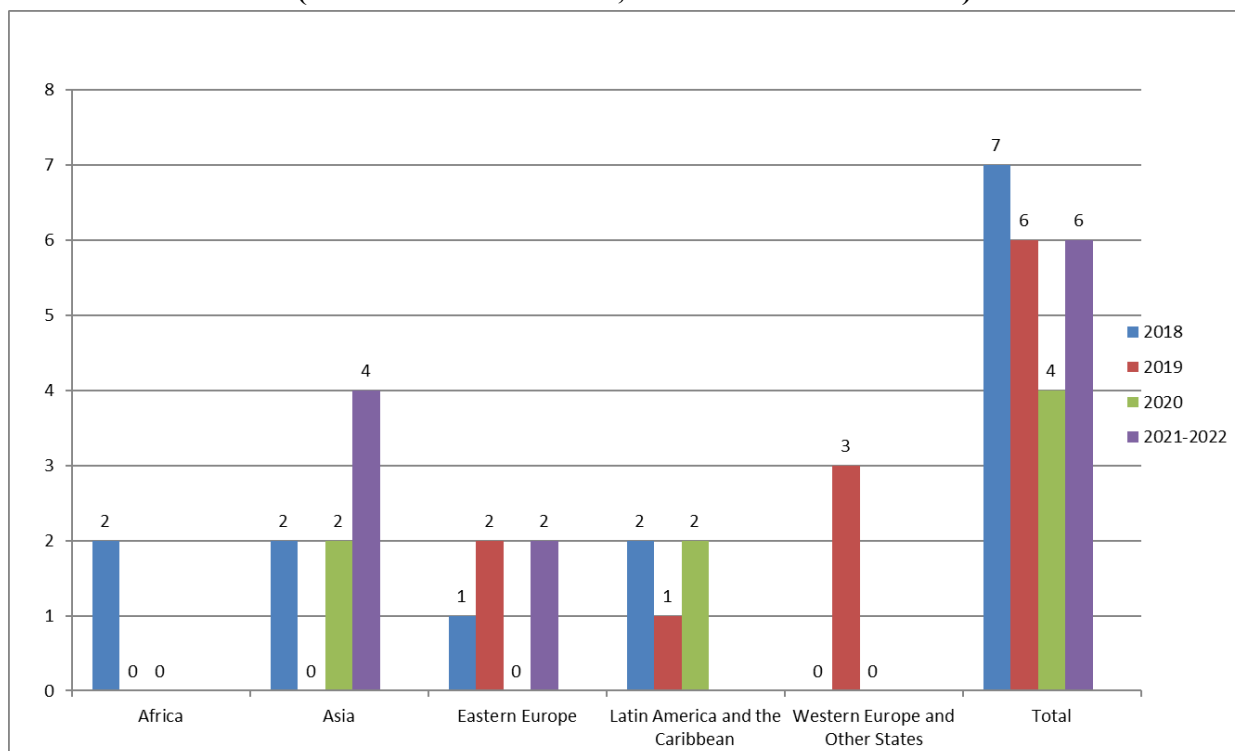


CHART 10: NUMBER OF PARTICIPANTS IN THE CONFERENCE SUPPORT PROGRAMME

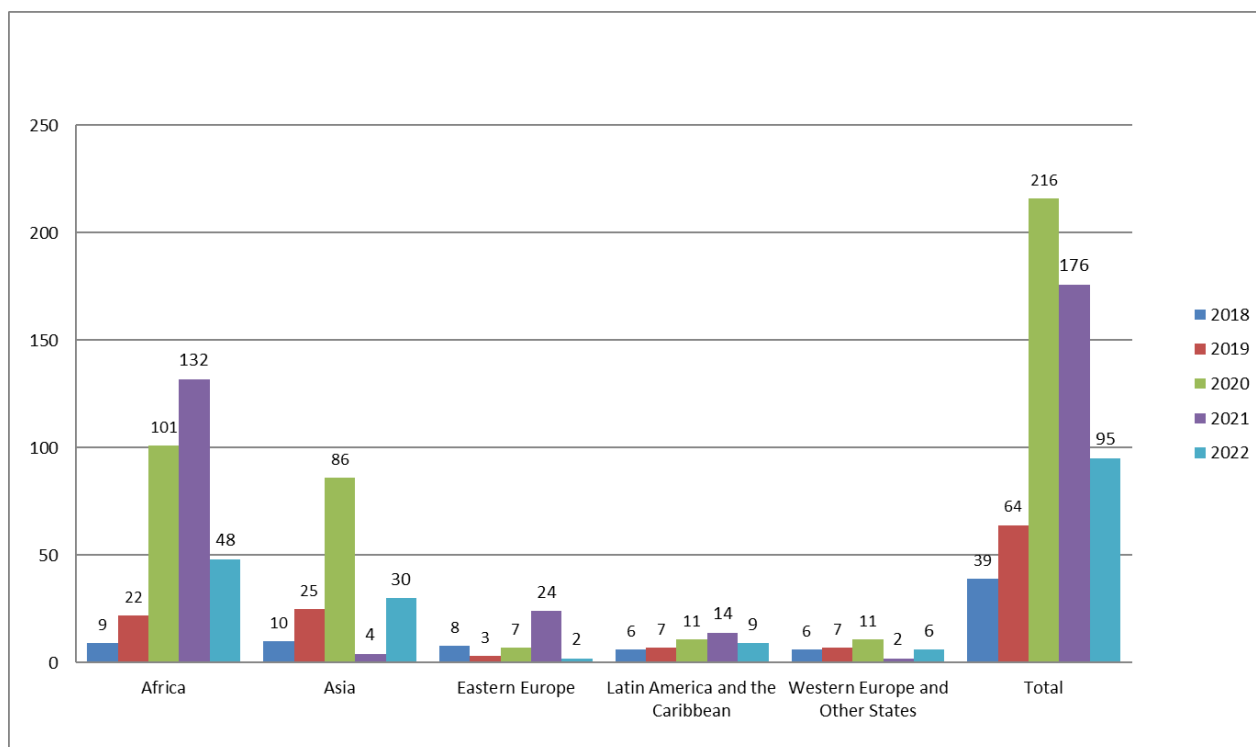
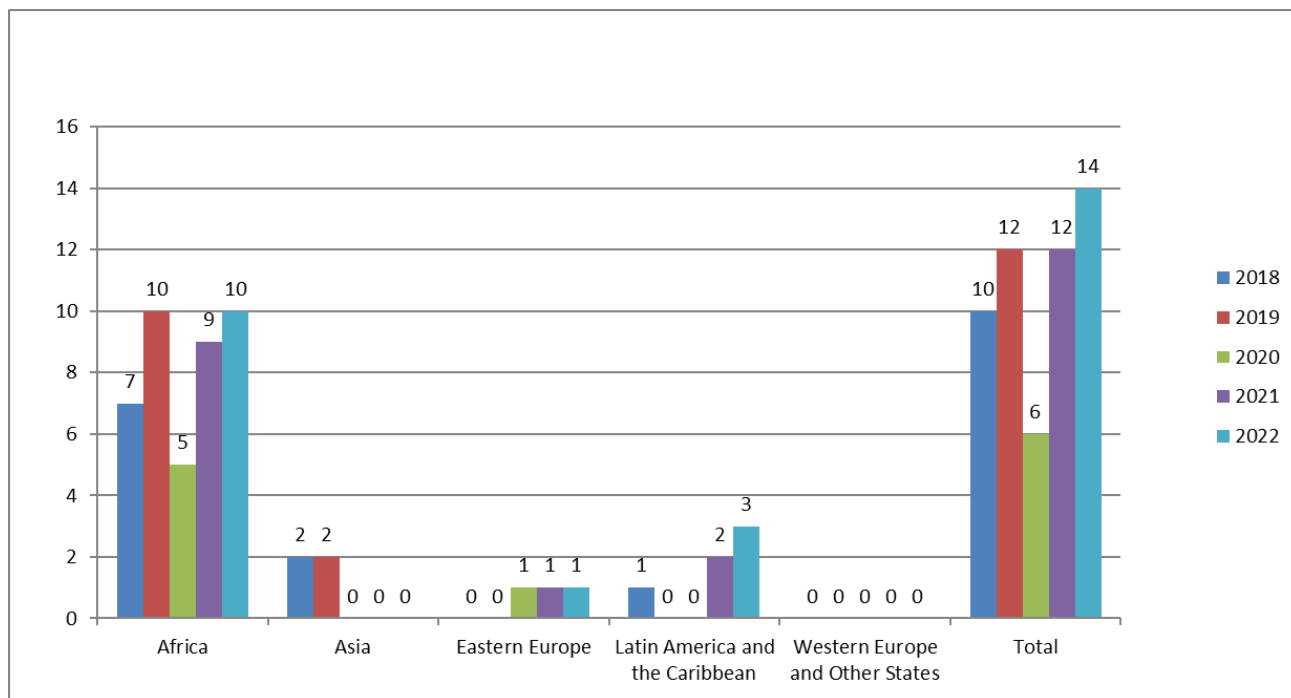


CHART 11: NUMBER OF PARTICIPANTS IN THE FELLOWSHIP PROGRAMME



4.294 The Secretariat launched the Education Training Programme on Peaceful Uses of Chemistry for Youth to raise awareness among young people on the Convention and on key concepts associated with chemical safety and security management, including misuse of dual-use chemicals and the benefits of peaceful applications of chemistry. The first event took place online in April 2022 with 47 participants.

4.295 The Secretariat also continued to organise symposiums on Women in Chemistry, workshops on Policy and Diplomacy for Scientists, and forums on the peaceful uses of chemistry as part of the educational and awareness-raising efforts under the series of programmes entitled “Building a Knowledge Society”.

Enhancing programme effectiveness through evaluation

4.296 The Secretariat has continued to review its international cooperation programmes to ensure that they meet the needs of States Parties in implementing Article XI according to its standard, systematic mechanism of evaluation and monitoring.

4.297 To accurately reflect the needs of States Parties in Article XI programmes, the Secretariat continued needs assessment exercises from 2019 to 2022. The needs assessment questionnaire, formerly an annex to the relevant Note of the Secretariat, has been upgraded to an online survey to improve efficiency, while adding elements relating to safety and security of transportation of hazardous chemicals.

4.298 The Secretariat also endeavoured to strengthen the alumni network in order to enhance the impact of its programmes. For example, an Alumni Association of the Associate Programme was established in 2012 and continued to be expanded, using a Facebook group page as a platform. The Association helped generate ideas and recommendations that enhanced the Associate Programme’s content and impact. The Secretariat also

established alumni networks for the Chemical Safety and Security Management Programme, the Women in Chemistry Initiative, integrated chemicals management events, as well as a new alumni network for the Education Training Programme on Peaceful Uses of Chemistry for Youth.

Developing partnerships and building synergies to enhance international cooperation

- 4.299 In line with the recommendations of the Third Review Conference, the Secretariat continued to take action to develop relationships and partnerships with various relevant stakeholders to raise awareness of the activities of the Organisation.
- 4.300 During the review period, the Secretariat continued its cooperation with industry through three-week industry attachments of Associate Programme participants at modern chemical facilities in Europe, Asia, and Latin America and the Caribbean in 2019. In 2020 and 2021 the programme was organised in an online format without the industry attachment owing to the COVID-19 pandemic, and with a one-day industry visit in a condensed version of the Programme in 2022. The Secretariat plans to fully resume industry attachments from 2023 if the situation so allows.
- 4.301 Dialogue and cooperation among multiple stakeholders, including scientists and academics, policymakers, and chemical industry representatives, was also strengthened through initiatives such as Green and Sustainable Chemistry and Policy and Diplomacy for Scientists.
- 4.302 The Secretariat also actively took part in interagency work and participated in joint initiatives with other international organisations, including by attending the Inter-Agency Meeting on Sound Chemicals Management in 2019 within the framework of the Inter-Organization Programme for the Sound Management of Chemicals, by hosting the Annual Inter-Agency Coordination Meeting on Industrial Accidents in 2021, and co-organising the Symposium on Women in Chemistry with UNICRI in 2022.

Conclusions and future considerations

- 4.303 Under the general framework of Article XI, the Secretariat aims to further strengthen its international cooperation programmes to promote the peaceful uses of chemistry, focusing on three strategic programme areas: integrated chemicals management, enhancing laboratory capabilities, and chemical knowledge promotion and exchange. Programme objectives and content will be based on risk and needs assessments to meet States Parties' needs and to ensure national ownership.

In the area of integrated chemicals management

- 4.304 The specific programme lines and future activity areas that the Secretariat considers effective in assisting States Parties to integrate, and thereby improve, their systems to manage chemicals, are described below:
- (a) Building on a close partnership with industry, the Secretariat will assist States Parties in developing their national frameworks and standards or guidelines on chemical safety and security management, covering the entire life cycle of chemicals.

- (b) The Secretariat will expand the work started in 2016 on compiling best practices and lessons learned in chemical safety and security management.
 - (c) The Secretariat will continue developing and promoting new tools and guidelines in the Toolbox on Chemical Safety and Security Management to address new topics and stakeholder groups.
- 4.305 The Secretariat will further expand its engagement with the chemical industry and private sector in its programmes, including the Associate Programme and chemical safety and security trainings. Efforts will be made to identify and mobilise expertise from the chemical industry, while seeking synergies and cooperation. This could include joint training schemes within the Fellowship Programme for professionals from States Parties with economies that are developing or in transition, or the chemical industry's hosting of specific trainings in integrated chemical management.
- 4.306 The thematic diversification of activities and stakeholder outreach under the Chemical Safety and Security Management Programme has contributed to its evolution. However, to better cover specific needs of institutions, the Secretariat intends to complement its capacity-building work with tailored individual assistance targeting specific institutions. This will be founded on expressions of interest from specific institutions, and will include medium- and long-term perspectives, and be based on clear objectives. It will also rely on existing expertise from the established centres of excellence or expertise that is accessible through partnerships with States Parties in the form of mentorship and twinning initiatives.
- 4.307 The Chemical Safety and Security Management Programme will be further streamlined and integrated with other initiatives under Articles VII and X to consolidate the comprehensive effort in chemical safety, security, and countering chemical terrorism. Engagement with relevant stakeholders will be emphasised, including with: the chemical industry to leverage the latest knowledge on trends and management standards; researchers and academia to promote education/ethics and scientific developments in the field of safety and security; and policymakers to highlight the need for chemical safety and security regulations. This approach will require the following measures to be effectively implemented:
- (a) the setting of long-term goals, focusing on needs and results, and mobilising support from local centres of excellence/knowledge retention hubs;
 - (b) the enhancement of outreach to relevant stakeholders, the establishment of sustainable and proactive networks, and the identification of synergies with international agencies;
 - (c) the development of a multi-stakeholder dimension and the concerted efforts of Secretariat units in related programme delivery; and
 - (d) more efficient coordination of the entire cross-cutting area to ensure balance, synergies, and internal sharing of knowledge and resources, including financial allocations.

In the area of enhancing laboratory capabilities

- 4.308 The Secretariat will further assist laboratories in developing their analytical capabilities in regard to Convention-related chemicals for a broad range of topics and types of specialised institutions using, where appropriate, the new training facility of the ChemTech Centre. Apart from the existing analytical chemistry courses routinely implemented at the OPCW Laboratory, a new training programme is proposed for chemical forensics, in addition to an extended course for customs laboratories.
- 4.309 The Secretariat will explore options for developing synergies between the Fellowship Programme and new research initiatives planned by the Secretariat at the ChemTech Centre in analytical chemistry and related fields, to enable scientists from States Parties whose economies are developing or in transition to participate in on-the-job training within the framework of these initiatives.
- 4.310 A special focus will be placed on support for laboratories that aim to achieve OPCW designation status by enhancing their advanced knowledge of the subject matter and their preparedness for the related OPCW testing exercises. In this regard, the focus will be placed on tailored assistance for such laboratories through the Laboratory Assistance and Twinning Programme, and through dedicated projects funded from voluntary contributions, which combine a set of assistance measures that are provided according to a medium- to long-term plan.
- 4.311 Under the Equipment Exchange Programme, the Secretariat will continue to enhance its networking activities and will further encourage States Parties to donate equipment for the benefit of States Parties whose economies are developing or in transition.

In the area of chemical knowledge promotion and exchange

- 4.312 The Secretariat will further align the Conference Support Programme with the overall objectives under Article XI, and target funds to sponsor events aimed at raising awareness, building capacity, and sharing best practices to promote the peaceful uses of chemistry.
- 4.313 Under the Fellowship Programme, new areas will be explored to identify where the programme can better support institutional goals and the areas of chemistry with a high impact on Convention implementation, while providing the opportunity for higher engagement of individual researchers in such activities. Partnerships with institutions will incorporate fellowship projects in which training opportunities will be provided within the framework of the agreed projects or research areas. Fellows will also take part in the Secretariat's other research activities in the peaceful uses of chemistry (both desk- and laboratory-based research) hosted at both the OPCW Headquarters and the ChemTech Centre.
- 4.314 Joint fellowships will be implemented in cooperation with partner institutions, such as universities and industry, involving multiple attachments of fellows to different institutions in the framework of agreed projects on the peaceful uses of chemistry. Such schemes, to be explored and established, will increase the OPCW's engagement in educational work through partnerships with universities or the establishment of public-private partnerships with the chemical industry.

- 4.315 Additionally, the Secretariat will consider supporting visits of senior researchers in the context of planned research activities to be carried out at the ChemTech Centre. The OPCW visiting scholar scheme will allow engagement of renowned scientists and experts on a temporary basis to support and supervise various research and training activities of the Secretariat, including the laboratory-based fellowships at the ChemTech Centre.
- 4.316 The Secretariat will further enhance the strategic aspects of the Programme for Support of Research Projects to further improve its value and impact in achieving Convention objectives. New specific thematic areas will be explored, based on specific calls for applications for research projects, to improve outreach to stakeholders, expand thematic coverage, and foster more focused achievements in selected scientific areas of high relevance to the Convention. This work and additional outreach efforts could be carried out with active participation and support from the SAB.
- 4.317 The Secretariat will enhance and expand stakeholder outreach across all programmes relating to chemical knowledge promotion and exchange by engaging with partner institutions and associations, other parts of the Secretariat, the ABEO, and the SAB.

On the overall delivery of Article XI programmes

- 4.318 The Secretariat will further engage with States Parties to develop targeted capacity-building programmes at the national, regional, and international levels.
- 4.319 The Secretariat will consider the development of e-learning content and initiatives to support and ensure the resilience of programme delivery in all its thematic areas.
- 4.320 The Secretariat will continue to cooperate with States Parties to ensure the regular evaluation and monitoring of its international cooperation programmes. The Secretariat will expand the evaluation and impact assessment schemes to examine the means of delivering capacity-building programmes effectively, based on needs. The Secretariat will further encourage States Parties' ownership in the process of Article XI implementation.
- 4.321 The Secretariat will further streamline its outreach mechanisms, including through the ABEO and the SAB, in order to increase in its activities the participation of stakeholders from technical and scientific backgrounds, including scientists and industry personnel.

OPCW Programme to Strengthen Cooperation with Africa on the Chemical Weapons Convention

Introduction

- 4.322 The Africa Programme was instituted by the Director-General in 2007 to give strategic direction to the Secretariat's engagement with African States Parties in support of the implementation of the Convention. The Programme has also provided triennial roadmaps for the Secretariat's capacity-building activities for African States Parties in order to address their specific needs.
- 4.323 The Programme is key in view of the importance of Africa's share in the membership of the Organisation (52 out of 193 Member States) and the significant challenges Africa faces in relation to implementation and access to knowledge and technology concerning peaceful uses of chemistry.

- 4.324 Since the Fourth Review Conference, the implementation of the Africa Programme continued to effectively facilitate the development of capacities in African States Parties in relation to key aspects of the Convention.
- 4.325 Programme implementation continued to be guided by the relevant policy framework defined by the Convention itself, the medium-term plans, and the relevant decisions of the policy-making organs.

Developments

- 4.326 During the reporting period, the fourth phase of the Programme (2017–2019) was successfully completed and, as at the cut-off date of this document, the fifth phase (2020–2022) had been progressing apace despite the earlier challenges associated with the COVID-19 pandemic.
- 4.327 The fifth phase was organised throughout 2019 based on a consultative process between the Secretariat and the African Group. As a result, the following objectives were identified and assigned to this phase: advancing the national implementation of the Convention; strengthening control over cross-border transfers of toxic chemicals; enhancing assistance and protection against chemical incidents and attacks; advancing chemical safety and security management; enhancing the capacities of chemical laboratories; and promoting knowledge of peaceful chemistry and its exchange. A specific objective covering programme visibility, partnerships, and stakeholder engagement was added.
- 4.328 The fifth phase was formulated in line with the core objectives of the OPCW and its Medium-Term Plan for the period 2020–2024 (EC-92/S/1 C-24/S/1). It has been also designed in a manner that strengthens the implementation of the relevant decisions and recommendations of the OPCW's policy-making organs, including the recommendations of the Third Review Conference (see RC-3/3*) and Conference decision C-16/DEC.10 entitled "Components of an Agreed Framework for the Full Implementation of Article XI".
- 4.329 At the cut-off date of this document, a total of 155 capacity-building and technical assistance activities had been scheduled for delivery by the Secretariat within the framework of the fifth phase of the Africa Programme (2020–2022), in line with the agreed objectives. These activities, which include 81 events organised specifically for the Africa region, will ultimately benefit some 2,500 participants representing 44 African States Parties. Moreover, during the fifth phase the Secretariat has provided financial support to 288 African scientists to take part in six international conferences and sponsored 12 African research projects and 13 fellowships for African scientists in advanced scientific institutions. The Secretariat also organised five knowledge forums facilitating exchanges on the peaceful uses of chemistry, including those targeting women and youth. These forums were attended by more than 100 African participants.
- 4.330 Since its inception, the Programme has been implemented by the three branches of the International Cooperation and Assistance Division, each according to its respective area of activities. The fifth phase of the Programme reflects a new streamlined approach in which the branches have worked jointly to address Programme objectives across all relevant Articles of the Convention.

- 4.331 For example, objective 3 on “strengthening control over cross-border transfers of toxic chemicals” has been addressed through the training of customs authorities on the transfers regime, which is organised by the Implementation Support Branch, and also through analytical skills development courses for customs laboratories, which are organised by the International Cooperation Branch.
- 4.332 In addition to streamlining synergies across relevant Articles and the branches of the International Cooperation and Assistance Division, the Secretariat introduced other key improvements to the fifth phase to enhance Programme effectiveness:
- (a) In line with results-based management principles, the logical framework of the Programme was revised to focus on achieving the targeted impact (that is, the objectives of the Programme) rather than just the output delivery (that is, the capacity-building activities). The new framework allowed for a better visualisation of the distinct roles of various stakeholders. The Secretariat’s role is to deliver capacity-building activities, following which participants report to their respective National Authorities. National Authorities can engage the participants for possible follow-up activities at the national level, while also using the mass of expertise acquired by the participants to achieve the objectives of the Programme. Accordingly, the fifth phase of the Programme was designed as a joint venture between the Secretariat, the African National Authorities and Permanent Representations, the participants in capacity-building events, and their employers.
 - (b) The Secretariat has also been working to enhance the engagement of various stakeholders (beneficiaries, donors, and partners) through special initiatives devised for the fifth phase. These include:
 - (i) regular coordination and consultation with African States Parties to secure increased engagement and participation. Measures taken include a needs assessment exercise, informal consultations, and briefings;
 - (ii) establishment in the fifth phase of a Programme Steering Committee, including African States Parties and Programme donors. Meeting twice a year, the Committee has been monitoring and supporting Programme implementation;
 - (iii) funding principally from the regular budget of the OPCW. To enhance the potential and impact of the Programme, the Secretariat has also devised a set of special extrabudgetary projects addressing the objectives of the Programme, and has been mobilising voluntary funding for them. These projects have continued to attract funding from various donors;
 - (iv) development and diversification by the Secretariat of partnerships for the implementation of activities and projects within the framework of the Programme. The list of partners includes international, regional, and national organisations and agencies;
 - (v) establishment of an OPCW Africa Network. Using social media, the network included, as at the cut-off date of this document, over 1,000 African chemists and other stakeholders, and constituted a platform for Programme information and interaction; and
 - (vi) publication by the Secretariat of an annual bulletin to increase Programme visibility and outreach.

- 4.333 The above initiatives have facilitated an increased participation of stakeholders in the Programme. In terms of beneficiaries, the share of the participation of the Africa region in OPCW capacity-building activities increased from 15.8% in 2019, that is, before the fifth phase, to roughly 25% throughout the fifth phase. Africa's share in OPCW capacity-building support has therefore become more proportionate to its share of the membership of the Organisation. There was also increased engagement from donors during the fifth phase, which translated into the provision of EUR 1,453,642 for seven extrabudgetary projects. In addition, a wide range of relevant partnerships facilitated the implementation of diverse activities under the Programme.
- 4.334 In parallel to the continued implementation of the fifth phase of the Africa Programme, the Secretariat in March 2022 initiated preparations for the sixth phase in close consultation with the African Group. The sixth phase, covering the period 2023 to 2025, will build on the progress achieved and lessons captured in the fifth phase, and will feature substantial improvements and innovations in terms of the planning approach and programmatic activities. These include the review and enhancement of the logical framework, the definition of new outcomes (such as the investigative capabilities in cases of chemical incidents and attacks), and the assignment of key performance indicators to long-term results, and not just outputs.

Conclusions and future considerations

- 4.335 The experience gained thus far in the implementation of the fifth phase of the Africa Programme will be fed into its next cycle. In this context, the following lessons learned have been found to be particularly relevant:
- (a) Promoting Programme visibility enhances the engagement and participation of stakeholders. The initiatives devised by the Secretariat within the framework of the fifth phase with a view to promoting Programme visibility and stakeholder engagement—for example, the OPCW Africa Network, the Africa Bulletin, the Programme Steering Committee, and the special projects for extrabudgetary funding—have helped increase participation among the beneficiaries, partners, and donors alike. The sixth phase will continue delivering on these value-adding initiatives.
 - (b) Institutional capacity building is more effective and sustainable than individual capacity building. A good example is the proficiency testing training, in which the Secretariat, jointly with the relevant National Authorities and with the support of partners, puts the focus on a specific laboratory, with a roadmap for capacity development. This is in contrast to sporadic training of individual participants from different laboratories, without pre-defined follow-up plans.
 - (c) Bilateral cooperation between States Parties, including South-South cooperation, with the facilitation of the Secretariat, provides excellent support to capacity building. This aspect has been observed in relevant programmes such as the Mentorship/Partnership Programme for National Authorities and the assistance and protection Instructor Exchange Programme. Since cooperating States Parties are usually familiar with one another's situation, there can be facilitating factors, such as a common language or work culture. Such cooperation provides additional support to what is directly delivered by the Secretariat.

- (d) The development of relevant partnerships and the mobilisation of additional, voluntary resources for the special projects to complement regular budget resources have helped to expand the Programme and deepen its impact. More available resources mean increased Secretariat capabilities, which translates into more activities and more impact.
- (e) Follow-up of OPCW capacity-building activities by the National Authorities is essential to achieving the Programme objectives and to ensuring the impact of the activities. The effective use by National Authorities of well-maintained databases of national participants and experts trained by the OPCW is a key enabler in this context.

E. ENGAGEMENT WITH EXTERNAL PARTNERS

Ensuring the universality of the Chemical Weapons Convention

- 4.336 The Secretariat has continued its work with the remaining States not Party to realise the universality of the Convention. Since the Fourth Review Conference, no new States have joined the Convention. As a result, the number of States Parties to the Convention is still 193. At present, only four States, the Democratic People's Republic of Korea, Egypt, Israel, and South Sudan, remain outside the Convention. Accordingly, the Convention continues to be one of the most successful international disarmament treaties in terms of progress towards achieving its universality.

Introduction

- 4.337 Since the Fourth Review Conference, the Secretariat has continued to pursue the goal of universality as a matter of high priority. During the reporting period, all remaining States not Party to the Convention were strongly urged to ratify or accede to it as a matter of priority and without preconditions.
- 4.338 The 2003 action plan for the universality of the convention (EC-M-23/DEC.3, dated 24 October 2003) provides key guidance to the Secretariat, the Director-General, the policy-making organs, and States Parties, and continues to be implemented following decisions of the Conference in 2005, 2009, and 2011. In addition, activities for achieving universality are also guided by the recommendations of the First, Second, and Third Review Conferences.

Developments

Status of universality

- 4.339 During the period under review, no new States joined the Convention. The number of States not Party has thus remained at four (the Democratic People's Republic of Korea, Egypt, Israel, and South Sudan).

Progress in the implementation of the action plan for the universality of the Chemical Weapons Convention

- 4.340 Despite the restrictions brought about by the COVID-19 pandemic, the Organisation continued its efforts to achieve universality of the Convention in line with the 2003 action plan, the relevant decisions adopted by the Conference, and the recommendations of the

First, Second, and Third Review Conferences. The Director-General submitted annual reports to the Conference and regularly briefed the Council on developments relating to universality, as well as on the relevant activities and plans of the Secretariat.

- 4.341 The Secretariat continued to maintain, when possible, high-level contacts with officials of States not Party to raise awareness of the importance of joining the Convention at the earliest date and without preconditions. Universality also continued to feature prominently in the statements delivered by the Director-General and the Deputy Director-General at regional and international forums, as well as at the United Nations, including during the Director-General's briefings to the Security Council.
- 4.342 Representatives of some States not Party continued to attend, as observers, the sessions of the Conference, and also attended the Fourth Review Conference.
- 4.343 The European Union continued to contribute to sustaining universality efforts through its Council decision (CFSP) 2019/538 (of 1 April 2019) in support of OPCW activities in the framework of implementation of the European Union's Strategy against Proliferation of Weapons of Mass Destruction.
- 4.344 With only four remaining States not Party, the Secretariat has continued to focus on a bilateral approach to implementing the action plan, both in terms of technical assistance and bilateral contacts at the diplomatic level with the States concerned. At the same time, the Secretariat has continued to place emphasis on outreach and regular interactions with relevant international and regional organisations.

Democratic People's Republic of Korea

- 4.345 The Democratic People's Republic of Korea remained unresponsive to the repeated efforts by the Secretariat to engage. No response was received to the invitation letters sent by the Secretariat inviting representatives of the Democratic People's Republic of Korea to participate in OPCW activities or events, including the regular sessions of the Conference.

Egypt

- 4.346 Since 2018, Egypt has remained unresponsive to invitations by the Secretariat to participate in OPCW events, including the sessions of the Conference. The Secretariat maintained contact with the Embassy of Egypt in The Hague.

Israel

- 4.347 From 2018 to 2021, Israel regularly participated in the sessions of the Conference, as an observer, and delivered statements on all occasions. In the margins of the Conference sessions, representatives of Israel met with Secretariat representatives and expressed interest in further maintaining working contacts with the Organisation, including through participation in OPCW activities. Representatives of Israel have also attended OPCW events such as the Induction Workshop for Diplomatic Personnel and the Briefing for Non-Hague-Based Permanent Representatives.
- 4.348 In February 2019, the Ambassador of Israel met with the Director-General at the OPCW Headquarters. Furthermore, in August 2020, the Secretariat received the Ambassador of Israel for a signing ceremony for a voluntary contribution of EUR 12,500 pledged to the OPCW ChemTech Centre.

South Sudan

- 4.349 Since the Fourth Review Conference, the Secretariat maintained contact with representatives of South Sudan at its Embassy in Brussels, Belgium. South Sudan was invited to participate in several OPCW activities, including the regular sessions of Conference as well as international cooperation and assistance events.

Conclusions and future considerations

- 4.350 As mentioned above, the number of States Parties to the Convention remained at 193 during the period under review. Irrespective of this, no other disarmament treaty has shown as much progress towards universal acceptance as the Convention. It has been ratified or acceded to by 98% of the countries in the world, which demonstrates the success of the activities carried out under the action plan for universality.
- 4.351 States Parties are encouraged to promote accession or ratification through their bilateral and other contacts with the States not Party.
- 4.352 In Africa, South Sudan is the only State not Party to the Convention. The OPCW will continue to engage with South Sudan to offer the support and assistance it requires to complete accession at the earliest date. The need for the Democratic People's Republic of Korea to join the Convention is of the utmost importance if a total ban on chemical weapons is to be achieved in Asia. The Secretariat will continue its engagement efforts with the Democratic People's Republic of Korea. In the Middle East, universality will remain a challenge with respect to Egypt and Israel, as both States have not reconsidered their decisions not to accede to or ratify the Convention.
- 4.353 Given the unique situation of each State not Party, the Secretariat will continue its targeted approach to engagement that is specific to national requirements for joining the Convention. Accordingly, the Secretariat will maintain its practice of offering regular and appropriately tailored activities to States not Party that balance promoting accession to or ratification of the Convention with the benefits of membership of the OPCW. Further universality efforts by the Secretariat will remain focused on sustaining regular engagement with the States not Party through high- and expert-level contacts, bilateral channels of States Parties, and encouragement to participate in OPCW events as appropriate.
- 4.354 In addition, indirect engagement with States not Party will be strengthened through regular external outreach within international forums, regional organisations, and attendance at regional and international disarmament-related conferences and meetings. Consultation and coordination with States Parties will be maintained to build on synergies and enhance coherence of outreach activities to States not Party, including through the facilitator on universality. The Secretariat will also maintain its readiness to facilitate and support a State not Party in joining the Convention.

Cooperating with other relevant international organisations

Introduction

- 4.355 The scale and interconnectedness of current global threats and challenges, such as terrorism, require collaborative solutions. The OPCW continues to cooperate with international organisations with the overall aim of addressing contemporary global challenges to peace and security in a more effective and efficient manner.
- 4.356 Cooperation with international and regional organisations has taken a range of forms, including participation in meetings and events, exchange of best practices and sharing of experience and, when appropriate, sharing resources and expertise. In particular, the need to explore further cooperation with relevant international organisations in the context of non-State actors was underscored by the Third Review Conference²⁷ and has been an ongoing priority for the OPCW since the Fourth Review Conference.

Developments

- 4.357 Within the framework of the 2001 relationship agreement, the OPCW continued its regular and high-level engagement with the United Nations. The Director-General provided both in-person and virtual briefings to the United Nations Security Council.
- 4.358 For the purpose of information exchange, the Secretariat has had frequent interaction with the United Nations Office for Disarmament Affairs (UNODA) and the High Representative for Disarmament Affairs, who also delivered a statement to the Conference in 2019. The OPCW has regularly contributed to United Nations reports, such as the report of the Secretary-General on cooperation between the United Nations and regional and other organisations and the report of the Secretary-General on current developments in science and technology and their potential impact on international security and disarmament efforts, as well as the annual United Nations Disarmament Yearbook. Furthermore, in collaboration with UNODA the OPCW has engaged in disarmament education and outreach activities by hosting, for example, visits by the United Nations Disarmament Fellowship Programme to the OPCW Headquarters in 2019, 2021, and 2022.
- 4.359 In January 2017, a memorandum of understanding was concluded between the OPCW and the WCO. Over the reporting period, this agreement has helped expand cooperation between the two organisations, notably in the context of the growing threat posed by non-State actors. Areas of common interest include the control of trade in dual-use chemicals, prevention of the trafficking of sensitive commodities, and capacity building for customs officials. Collaborative efforts have focused on tightening national and international controls on the trade in toxic chemicals and the establishment of procedures that will further enhance cooperation between the WCO and the OPCW. This has been achieved through consultations, joint training courses, exchanges of information and documents, technical cooperation, as well as cross-representation at relevant meetings.

²⁷ In paragraph 9.145 of RC-3/3* the Third Review Conference “while reaffirming the autonomous and independent status of the OPCW [...] underscored the need to explore further cooperation on this issue and build on existing work with relevant international organisations and international bodies that deal with the potential threats of chemical terrorism”.

- 4.360 During the period under review, the OPCW continued its long-standing cooperation with the United Nations Security Council Committee established pursuant to resolution 1540. The OPCW supported the Committee during its comprehensive review in 2022 of the status of implementation of resolution 1540, including taking part in open consultations. The Organisation and the 1540 Committee Group of Experts continued the practice of reciprocal participation in one another's events in areas of common interest, such as national legislation, chemical security, chemical terrorism, and customs. The Organisation also continued to support the Committee's efforts to match States Parties' requests for assistance in implementing resolution 1540 with those entities willing to provide such assistance. For instance, in 2019 the OPCW shared its capacity-building programme with the Committee on its website.
- 4.361 On 20 March 2018, the Director-General signed the "Global Counter-Terrorism Coordination Compact", which espouses the principles under which the 39 Compact entities will operate. In the reporting period, the OPCW became a vice-chair of the Compact's Working Group on Emerging Threats and Critical Infrastructure Protection, which is chaired by INTERPOL. Under this framework, the third phase of a project to enhance interagency interoperability and public communications in the event of a chemical or biological attack was launched in 2022, with participation from several Compact entities.
- 4.362 The OPCW's Open-Ended Working Group on Terrorism has also provided a platform to engage with a number of international and regional organisations, such as the European Union, INTERPOL, UNOCT, and UNODC.
- 4.363 The Secretariat also deepened its outreach activities aimed at raising awareness of the Convention through its participation in appropriate initiatives. The Secretariat has engaged with the Biological Weapons Convention Implementation Support Unit on the convergence of chemistry and biology, regularly participating in the Biological Weapons Convention meetings of States Parties, meetings of experts, and review conferences.
- 4.364 The Secretariat also participated in regional meetings, such as the ASEAN Defence Ministers' Meeting-Plus, which is a platform for regional defence and security cooperation.
- 4.365 The Organisation has further worked with other international and regional organisations to deliver capacity-building activities. Over the review period, the Secretariat worked with INTERPOL to deliver a series of online training courses aimed at assisting States Parties in developing appropriate legislative and regulatory frameworks on chemical security. In terms of regional organisations, the OPCW continued its engagement with the African Union's Peace and Security Department, in particular for the implementation of the Africa Programme. In addition, in 2021 the Organisation collaborated with the Inter-American Defense Board on the initial workshop for female first-responders in the Pan-American region to support the development of women professionals in the field of chemical emergency response and management. Collaboration was also maintained with various African regional economic communities for the planning and implementation of OPCW capacity-building activities in the framework of the Africa Programme.

- 4.366 The OPCW maintained its long-standing relationship with the European Union and cooperation has included political, financial, and in-kind support from the European Union for the OPCW's activities, including a 2019 European Council decision in support of OPCW activities. In April 2021, the Director-General also briefed the Subcommittee on Security and Defence of the European Parliament on the work of the OPCW.
- 4.367 Collaboration with other international organisations on administrative issues such as procurement, information technology, human resources, and finance has also been carried out. The Secretariat co-hosted, with the Preparatory Commission for the CTBTO, a hiring webinar to attract applicants from specific geographic regions. The OPCW is also a member of the United Nations Global Marketplace, which is a procurement portal of the United Nations system that brings together procurement staff and the supplier community.

Conclusions and future considerations

- 4.368 To strengthen the implementation of the Convention against the backdrop of current and emerging threats, the Organisation will need to enhance its collaboration with relevant regional and international organisations that can result in synergies and mutual benefits.
- 4.369 Going forward, the OPCW will take the following considerations into account when reviewing the OPCW's cooperation with regional and international organisations:
- (a) Past and ongoing OPCW missions, such as with the United Nations, have underlined the utility of cooperation through standing legal arrangements. These formalised collaborative initiatives offer lessons for future arrangements with other regional and international organisations.
 - (b) The heightened threats to global peace and security necessitate collaborative approaches and solutions. Accordingly, the OPCW will evaluate its engagement with other disarmament and arms control organisations with a view to establishing mutually beneficial cooperation.
 - (c) A review of long-standing relationship arrangements will need to be conducted to ensure that they maintain their relevance to the needs of the OPCW and partner organisations.
 - (d) Collaborating with regional and international organisations to provide integrated packages of support has proven to be a cost-efficient way of engaging with resource-constrained States Parties that maximises the impact of the Secretariat's assistance.
- 4.370 With respect to the aforementioned future considerations, an institutional strategy for engagement with regional and international organisations will be contemplated to provide clear guidance for future activities.

Engagement with other external partners, including chemical industry and other relevant stakeholders

Introduction

- 4.371 Since the Fourth Review Conference, the Organisation has continued to expand its external engagement with key stakeholders, including through its public diplomacy activities. Such activities help enhance the international profile and convey the relevance of the Organisation. Public diplomacy initiatives are essential for cultivating confidence in multilateralism and international cooperation, and they enhance engagement with key stakeholders, which is necessary for ensuring full implementation of the Convention.

Developments

- 4.372 The Third Review Conference encouraged the Secretariat and the States Parties to improve interaction with the chemical industry, the scientific community, academia, and civil society organisations engaged in issues relevant to the Convention, and in regard to such interactions encouraged the Secretariat and States Parties to develop a more open approach in conformity with the Rules of Procedure of the policy-making organs. External engagement is a shared responsibility across the Secretariat and among States Parties. The Secretariat has adopted an approach that seeks to partner with key stakeholders to facilitate the full implementation of the Convention, while ensuring the relevance of the OPCW.
- 4.373 Before 2013, the OPCW's external engagement activities were primarily focused on governments for the purpose of destruction, verification, capacity building, and universality. Since the Organisation's inception, there has also been engagement with scientists and academia through the SAB to ensure the OPCW's awareness of scientific and technological developments. Since the Third Review Conference, the OPCW's external engagement activities have broadened in scope and increased in intensity, owing to a significant increase in international attention brought on by the awarding of the Nobel Peace Prize and developments in the Syrian Arab Republic, as well as the transition of the focus of the Organisation to preventing the re-emergence of chemical weapons.
- 4.374 External stakeholder engagement can be divided into several categories, namely outreach to: the chemical industry, civil society, academia, media, and the general public.

Outreach activities

- 4.375 The Secretariat has taken advantage of major events to highlight the enduring relevance of the Convention and to raise the profile of the Organisation. For example:
- (a) To mark the twenty-fifth anniversary of the OPCW and the entry into force of the Convention, a seminar was held at OPCW Headquarters on 25 May 2022. Panel discussions covered wide-ranging topics, with contributions by diplomats and external experts working in disarmament, non-proliferation, and security. Future challenges and threats to the Convention, including chemical terrorism, non-State actors, and risks related to the re-emergence of chemical weapons, were part of the discussions. Opportunities to strengthen the implementation of

the Convention were also a key part of the discussions, including the importance of incorporating gender perspectives and engaging the next generation to strengthen the global norm against chemical weapons. The Director-General also participated in the launch of a new research and civil society network, the CBWNet, a joint initiative of several German academic institutions supported by the German Federal Government.

- (b) To mark the start of construction of the new ChemTech Centre, on 23 September 2021 a “First Pillar Ceremony” was held in Pijnacker-Nootdorp outside The Hague for Member States’ representatives, government officials, and the local municipality. The event was an opportunity to highlight the ChemTech Centre, which is funded entirely from voluntary contributions, as an important upgrade to the OPCW for discharging its mandates and supporting Member States in implementing the Convention.

- 4.376 In response to the need for clear and easily accessible information about the OPCW and the Convention, the Secretariat produced multiple videos as part of two new video series: “OPCW Basics” and “OPCW Up-Close”. OPCW Basics is a series of 12 videos that explain the fundamentals of the Convention and the work of the OPCW, and which has resulted in a nearly 19% growth in subscribers to the OPCW YouTube channel, indicating the relevance of this content with OPCW audiences. The videos are subtitled in all of the OPCW’s official languages and are regularly used in trainings and public outreach.
- 4.377 The Secretariat has continued its long-standing cooperation with the TMC Asser Institute to hold annual week-long training programmes on WMD disarmament and non-proliferation geared towards early to mid-career professionals. With funding from the European Union, the Secretariat provided a limited number of scholarships to civil society representatives from developing countries.
- 4.378 In addition to the special events and programmes organised by the Secretariat to reach out to different stakeholders, visits of the Director-General and Deputy Director-General typically include engagement with senior government officials, chemical industry and civil society representatives, the media, and students.

Media

- 4.379 The media and information landscape continues to change and evolve. International organisations, including the OPCW, have had to adapt their strategic approaches to communications in order to remain effective. Audiences consume content in different ways and the information sphere is becoming busier and more confusing. At the same time, audiences have also grown more sophisticated and expect to be not only informed, but entertained, as well as inspired and engaged.
- 4.380 Digitisation has transformed the news media landscape and affected production, advertising, distribution, and quality of news. It has enabled pathways for false or manipulated information to be created, disseminated, and amplified by various actors for political, ideological, or commercial motives at a scale, speed, and reach never known before. Disinformation—verifiably false or misleading information created, presented, and disseminated for economic gain or to intentionally deceive the public—

is an evolving threat which requires continuous efforts to address in an effective and comprehensive manner. The Secretariat is adapting to these changing circumstances, but more can be done, including by States Parties and key stakeholders, to meet the growing demand and challenges.

- 4.381 Engagement with the media, both in terms of traditional media (such as print journalism, radio, and television) and adopting new media approaches (digital initiatives and social media strategies), has been crucial to the OPCW raising its international profile. The Organisation has further advanced a broader understanding of its mission and activities by adopting a strategic approach that focuses on both public and digital diplomacy.
- 4.382 The Organisation continues to attract media interest. Since 2018, the most notable topics that the news media reported on include:
- (a) developments in the Syrian Arab Republic, including reports of the FFM and IIT;
 - (b) technical assistance provided by the OPCW at the request of the United Kingdom of Great Britain and Northern Ireland related to toxic chemical incidents in Salisbury and Amesbury;
 - (c) the family of so-called “novichok” nerve agents and the 2019 additions to the Annex on Chemicals;
 - (d) technical assistance provided by the OPCW at the request of Germany related to the poisoning of Mr Alexei Navalny;
 - (e) riot control agents;
 - (f) risk of the use of chemical weapons in Ukraine;
 - (g) the role of artificial intelligence in relation to the Convention; and
 - (h) progress in eliminating chemical weapons.

OPCW website

- 4.383 The official OPCW website remains a core component of the Organisation’s digital portfolio, housing an ever-growing library of content and resources. These range from public diplomacy informational material to official documents, procurement, and recruitment opportunities. The public website serves 300,000 visitors viewing 2.5 million pages each month.
- 4.384 In line with the more open approach to information sharing, the OPCW website’s Media Centre contains several landing pages on featured topics, containing all public information that has been published on subjects of heightened interest, including the Syrian Arab Republic, the situation in Ukraine, the case of Alexei Navalny, and the incidents in Salisbury and Amesbury in the United Kingdom of Great Britain and Northern Ireland.

Social media

- 4.385 The Secretariat's social media audience continued to increase at a rapid pace, with followers increasing by 55% since 2018. All content posted to social media is designed to foster engagement and to enhance stakeholder understanding of the work and activities related to the Organisation and the Convention. Studies show that as much as 75% of the global population seeks news and information primarily on social media channels. In this regard, the use of Twitter, Facebook, LinkedIn, and YouTube has enabled the Organisation to amplify its messages and to reach audiences where they are already actively consuming information.
- 4.386 In 2020, the Organisation embarked on an effort to ensure that its activities reflect and reinforce a simple common visual brand identity standard. The refreshed visual identity standards reinforce consistency across diverse communications products and provide the tools to build brand recognition among external audiences.

Civil society

- 4.387 The Secretariat continues to encourage civil society participation in the sessions of the Conference, with appreciation for their important role in promoting better public understanding of the Convention worldwide.
- 4.388 The Secretariat also continues to be attentive to the views of NGOs and welcomes their substantive contributions to the debate about the current and future challenges of the worldwide prohibition of chemical weapons.
- 4.389 Following the decision of the Third Review Conference that "[r]epresentatives of non-governmental organisations may attend the plenary sessions of the Conference, and participate in the activities of review conferences" (RC-3/DEC.2, dated 8 April 2013), civil society's participation in the regular sessions of the Conference has substantially increased.
- 4.390 Since the Fourth Review Conference, NGO participation has steadily grown at each session of the Conference. At the Twenty-Third Session of the Conference, 88 NGOs were accredited to participate, while at the Twenty-Fourth Session, States Parties accredited 93 NGOs. The COVID-19 pandemic restricted NGO physical participation at the Twenty-Fifth and Twenty-Sixth Sessions of the Conference; however, 76 and 78 NGOs respectively were accredited. For the Twenty-Seventh Session of the Conference, the growth trend in NGO applications for participation resumed and 119 NGOs were accredited for participation—the highest number ever.
- 4.391 These results testify to an increase in NGO interest in participating in the sessions of the Conference and in providing exhibits. The NGO statements made during the general debates, except in the sessions affected by COVID-19 restrictions in which no general debate took place, have become part of the proceedings and a way for States Parties to hear from civil society. During the pandemic, the Secretariat facilitated, in coordination with the Chemical Weapons Convention Coalition, video statements for NGOs to retain the presence of civil society perspectives at the Conference. Civil society groups have organised side events and exchanged views with one another and with the representatives of the Secretariat.

- 4.392 To facilitate the participation in the Conference of NGOs from developing countries and countries with economies in transition, the Secretariat has, since 2015, covered the costs of attendance of selected NGOs, thanks to the European Union funds provided to the OPCW for this purpose.
- 4.393 The Secretariat has also deepened its cooperation with the wider system of international organisations regarding civil society engagement, for example through the exchange of information with the United Nations Economic and Social Council and the exploration of joint activities with UNODA, the CTBTO, and more.

OPCW–The Hague Award

- 4.394 As a means of preserving the legacy of the 2013 Nobel Peace Prize bestowed upon the OPCW, some of the prize money awarded by the Norwegian Nobel Committee, supplemented by contributions from the City of The Hague, has been used since 2014 to fund the OPCW–The Hague Award.
- 4.395 The Award recognises outstanding contributions by individuals or institutions in advancing the objectives of the Convention. Since the Fourth Review Conference and as at the cut-off date of this Note, the recipients of the Award have been:
- (a) Dr Robert Mikulak (United States of America);
 - (b) Mr Cheng Tang (China); and
 - (c) IUPAC.
- 4.396 The Secretariat has reviewed and revised the OPCW–The Hague Award, in close cooperation with the Municipality of The Hague, its co-sponsor. The revised Award seeks to attract young professionals, in addition to existing categories. This will ensure the future viability of the Award while at the same time serving as an outreach tool to engage younger generations. The revised Award was launched in July 2022 with a call for nominations and closed on 16 October 2022. More than 50 nominations were submitted for candidates from each geographical region.
- 4.397 The Secretariat has promoted the OPCW–The Hague Award through both traditional and social media. In 2022, the social media campaign was coordinated with and shared by peer organisations. Open-source, editable social media assets were made available to States Parties, other stakeholder groups, and the public, and were shared by other international organisations and translated into other OPCW official languages.
- 4.398 The OPCW–The Hague Award ceremony traditionally takes place during the first day of the Conference and is webcast live and watched by viewers from numerous countries. The Secretariat produces video interviews with the Award recipients to highlight their contributions to the goals of the Convention. The video interviews are posted on YouTube and promoted across the OPCW’s social media channels.

Chemical industry

- 4.399 Since the Fourth Review Conference, the Secretariat has continued its engagement with the global chemical industry. In May 2020, the OPCW and ICTA concluded an exchange of letters (S/1880/2020, dated 25 June 2020) to formalise the relationship between the two entities and promote greater cooperation. ICTA joined ICCA to become members of the Chemical Industry Coordination Group (CICG), a working-level group consisting of staff from the Secretariat and representatives of both of the aforementioned chemical industry associations. CICG identifies and explores potential areas of mutual interest. It reports to the OPCW-ICCA Joint Steering Committee.
- 4.400 Between June 2018 and the cut-off date of this Note, the CICG met eight times (June 2018, March and September 2019, March 2020, March and September 2021, and March and September 2022) and the OPCW-ICCA Joint Steering Committee met once (October 2018). Since 2015, the agenda of each session of the Conference has contained an agenda item dedicated to the chemical industry and scientific community, and senior chemical industry representatives have been invited to address the Conference at each session. The primary areas of discussion and cooperation with industry have been verification, capacity building, education and outreach, and chemical security.
- 4.401 In the framework of the CICG, chemical industry and the Secretariat shared their experiences with declarations and inspections, with the goal of identifying best practices and areas for improvement. In support of this process, ICCA conducted a survey among small and medium-sized enterprises, the findings of which informed the Secretariat's efforts to optimise Article VI verification. Chemical industry representatives also continued to participate in various meetings with National Authorities. Annual meetings of chemical industry representatives and National Authorities have been held each year since 2014.
- 4.402 Since the Fourth Review Conference, chemical industry representatives have been invited to observe the routine consultations of the Industry Cluster.
- 4.403 Experts from the chemical industry have had the opportunity to present their views on a wide range of verification-related issues, through presentations to the SAB and participation in meetings of its working groups. Furthermore, in 2022 the SAB organised a joint workshop with the chemical industry, which focused on new technologies in the determination of hazardous properties of toxic chemicals and on the possibility of phasing such chemicals out. External chemical industry experts were also invited to address CICG meetings on trends in the development and research of new production processes in the chemical industry. Insights on those issues have been informative for the Secretariat, allowing staff to become familiar with the future chemical industry outlook, which may have an impact on the implementation of the industry verification regime.
- 4.404 Chemical industry associations have supported a number of OPCW capacity-building activities for the promotion of peaceful uses of chemistry. For example, with the support of ICCA and national chemical associations, 17 chemical plant sites in 12 States Parties hosted participants of the Associate Programme for a three-week training course in 2019. The courses allowed participants to gain exposure to modern practices in chemical industries, with a special focus on chemical safety.

- 4.405 ICCA has also contributed to the Policy and Diplomacy for Scientists and Responsible Care[®] workshops, as well as to events under the Green and Sustainable Chemistry initiative in 2018 and 2019. In the same period chemical industry representatives made presentations during the Symposium on Women in Chemistry.
- 4.406 The negative impact of the COVID-19 pandemic on the ability of the Secretariat to organise in-person international cooperation activities, particularly in 2020 and 2021, also affected the level of support for these activities by chemical industry associations. The Secretariat has been working with the chemical industry to restore the level of engagement to pre-pandemic levels.
- 4.407 Education and outreach is another area in which the Secretariat has maintained significant engagement with industry. A representative of ICCA has been invited to attend all meetings of the ABEO since its first session in April 2016.
- 4.408 Since 2016, ICCA and the Secretariat have been collaborating on public affairs activities, including social media outreach, to promote cooperation between the two organisations. For example, representatives of ICCA and ICTA were invited to attend the ceremony marking the twenty-fifth anniversary of the entry into force of the Convention and of the creation of the OPCW. The ICCA Council Secretary is also a member of the panel that selects the annual winner of the OPCW–The Hague Award.
- 4.409 In July 2021, an ABEO member gave a presentation before the ICTA Transport and Security Committee on The Hague Ethical Guidelines, highlighting their key elements. Further to a recommendation from the Committee, the ICTA Board decided to endorse the Guidelines on 22 September 2021.²⁸
- 4.410 Chemical safety and security is an area in which cooperation between the Secretariat and the chemical industry has been steadily increasing. Since October 2018, chemical industry experts have participated in more than 40 workshops and activities organised by the Secretariat in the framework of the Chemical Safety and Security Management Programme. Chemical industry support for these activities allows participants to get acquainted with best practices in chemical safety and security management throughout the chemical life cycle.
- 4.411 Chemical industry experts took part in a series of workshops, which led to the development of the “Indicative Guidelines for Chemical Safety and Security in Small and Medium-sized Enterprises to Foster the Peaceful Uses of Chemistry”. These non-binding guidelines serve as a practical tool providing a global overview of chemical safety and security management for small and medium-sized businesses, relevant for all OPCW Member States. The chemical industry has been also supporting the development of the next set of indicative guidelines for the transportation of hazardous chemicals by road. The work on this project commenced in early 2022.

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ICCA endorsed The Hague Ethical Guidelines in January 2016.

Advisory Board on Education and Outreach

- 4.412 During the reporting period the ABEO conducted multiple activities related to education and awareness-raising about the Convention and the OPCW, both within and outside the OPCW organisational framework, including during the COVID-19 pandemic. The Board continued to produce educational resources and tools, based on an interactive approach.
- 4.413 The Board participated in the Annual Meetings of National Authorities in 2019, 2020, and 2021. It also took part in the Nineteenth Regional Meeting of National Authorities in Africa (June 2021), the Twenty-Second Regional Meeting of National Authorities in Latin America and the Caribbean (June 2021), and the Eighth Annual Meeting of Representatives of the Chemical Industry and National Authorities (October 2021). The Board has been ready to contribute with education and outreach webinars, workshops, and (virtual) courses to provide advice to requesting National Authorities according to their specific needs.
- 4.414 The ABEO Temporary Working Group on E-learning was established by the Director-General in September 2020, in consultation with the Board, with a mandate of one year. This TWG prepared a set of concrete recommendations to improve e-learning and increase the capacity of the OPCW to reach wider external audiences. This set of recommendations is reflected in the ABEO TWG final report, annexed to the annual report on ABEO activities covering the period 1 September 2020 to 31 August 2021²⁹ and was noted by the Council at its Ninety-Eighth Session. These recommendations include, among others, enhancing engagement with external stakeholders.
- 4.415 One of the key recommendations of this TWG refers to the adoption by the Secretariat of a centralised strategy in digital education. The Secretariat has identified a suitable platform and is implementing a new Learning Management System thanks to funding from the European Union. This new system will enable the Secretariat to better reach external audiences and is scheduled to be ready in the first half of 2023.
- 4.416 In order to strengthen the OPCW's relationship with academia, and tapping into another recommendation by the ABEO TWG on E-learning, the Secretariat has identified a qualified producer to develop modules for universities on: the OPCW and its mission; the history of chemical weapons; chemical security and safety; and ethics. These modules, whose development will be financed using European Union funds and other Secretariat resources, will be made available to social sciences and scientific universities with the aim of raising awareness about the Convention.
- 4.417 In 2021 the ABEO at its Tenth Session adopted its Strategic Plan (Annex 2 to ABEO-10/1, dated 10 February 2021). The Strategic Plan sets the priorities of work for the Board and aligns them with OPCW priorities, taking into account different target audiences. The Board agreed to focus on enhancing the e-learning offer of the Secretariat, to continue raising awareness about the OPCW and the Convention, and to assist the Secretariat and the States Parties in connecting with diverse audiences.

- 4.418 As the second term of office of several ABEO members was expiring at the end of 2021, the Secretariat issued a call for nominations for ABEO membership for the period 2022 to 2024 (S/1925/2021, dated 18 January 2021), highlighting the areas of expertise particularly relevant to the work of the Board. The Director-General subsequently reappointed four members for a second term of three years and appointed 11 new experts to serve on the Board for the period 2022 to 2024.
- 4.419 The Board will continue to focus its work on the enhancement of the e-learning spectrum of the Secretariat and, among others, contribute to the educational and outreach portfolio of the ChemTech Centre and provide tailor-made advice to requesting National Authorities to assist them in connecting with diverse audiences.

Conclusions and future considerations

- 4.420 Since the Fourth Review Conference, the scope of external engagement has expanded and the intensity of engagement activities has increased, with external stakeholders able to contribute substantially to the OPCW decision-making process. There has been increased interaction, synergy, and collaboration among external stakeholders.
- 4.421 However, considering the current realities and future priorities of the OPCW, challenges remain when assessing external engagement. The increasing demand for external engagement requires adequate investment of both financial and human resources. As past engagement programmes have demonstrated, there is a need for more extensive collaboration among States Parties, international and regional partners, and the Secretariat. As the Organisation continues to evolve, a new balance must be struck between increasing the OPCW's profile through media channels and navigating the constraints of the confidentiality regime. Experiences in recent years have demonstrated the value of proactive outreach through events and campaigns, and the importance of effective and timely communication and engagement with external stakeholders in crisis situations.
- 4.422 Effective communications are essential to build support for the Organisation among a range of target audiences, and to mitigate reputational risk. Sustaining confidence in the OPCW requires an open communications approach. The absence of an OPCW official voice on relevant issues could aid the spread of non-factual or inaccurate information. Proactive public communications reinforce the OPCW as a global authority of impartial experts and help inoculate it against the spread of mis- and disinformation.
- 4.423 A strategic approach for external engagement of all stakeholders is needed to ensure that activities will yield maximum impact, within the context of resource constraints, and that activities are aligned with the OPCW's future priorities. To facilitate participation by think tanks, academia, youth, and broader civil society, and their substantive contributions to the work of the Organisation, consideration should be given to the development of opportunities and forums outside of the Conference.
- 4.424 Fostering relationships with influential amplifiers who have their own existing audiences can help the Secretariat to convey its ongoing relevance and reach new stakeholders. Such amplifiers include States Parties and National Authorities, but also civil society partners, social media influencers, celebrity advocates, the creative community, and specialist publications (including on science and chemistry, shipping and logistics, medical first response, and law enforcement).

- 4.425 The Secretariat will continue its engagement with international chemical industry associations based on the mandate of the policy-making organs. The outreach to the chemical industry will be characterised by an increased emphasis on results, in particular on developing tools for States Parties and contributions to key Secretariat activities and objectives.
- 4.426 The efficiency of outreach to the chemical industry is inseparably linked to the resources available to the Secretariat and to associations. More focus on identifying synergies and pursuing topics of common interest, such as chemical safety and security, threats posed by the misuse of dual-use chemicals by non-State actors, and international cooperation, will be essential in the future. The Secretariat will also engage National Authorities of States Parties by empowering them to facilitate outreach to their national chemical industry, including small and medium-sized enterprises.
- 4.427 Civil society engagement is currently limited to participation at sessions of the Conference. With additional support and funding, as well as closer cooperation with civil society networks and international organisations, a more sustained and meaningful ongoing dialogue may be beneficial to all stakeholders. In particular, the Organisation would benefit from a comprehensive and strategic approach to engaging youth in academia, through civil society and in media (for example young journalists and digital content producers), and as a specific target audience of Secretariat outreach initiatives.

F. ORGANISATIONAL GOVERNANCE

Articles XII to XV and final clauses

Introduction

- 4.428 Previous Review Conferences have reaffirmed the continued relevance of the provisions of Articles XII to XV of the Convention.³⁰ The implementation of Article XII and Article XV, in particular, has given rise to several developments in the period since the Fourth Review Conference.

Developments

Article XII: Measures to redress a situation and to ensure compliance, including sanctions

- 4.429 In the period since the Fourth Review Conference, the Conference took its first decision under paragraph 2 of Article XII of the Convention, which provides that the Conference may, inter alia, upon the recommendation of the Council, restrict or suspend the rights or privileges of a State Party which has been requested by the Council to take measures to redress a situation relating to its non-compliance and has failed to do so within the specified time. The rights and privileges remain suspended until the State Party undertakes the necessary action to conform with its obligations under the Convention.
- 4.430 At its Ninety-Fourth Session the Council adopted decision EC-94/DEC.2 entitled “Addressing the Possession and Use of Chemical Weapons by the Syrian Arab Republic”. In that decision, the Council condemned “the use of chemical weapons as reported by the IIT, which concluded that there are reasonable grounds to believe that

³⁰

See for example paragraph 9.132 of RC-3/3*.

the Syrian Arab Republic used chemical weapons”³¹ in Ltamenah (Syrian Arab Republic) on 24, 25, and 30 March 2017. The Council expressed its deep concern that “the use of such chemical weapons by the Syrian Arab Republic, by direct implication, establishes that the Syrian Arab Republic failed to declare and destroy all of its chemical weapons and chemical weapons production facilities”.³²

4.431 The Council demanded that “that the Syrian Arab Republic immediately cease all use of chemical weapons”.³³ In EC-94/DEC.2, the Council further requested the Syrian Arab Republic to complete, within 90 days of the adoption of the decision, all the measures outlined therein in order to redress the situation, and decided that the Director-General would report to the Council and all States Parties, within 100 days of the decision, on whether the Syrian Arab Republic had completed all of the requested measures,³⁴ namely to:

- (a) declare to the Secretariat the facilities where the chemical weapons, including precursors, munitions, and devices, used in the 24, 25, and 30 March 2017 attacks were developed, produced, stockpiled, and operationally stored for delivery;
- (b) declare to the Secretariat all of the chemical weapons it currently possesses, including sarin, sarin precursors, and chlorine that is not intended for purposes not prohibited under the Convention, as well as chemical weapons production facilities and other related facilities; and
- (c) resolve all of the outstanding issues regarding its initial declaration of its chemical weapons stockpile and programme.³⁵

4.432 The Council further decided to recommend to the Conference that it adopt a decision at its next session taking appropriate action pursuant to paragraph 2 of Article XII of the Convention if the Syrian Arab Republic failed to redress the situation by completing the measures set out by the Council.³⁶

4.433 The Conference at its Twenty-Fifth Session adopted a decision entitled “Addressing the Possession and Use of Chemical Weapons by the Syrian Arab Republic” (C-25/DEC.9). In it, the Conference recalled Council decision EC-94/DEC.2, including the Council’s recommendation for appropriate action by the Conference under paragraph 2 of Article XII of the Convention,³⁷ and expressed grave concern that, pursuant to the mandate in EC-94/DEC.2, the Director-General had reported that the Syrian Arab Republic had not completed any of the measures requested by the Council to redress the situation.³⁸

³¹ Paragraph 1 of EC-94/DEC.2.

³² Paragraph 2 of EC-94/DEC.2.

³³ *Ibid.*

³⁴ Paragraph 6 of EC-94/DEC.2.

³⁵ Paragraph 5 of EC-94/DEC.2.

³⁶ Paragraph 7 of EC-94/DEC.2.

³⁷ Preambular paragraphs 19 and 20 of C-25/DEC.9.

³⁸ Paragraph 5 of C-25/DEC.9.

- 4.434 The Conference decided, pursuant to paragraph 21(k) of Article VIII and paragraph 2 of Article XII of the Convention, and without prejudice to the Syrian Arab Republic's obligations under the Convention, to suspend the following rights and privileges of the Syrian Arab Republic:
- (a) to vote in the Conference and the Council;
 - (b) to stand for election to the Council; and
 - (c) to hold any office of the Conference, the Council, or any subsidiary organs.³⁹
- 4.435 The Council (in paragraph 12 of EC-94/DEC.2) and the Conference (in paragraph 12 of C-25/DEC.9) also decided that, in addition to all States Parties, the Director-General shall provide a copy of the decisions to the United Nations Security Council and the United Nations General Assembly through the United Nations Secretary-General.⁴⁰
- 4.436 In addition, in paragraph 12 of EC-94/DEC.2 the Council mandated the Director-General to regularly report to it on the implementation of the decision and to also provide a copy of such reports by the Secretariat to all States Parties and to the United Nations Security Council and United Nations General Assembly through the United Nations Secretary-General. In paragraph 8 of C-25/DEC.9, the Conference also mandated the Director-General to regularly report to the Council and States Parties on whether the Syrian Arab Republic has completed all of the measures contained in paragraph 5 of Council decision EC-94/DEC.2.
- 4.437 In paragraph 8 of C-25/DEC.9, the Conference further decided that the suspended rights and privileges of the Syrian Arab Republic are reinstated by the Conference once the Director-General reports to the Council that the Syrian Arab Republic has completed all of the required measures.
- 4.438 In view of the above, the Director-General, in his monthly reports on "Progress in the Elimination of the Syrian Chemical Weapons Programme", regularly reports to the Council and States Parties on the activities carried out by the Secretariat with respect to decisions EC-94/DEC.2 and C-25/DEC.9. As at the cut-off date of this document, the latest such report stated inter alia that, as at the date of the report, the Syrian Arab Republic had not completed any of the measures stipulated in paragraph 5 of EC-94/DEC.2 and that the Secretariat would continue to engage with the Syrian Arab Republic with regard to their completion and to report to the Council as mandated.⁴¹

Article XV: Amendments

- 4.439 During the Fourth Review Conference, there were discussions about keeping the Convention's Schedules under review and updated, by adding newer, highly toxic agents and their precursors to them or by adjusting them as needed, using the procedures as set out under Article XV of the Convention.

³⁹ Paragraph 7 of C-25/DEC.9.

⁴⁰ A copy of EC-94/DEC.2 was accordingly transmitted on 16 July 2020 and a copy of C-25/DEC.9 on 28 April 2021.

⁴¹ Paragraphs 33 and 34 of EC-101/DG.22 (dated 23 September 2022).

- 4.440 Article XV governs amendments to the Convention, with a simplified procedure to make changes to provisions in the Annexes to the Convention which are related only to matters of an administrative or technical nature. During the period since the Fourth Review Conference, this procedure was activated for the first time since the entry into force of the Convention in 1997. The Annex on Chemicals includes three Schedules which list toxic chemicals and their precursors. For the purpose of implementing the Convention, these Schedules identify chemicals for the application of verification measures according to the provisions of the Verification Annex.
- 4.441 Following incidents in 2018 in Salisbury and Amesbury (United Kingdom of Great Britain and Northern Ireland) involving a toxic chemical displaying the properties of a nerve agent, and as a result of the fact that the toxic chemical involved was not listed in the Convention's Schedules, two proposals pursuant to Article XV of the Convention were made in 2018 to introduce additional chemical families to Schedule 1 of the Annex on Chemicals. One was a joint proposal by Canada, the Netherlands, and the United States of America (S/1682/2018, dated 25 October 2018), while the other was by the Russian Federation (S/1697/2018, dated 7 December 2018) and Corr.1 (dated 21 January 2019).
- 4.442 The Council met on 14 January 2019 and 25 February 2019 to consider each proposal respectively. The Conference at its Twenty-Fourth Session adopted decisions C-24/DEC.4 and C-24/DEC.5, in which it approved, in accordance with paragraphs 4 and 5 of Article XV of the Convention, certain changes to Schedule 1 of the Annex on Chemicals.
- 4.443 The two adopted decisions reflected proposals that had been submitted in the context of an evolving threat from chemical weapons and their use, which required the OPCW to continually adjust its ability to respond. Such conditions led to the need to update the Schedules of the Annex on Chemicals. Both decisions called for technical changes to Schedule 1 of the Annex on Chemicals.
- 4.444 Through Note Verbale NV/ODG/221841/19 (dated 10 December 2019), the Director-General subsequently notified all States Parties of the Conference's approval of these changes to the Annex on Chemicals. By letter L/ODG/221840/19 (dated 10 December 2019), the Director-General also notified the Depositary accordingly.
- 4.445 On 23 December 2019, the Secretariat issued the "Consolidated Text of Adopted Changes to Schedule 1 of the Annex on Chemicals to Chemical Weapons Convention" (S/1820/2019, dated 23 December 2019) which set out the consolidated text of the adopted changes which would replace, upon entry into force, Schedule 1 of the Annex on Chemicals, including Chemical Abstracts Service registry numbers assigned to the toxic chemicals described therein (i.e., items Schedule 1.A (13) to (16)). This Note was also communicated to the Depositary.⁴²
- 4.446 Pursuant to subparagraph 5(g) of Article XV of the Convention, changes to the Annex on Chemicals entered into force for all States Parties on 7 June 2020, that is, 180 days after the date of the Director-General's notification of approval of those changes.

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See also C.N.86.2020.TREATIES-XXVI.3 (Depositary Notification), dated 23 April 2020.

- 4.447 In order to assist States Parties with the implementation of the changes, the Secretariat circulated a Note entitled “Guidance for States Parties on Article VI Declaration Obligations and Inspections Following Entry Into Force of Changes to Schedule 1 of the Annex on Chemicals to the Chemical Weapons Convention” (S/1821/2019/Rev.1, dated 14 January 2020). The Secretariat further issued an addendum to this guidance (S/1821/2019/Rev.1/Add.1, dated 20 May 2020).
- 4.448 In 2021, informal consultations were conducted in regard to guidance for States Parties on Article VI declarations obligations and inspections following entry into force of changes to Schedule 1 of the Annex on Chemicals.

Conclusions and future considerations

- 4.449 Articles XII to XV and the final clauses of the Convention continue to allow for its effective implementation.⁴³ The activation, for the first time since entry into force of the Convention, of the procedures under paragraph 2 of Article XII and under Article XV for introducing changes to the Annex on Chemicals supports this position and highlights the capacity of the Organisation to adapt to new challenges and risks.
- 4.450 In the future, the Secretariat will continue to assist States Parties in the implementation of their obligations under the Convention, as well as discharge the reporting and other mandates bestowed on it by the Convention and the policy-making organs.

Protection of confidential information

Introduction

- 4.451 The protection of confidential information pertains to the verification of both civil and military activities and facilities, material obtained during authorised contingency missions (including but not limited to the FFM, the DAT, and the IIT), and any other information assets necessary to carry out and/or support the mission of the OPCW. The Director-General has the primary responsibility for ensuring the protection of confidential information and maintains a stringent regime governing the handling of confidential information by the Secretariat, while each State Party is also required to treat all information assets that it receives from the Organisation as confidential and afford it special handling.

Developments

Strengthening the confidentiality regime

- 4.452 In the area of confidentiality, the Secretariat has focused its efforts on enhancing its capabilities against a solid foundation of security risk management, corporate governance, and business continuity resilience. In addition, it has also intensified efforts for providing advice on operational and information security and confidentiality during OPCW missions.

⁴³

See also paragraph 4.372 of RC-4/S/1, dated 6 November 2018.

- 4.453 Since the Fourth Review Conference, two administrative directives related to the strengthening of the confidentiality regime have been promulgated, while others are in the final stages of approval. These include the:
- (a) Business Continuity Policy (AD/ADM/36, dated 27 June 2022) (new);
 - (b) Information Security Policy (AD/ADM/17/Rev.1*, dated 8 September 2022) (revised); and
 - (c) Information Classification Policy (new) and Manual of Confidentiality Procedures (revised) (both in progress).
- 4.454 Further strengthening of the confidentiality regime is facilitated through regular targeted training on security and confidentiality, as well as a robust security awareness and education programme that is delivered to all personnel associated with the OPCW, to include (but not limited to) permanent and temporary staff members, members of subsidiary bodies, members of State Party delegations, and external partners, where appropriate.
- 4.455 Since the Fourth Review Conference, the Commission for the Settlement of Disputes Related to Confidentiality held each of its annual meetings and produced reports, in spite of the COVID-19 pandemic. The Commission held its 2020 meeting entirely remotely, while subsequent meetings incorporated hybrid elements.
- 4.456 The Commission continued its work, which included exercising mock cases relating to hypothetical or alleged breaches of confidentiality involving States Parties or a State Party and the OPCW. A decision amending the Operating Procedures of the Commission was approved by the Conference at its Twenty-Seventh Session (C-27/DEC.12, dated 30 November 2022).

Information technology security

- 4.457 The Secretariat continues to operate the two primary information and communications technology networks: the Security Non-Critical Network (SNCN), an Internet-connected system for storing and processing the OPCW's official and lower risk confidential information; and the Security Critical Network (SCN), a non-Internet-connected system for storing and processing the OPCW's higher risk confidential information. Further, vast improvements have been made to properly compartmentalise and control access to additional networks and information systems in relation to the contingency missions. Since the Fourth Review Conference, OPCW infrastructure, systems, and personnel have continued to experience significant cyberattacks, including extremely advanced technical and specifically targeted attacks. In this regard, several vital information and communications technology security efforts have been undertaken, as described below.
- 4.458 To enhance the security measures supporting the enforcement of the confidentiality regime within the OPCW, investments in best practice technology have been made, most notably as follows:
- (a) an upgrade to the security incident and event management systems for both the SCN and SNCN, which allows logs to be monitored and correlated centrally so issues with patterns of behaviour rather than individual incidents can be identified with more confidence;

- (b) improved vulnerability management, to include an active directory scanner which scans networks and detects flaws and vulnerabilities and identifies risks for consideration by the appropriate risk owners;
- (c) hardening of information system infrastructure to include improved encryption capacity, such as the installation of the Hardware Security Module, which strengthens encryption-related practices (i.e., key management, authentication of digital signatures, etc.), and network hardware encryption, which allows for encryption between the new ChemTech Centre and OPCW Headquarters;
- (d) increased capabilities of identity and access management through a smartcard enrolment system integrated with the OPCW badge system;
- (e) improved incident management, to include digital forensics evidence collection and storage and an incident management system; and
- (f) implementation of encrypted communications platforms to allow for increased security around communications supporting sensitive missions.

4.459 Business continuity and cybersecurity resilience have been enhanced substantially since the Fourth Review Conference, thanks to a successful consultancy and the establishment of a robust business continuity programme at the Secretariat, including the promulgation of a new administrative directive, the establishment of a strategic business continuity plan and strategic business impact analysis, as well as the implementation of a crisis management framework. To facilitate the embedding of business continuity throughout the OPCW, additional investments have been made in technology, such as the implementation of a business continuity management system to serve as a consolidated source for all business continuity-related activity, including an emergency notification system.

4.460 The confidentiality regime continues to be strengthened by focusing on user awareness through a robust security training, education, and awareness programme, enhanced by a security awareness platform for automated user training and awareness. Further, improved approaches to identity and access management, such as an upgrade to the security access profile management system, are ongoing.

4.461 As the cybersecurity landscape continues to evolve, the Secretariat has established a security operations centre to more completely assess and react to ongoing cyberthreats, striving to implement effective procedural controls and, where possible, investing in the most appropriate technical solutions.

States Parties providing details on their handling of OPCW confidential information

4.462 Each State Party is required to provide details on the handling of information provided by the Organisation upon request, in accordance with paragraph 4 of the Annex on the Protection of Confidential Information. States Parties are regularly encouraged to provide this information in response to annual requests from the Secretariat via note verbale. At the end of the first half of 2022, a total of 123 States Parties had provided such information. This is only a modest increase since the Fourth Review Conference. The Secretariat continues to assist States Parties in this regard.

Incidents involving confidentiality

- 4.463 Since the Fourth Review Conference, the method for collecting data for confidentiality-related incidents improved by delineating more distinctly between incidents related to security and to confidentiality. There have been 40 confidentiality-related incidents since the Fourth Review Conference, on average less than 10 per year. However, in 2020, there was a significant increase in the number of incidents (17), possibly because of the substantial increase in remote communications during the pandemic. Almost all of these incidents resulted from States Parties delivering confidential material in a manner that was in violation of the OPCW Policy on Confidentiality. Actions were subsequently taken on this matter to inform States Parties about proper handling requirements, which has resulted in a substantial decrease in such incidents, with only seven recorded in 2021.

Conclusions and future considerations

- 4.464 Since the Fourth Review Conference, the Secretariat has developed the confidentiality regime to play a more evolved role based on risk ownership and risk management. One such improvement is the forthcoming update to the Manual on Confidentiality Procedures, which is to provide more robust guidance on information classification. For the future, the Secretariat will continue to improve its monitoring regime for confidentiality-related issues, while maintaining the implementation of the confidentiality regime at the same high level. Training, education, and awareness continue to be supporting foundations of the confidentiality regime.
- 4.465 The Secretariat is also in the process of developing and implementing a privileged access governance system, which will continue to enhance the identity and access management programme throughout the OPCW.
- 4.466 The Secretariat will continue to decrease the physical handling of classified information as much as possible, and to explore the use of ICT applications for increased monitoring capability.

General functioning of the Organisation for the Prohibition of Chemical Weapons

Project to upgrade the OPCW Laboratory and Equipment Store to a Centre for Chemistry and Technology

- 4.467 Since the Fourth Review Conference, significant progress has been made in the project to upgrade the OPCW chemical laboratory. The agreement for the purchase of the land for the construction of the new ChemTech Centre was signed in December 2019. In 2020, the draft, preliminary, final, and technical designs were completed. The irrevocable construction permit was granted in February 2021 by the permitting authority for the project. Construction activities on site began in June 2021. A first pillar ceremony was held on 23 September 2021 to officially mark the start of construction. The project remains on schedule with construction planned to be completed by the end of 2022. To date, financial contributions and pledges totalling EUR 34 million have been received from 54 countries, the European Union, and other donors.
- 4.468 Regular updates on project progress have been provided in Notes by the Secretariat, all entitled “Progress in the Project to Upgrade the OPCW Laboratory and Equipment Store to a Centre for Chemistry and Technology”, in briefings to States Parties on multiple occasions, as well as on the ChemTech Centre section on the OPCW website.

- 4.469 Once operational, the ChemTech Centre will be an important tool to support the mission and work of the Organisation by providing expanded and enhanced analytical, operational, as well as training and capacity-building capabilities to strengthen implementation of the Convention. Programmes and activities are planned to commence at the ChemTech Centre in spring 2023, following an inauguration ceremony.
- 4.470 As outlined in the Secretariat's Note on "Anticipated Programmes and Activities at the Centre for Chemistry and Technology" (S/2034/2022, dated 1 March 2022), many of the programmes and activities carried out at the ChemTech Centre will be a continuation or enhancement of existing activities. In the updated Note on "Anticipated New Programmes and Activities at the Centre for Chemistry and Technology" (S/2102/2022, dated 30 September 2022), nine potential new programmes and activities to be implemented at the ChemTech Centre were highlighted. These programmes and activities relate to enhancement of OPCW Laboratory capabilities, inspectors' routine and non-routine readiness and training, international cooperation and assistance, and knowledge management and scientific collaboration.

Policy-making organs

Introduction

- 4.471 The Third Review Conference recognised the important role and function of the policy-making organs in ensuring the implementation of the Convention. Both the Conference and the Council continue to play their roles in accordance with Article VIII of the Convention, and have maintained a sustainable pattern of work.

Developments

Conference of the States Parties

- 4.472 The Conference, the principal organ of the OPCW, held four regular sessions during the period under review, with an average participation of 154 States Parties. This is a slight increase compared to the average participation of 133 States Parties during the five-year period prior to the Fourth Review Conference. The level of participation of States Parties in the Conference was as follows: Twenty-Third Session (160); Twenty-Fourth Session (154); Twenty-Fifth Session (149); and Twenty-Sixth Session (152). The Conference has adopted 48 decisions since the Fourth Review Conference.

Executive Council

- 4.473 Since the Fourth Review Conference, the Council, the executive organ of the OPCW, met for 12 sessions and convened for four meetings. During the reporting period, the Council adopted 47 decisions.
- 4.474 Since the Fourth Review Conference, the number of observer States Parties attending the Council sessions in person has reduced owing to the specific modalities applied during the events to minimise the risks to health and safety of delegates and Secretariat staff. Nevertheless, each session of the Council attracted (in person and online) an average of 45 observers, compared to 47 as reported at the Fourth Review Conference.

Decision making

- 4.475 The Third Review Conference noted with satisfaction the commitment of States Parties and their prevailing practice of adopting decisions by consensus, which had played an important role towards the achievement of common goals and strengthened the authority of the Convention. Decision making by consensus continued to prevail in the Council and the Conference. Since the Fourth Review Conference, the Council adopted 41 draft decisions by consensus—40 during regular sessions and one during a meeting. The Conference adopted 40 draft decisions by consensus during its regular sessions. There were 14 instances when draft decisions were adopted by voting—eight by the Conference and five by the Council during regular sessions, and one by the Council during a meeting.

Business continuity in relation to policy-making organ activities

- 4.476 As of March 2020, the principal OPCW policy-making organs had to adapt their working modalities to minimise the risks related to the challenges brought about by the outbreak of the COVID-19 pandemic. On the basis of thorough analysis of organisational, procedural, health, safety, technical, logistical, and financial aspects of the evolving situation, the Director-General, in close interaction with the Chairpersons of the Conference and Council, put forward sets of measures that enabled the Organisation to successfully conduct the mandated sessions of its principal policy-making organs, in accordance with the statutory requirements of the Convention and with the highest possible health and safety standards for all participants.
- 4.477 The COVID-19 pandemic revealed a pressing need to develop and introduce a vast range of IT solutions enabling the policy-making organs and the Secretariat to continue organising and conducting events under extraordinary circumstances, as well as maintaining information and documentation exchange with States Parties.
- 4.478 To these ends, since 2020 the Secretariat has continued to develop new IT capabilities: online documentation exchange (the external server—Catalyst); online digital processing of official-series documents; technologies to host past digital recordings (archive) and to make the Council and Conference proceedings available via live streaming online to all the States Parties (Connected Views); and tools to promote higher organisational efficiency and oversight of language services.
- 4.479 The Secretariat continues to advance one of the most important elements of its digital resilience—the conduct of hybrid or fully online meetings of the OPCW policy-making organs in all six of the Organisation’s official languages. Accordingly, the one-time costs of the platform are being supported by the trust fund for security and business continuity, to which Canada, Germany, and the United Kingdom of Great Britain and Northern Ireland generously contributed.

Language services

- 4.480 Since the pandemic, the Language Services Branch (LSB) had adapted its processes to effectively support the activities of the OPCW policy-making organs. LSB played a key role in the development of an online meetings platform for hybrid or fully online events. OPCW interpreters have been certified in using remote simultaneous interpretation platforms and have provided support to several multilingual meetings, including a testing

event for delegations of the States Parties that are members of the Council. Technical and organisational preparations for the launch of an online meeting system have been completed. This includes the procurement of hardware and software, integration with existing conference systems, and certifying OPCW interpreters in using the system. Simulation testing was successfully conducted for the supporting staff and selected delegations. When conditions allow, this exercise will encompass all delegations.

- 4.481 LSB provided valuable support in regard to the multilingual content of the new Catalyst server. This portal became a very effective tool for two-way communication between the Secretariat and national delegations. Occasional deferral of distribution of language versions of official-series documents should be attributed to late submission of documents, subsequent delays during the approval process, and overall workload in view of existing resources. LSB continues to work on improving all of the related procedures, including the upgrade and development of its technical capabilities. Development of technical capabilities will ensure that LSB maintains its capacity to ensure timely delivery of mandated services during peak periods of work and to absorb increases in workload.
- 4.482 These capabilities include the planned introduction in LSB of essential language tools such as the Translation and Interpretation Management System and a computer-assisted translation tool. These tools will enhance digital resilience; facilitate the integration of processes; improve planning and organisational efficiency; provide transparency and oversight of translation and interpretation management workflows; and increase consistency in translation and contribute to knowledge management efforts.

Documentation

- 4.483 The Third Review Conference pointed out that in order to guarantee good results of the policy-making organs, it is necessary to ensure prompt and timely production of documents.
- 4.484 In 2020, a new application was introduced to facilitate the planning, digital approval workflow, and processing of official-series documents, with the aim of further ensuring that they are issued to States Parties in accordance with the deadlines for their circulation (EC-49/DG.5, dated 3 May 2007). Additional features include e-notifications, key performance indicator reporting, version control, and full digital archiving of all official-series documents, including the language versions.
- 4.485 The Secretariat has reported that, on average, 80% of documents are circulated within the statutory deadlines as established by the rules of procedure and decisions of the Council and the Conference. Late distribution (20%) can be attributed to late submissions, subsequent delays during the approval process, and overall workload in view of existing resources. Over the five-year period 2017–2021, an average of 680 documents comprising 12,000 pages have been processed each year.
- 4.486 During the same period, there has been a substantial and continuing upward trend in the number of requests for national statements to be issued as official-series documents, which has increased costs both in terms of financial and human resources. On average during the five-year period (2017–2021), 48% of documents pertaining to the sessions of the Conference and the Council were national statements (see Charts 12 and 13 below).

CHART 12: NATIONAL STATEMENTS ISSUED AS OFFICIAL-SERIES DOCUMENTS, 2017–2022

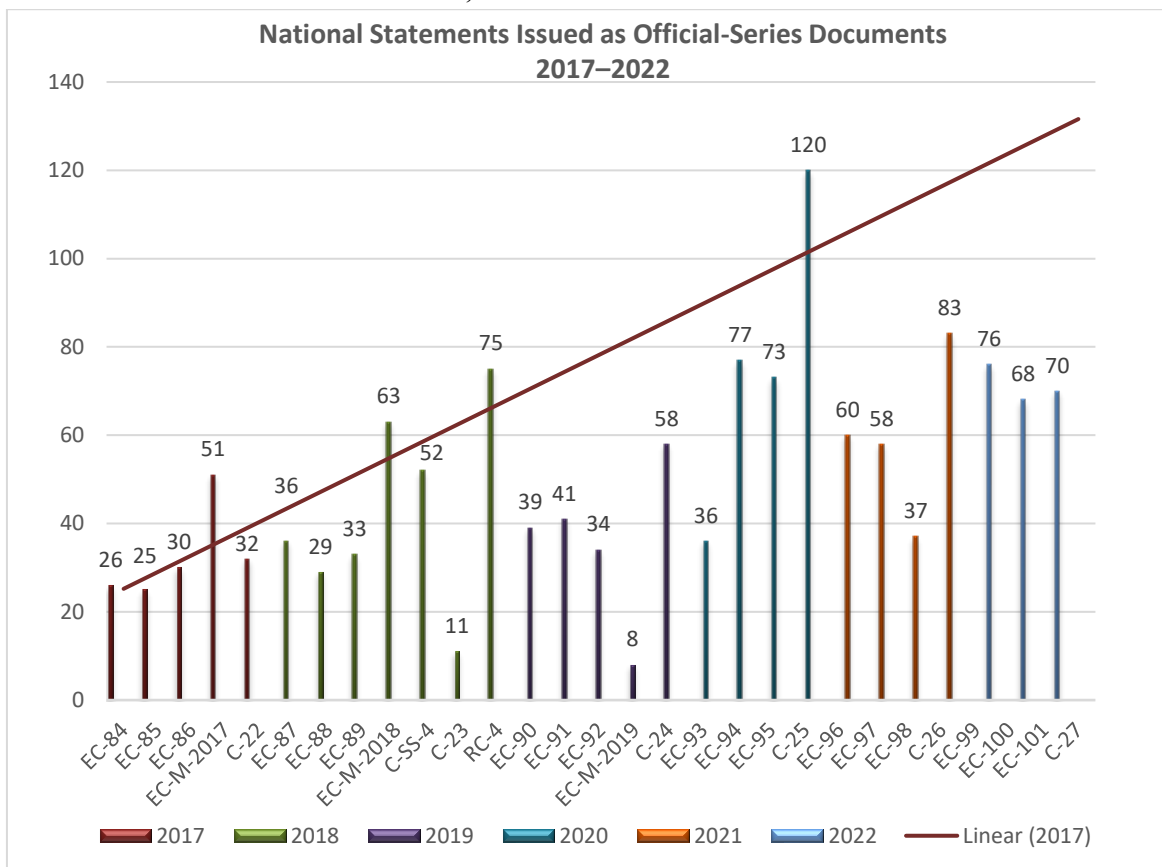
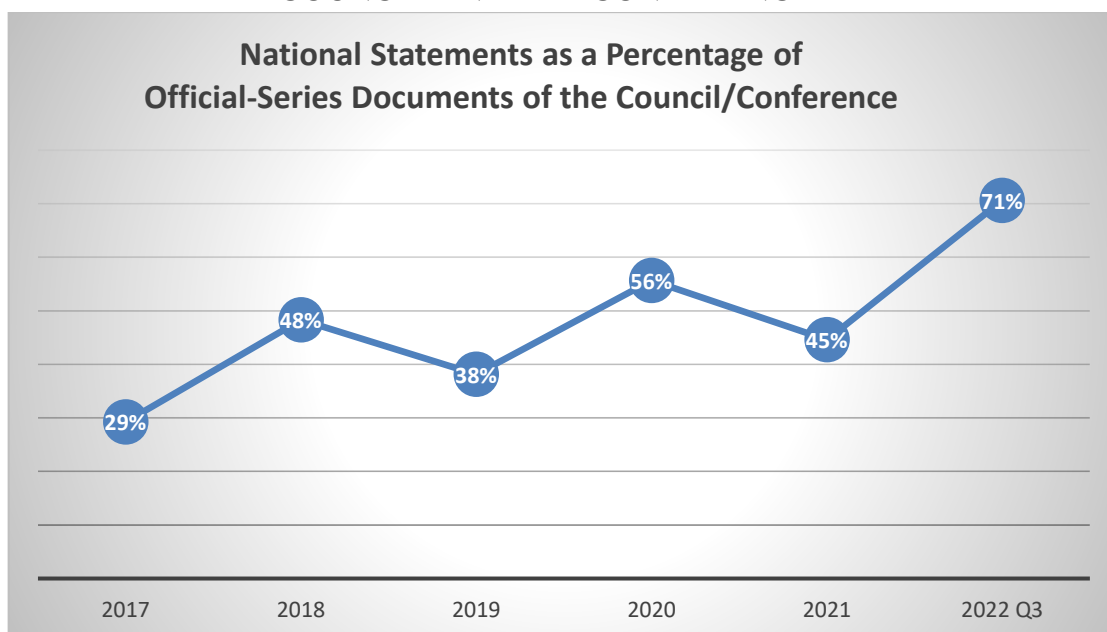
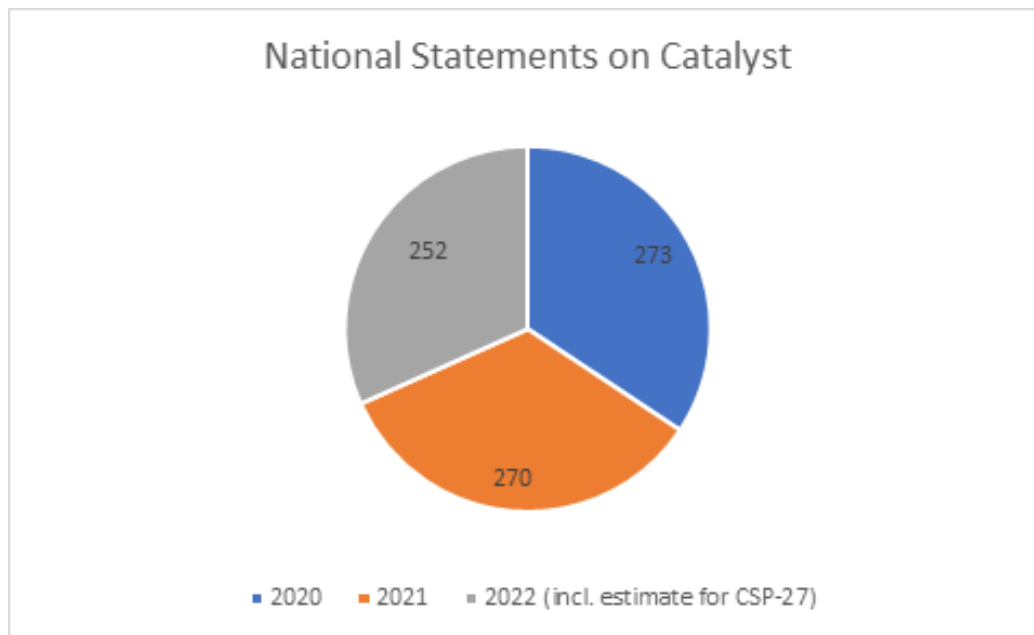


CHART 13: PERCENTAGE OF NATIONAL STATEMENTS AS A SHARE OF ALL OFFICIAL-SERIES DOCUMENTS FOR SESSIONS OF THE COUNCIL AND THE CONFERENCE



- 4.487 In the context of COVID-19 restrictions (2020–2022) implemented for the sessions of the policy-making organs, the Secretariat for the Policy-Making Organs (PMO) also distributed national statements, as submitted, via the External Server (Catalyst) in advance of the sessions. Delegations were also invited to submit for distribution on Catalyst statements made in the exercise of their right of reply. Although the workload has increased because of COVID-19 restrictions, the response from external stakeholders indicates that the timely distribution of statements has proved useful.

CHART 14: NATIONAL STATEMENTS ON CATALYST



OPCW's External Server – Catalyst/PMO

- 4.488 In July 2021, a new external server platform (Catalyst) was launched, providing representatives from States Parties, National Authorities, and scientific communities with access to OPCW online applications, official-series and other documents, as well as information on meetings, training opportunities, and events. The multilingual hub with enhanced security provides registered users with access to the official-series documents, informal papers (including national statements and presentations relating to the work of the policy-making organs), the Journal and weekly lists of documents, and other PMO-related documents. It provides a multilingual search engine, is mobile-friendly, and offers an e-notification subscription service facilitating direct access to official-series documents and informal papers once distributed. Catalyst/PMO further demonstrates the Secretariat's attention to the potential of modern technologies to enhance the effectiveness of servicing intergovernmental processes and the adoption of a PaperSmart approach to promote the use of electronic media and provide participants with electronic access to meeting programmes, agendas, documents, and statements, thus making financial savings as well as supporting the OPCW's green initiative.
- 4.489 To ensure access is provided on a need-to-know basis, Catalyst/PMO accounts expire each year at the end of September, and Permanent Representations are required to approve and submit a list of officials requiring access. During the first year of implementation (2021–2022), 832 accounts were enabled for 137 Member States.

Conclusions and future considerations

- 4.490 The Secretariat has continued to make efforts to provide documents in a timely and efficient manner regardless of the increased volume, and will further promote the use of Catalyst/PMO among its stakeholders. The Secretariat recognises the advantage of the availability of national statements in advance of the policy-making organs sessions, or immediately following delivery, and will be approaching the policy-making organs to consider discontinuing the current practice of issuing national statements as official-series documents post-session at considerable delay owing to the process and resources involved. The approach used by the United Nations Headquarters with regard to national statements may be considered as the best solution. The new approach will mean that once a national statement is submitted and a request is made for it to be posted on the external server and/or OPCW public website, it will be immediately uploaded in the format and language as submitted by the requesting delegation. This will, in turn, reduce the overall number of official-series documents and workload involved, enabling enhanced use of resources. The Secretariat is also considering the possibility of expanding current applications for the dissemination of audio/video files of the sessions of the policy-making organs, thus enabling access to statements provided in a language other than English.
- 4.491 The policy-making organs continue to play key roles in meeting the objectives of the Convention and ensuring the effective functioning of the Organisation. The Secretariat continues to assist both the Conference and the Council in the performance of their functions.

Subsidiary bodies

Advisory Body on Administrative and Financial Matters

- 4.492 The Advisory Body on Administrative and Financial Matters, established by the Council at its Second Session (EC-II/DEC.1, dated 30 June 1997) has continued to provide valuable advice on financial and other administrative matters.

Advisory Board on Education and Outreach

- 4.493 Information on the role of the ABEO is included in the subsection related to the engagement with external stakeholders (see paragraphs 4.412 to 4.419 above).

Commission for the Settlement of Disputes Related to Confidentiality

- 4.494 Information on the Commission for the Settlement of Disputes Related to Confidentiality is included in the subsection on the protection of confidential information (see paragraphs 4.455 and 4.456 above).

Scientific Advisory Board

- 4.495 The activities of the SAB are covered in Section 3 on developments in science and technology (see paragraphs 3.12 to 3.18 above).

Effective functioning of the Technical Secretariat

Introduction

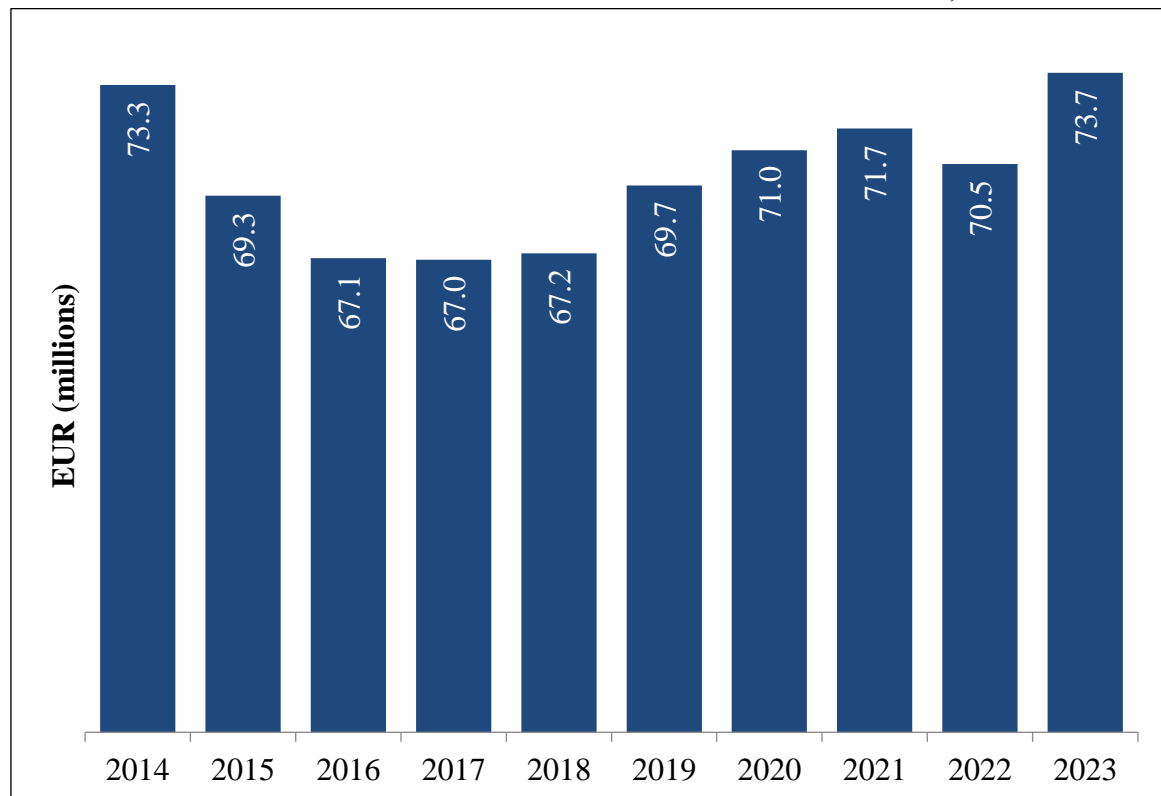
- 4.496 The Secretariat is fully committed to carrying out the functions entrusted to it under Article VIII of the Convention. Effective functioning of the Secretariat has been ensured in various ways, in accordance with the Convention and the relevant rules and regulations.

Budgetary resources

Developments

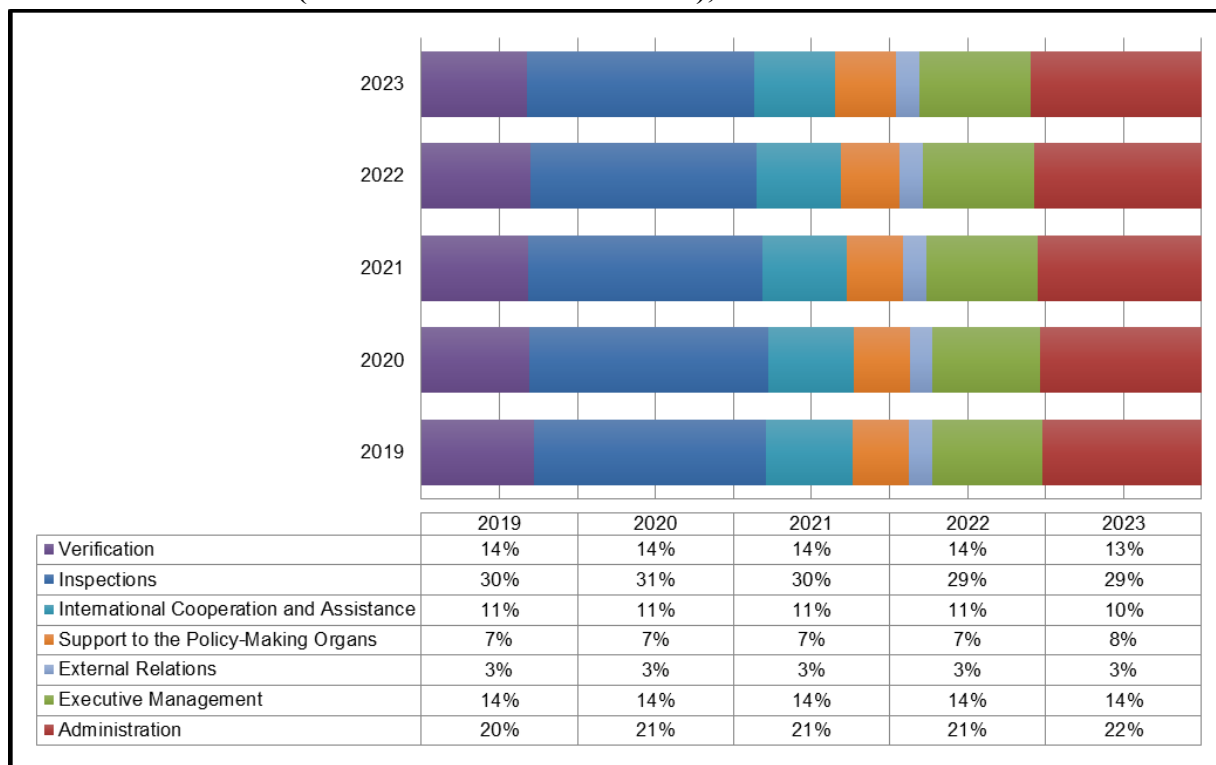
- 4.497 The annual Programme and Budget of the OPCW is adopted by the Conference at its regular sessions. Chart 15 below highlights OPCW budget levels since 2009.

CHART 15: REGULAR BUDGET LEVELS FOR THE OPCW, 2014–2023



4.498 Expenditure across the Secretariat is divided among seven programmes. Chart 16 below illustrates the division of the budget from 2019 to 2023.

CHART 16: REGULAR BUDGET LEVELS, BY PROGRAMME (PROPORTION OF TOTAL), 2019–2023



4.499 In the period from 2019 to 2021, States Parties have mandated the Secretariat to undertake a number of important additional tasks in defence of the norm against chemical weapons. At the same time, the Secretariat adapted to operating with diminishing regular budget resources, a situation intensified by the loss of purchasing power owing to inflation. The revision of the basis for budget preparation to incorporate inflation considerations from the 2022–2023 biennium significantly eased pressures on programme implementation.

Conclusions and future considerations

4.500 Zero nominal growth engendered a steady erosion of the OPCW's regular budget in real terms, in addition to reducing the operating platform that it funded. Incorporating inflation considerations in the 2022–2023 biennium has significantly improved the Organisation's ability to fulfil the full range of tasks and responsibilities required of it.

Management

Developments

4.501 Since 2005, the annual Programme and Budget has incorporated elements of results-based budgeting.

- 4.502 Since 2010, the Secretariat embarked on implementing results-based management in its management processes and practices in order to better ensure that its work contributes to the achievement of clearly defined results and the core objectives of the Organisation.
- 4.503 Consistent with the Medium-Term Plan (EC-92/S/1 C-24/S/1), additional focus has been placed on enhancing resilience and adaptive capacity, including through the adoption of additional new, project-based working methods and tools, the continued improvement of results-based management procedures, and strengthened knowledge management structures and processes.
- 4.504 A number of improvements in procedures and processes have been implemented since the Fourth Review Conference. Among them are an improved programme and budget preparation process, including a move towards zero-based budgeting, and improved standard costing. The clarity of the resultant programme and budget document has also been improved.
- 4.505 Further to the Notes by the Secretariat entitled “Request to Begin Preparations to Move the Programme and Budget of the OPCW to a Biennial Budget” (RC-4/S/2, dated 21 November 2018) and “The OPCW in 2025: Ensuring a World Free of Chemical Weapons” (S/1252/2015, dated 6 March 2015), where reference was made to exploring the benefits to be derived from moving to a two-year budget cycle in support of the achievement of results and ensuring that programme and project outputs and outcomes are achieved in a predictable manner, and in light of the consistent view expressed by the External Auditor’s reports on the 2016, 2017, and 2018 Financial Statements of the OPCW⁴⁴ in support of the Secretariat’s efforts to introduce biennial budgeting, the Conference at its Twenty-Fourth Session approved the OPCW’s transition from an annual to a biennial programme and budget cycle.⁴⁵ The biennial Programme and Budget enhances efficiency, longer-term strategic planning, and predictability of resource requirements. The first biennial Programme and Budget covers the two-year period 2022–2023.
- 4.506 A risk-based approach is embedded in the Secretariat’s operations and activities, including programme and budget and strategic planning. A Business Continuity Management Framework has been adopted in the Secretariat in order to enhance the resilience of the Organisation and enable the resumption of its activities during periods of disruption.
- 4.507 Since the Fourth Review Conference, in order to further promote the efficiency and economy of OPCW operations and improve the management of the OPCW’s resources, internal audits, confidentiality audits, evaluations, investigations, and advisory services have continued to be conducted by the Office of Internal Oversight. Efforts have also continued to develop and maintain a quality management system (QMS) that is in line with the applicable standards of the ISO. The accreditation of the QMS by an internationally recognised body strengthens the efforts of the Secretariat to build confidence among the States Parties and to gain international recognition.

⁴⁴ Respectively Annex 3 to EC-86/DG.3 C-22/DG.5 (dated 24 July 2017); Annex 3 to EC-89/DG.3 C-23/DG.4 (dated 7 August 2018); and Annex 3 to EC-92/DG.2 C-24/DG.5 (dated 13 August 2019).

⁴⁵ C-24/DEC.11 (dated 28 November 2019).

Conclusions and future considerations

- 4.508 The implementation of results-based management has enhanced the focus of programme managers on outputs and outcomes, rather than on activities. Such a shift provides a higher level of assurance that programme objectives are being reached.

Finance

Developments

- 4.509 The percentage of assessed contributions collected⁴⁶ has declined from 97% in 2018 to 93% in 2021; 100% has never been achieved. The Third Review Conference urged all States Parties to regularise their payments without delay. In order to address outstanding assessed contributions, the Director-General has continued, whenever possible, to remind States Parties in arrears to use the multi-year payment options. As a result of these efforts, Libya and Sierra Leone signed and are implementing multi-year payment plans.
- 4.510 Voluntary contributions during the reporting period increased from EUR 8.2 million in 2017 to EUR 21.1 million in 2021, for a total of EUR 72.8 million over the period 2017 to 2021. As regular budgets have remained flat for several years, extrabudgetary resources became an increasingly important source of funding for the Organisation, and a revised administrative directive on trust funds and voluntary contributions was issued in 2018 in order to streamline the administrative and financial management of voluntary contributions.
- 4.511 The Secretariat has maintained International Public Sector Accounting Standards (IPSAS) since their implementation on 1 January 2011, and all subsequent IPSAS-compliant financial statements (from 31 December 2011 onwards) have received an unqualified opinion from the External Auditor.

Conclusions and future considerations

- 4.512 In the future, finance-related processes will be continually streamlined in order to enhance the overall efficiency of service delivery, and to enable the Organisation to derive the maximum benefit from the implementation of the new ERP system.

Human resources

Introduction

- 4.513 Since the Fourth Review Conference, the Organisation has continued to depend on a capable and committed workforce to deliver on its work. The external human resources environment has evolved considerably since 2018 with digitisation, work flexibility, and diversity among the key themes. The OPCW has experienced these shifts, in particular in the context of the COVID-19 pandemic. While presenting significant challenges to business continuity that were overcome, it also served as a further spur to modernise and adapt systems and processes.

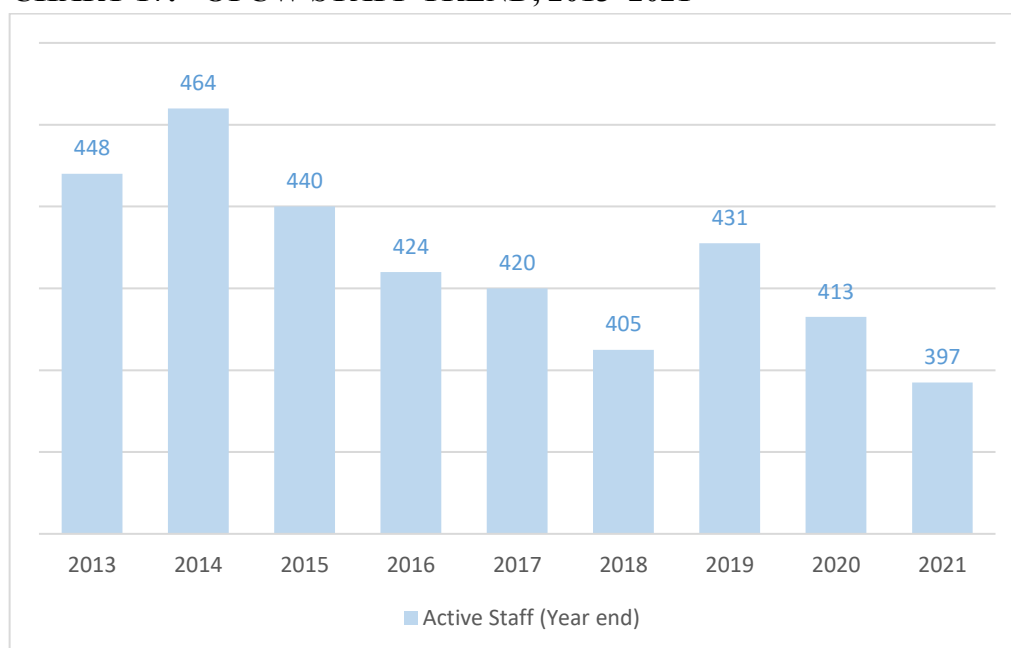
⁴⁶

Based upon the assessed contribution collection rate as at 31 December of each year.

Developments

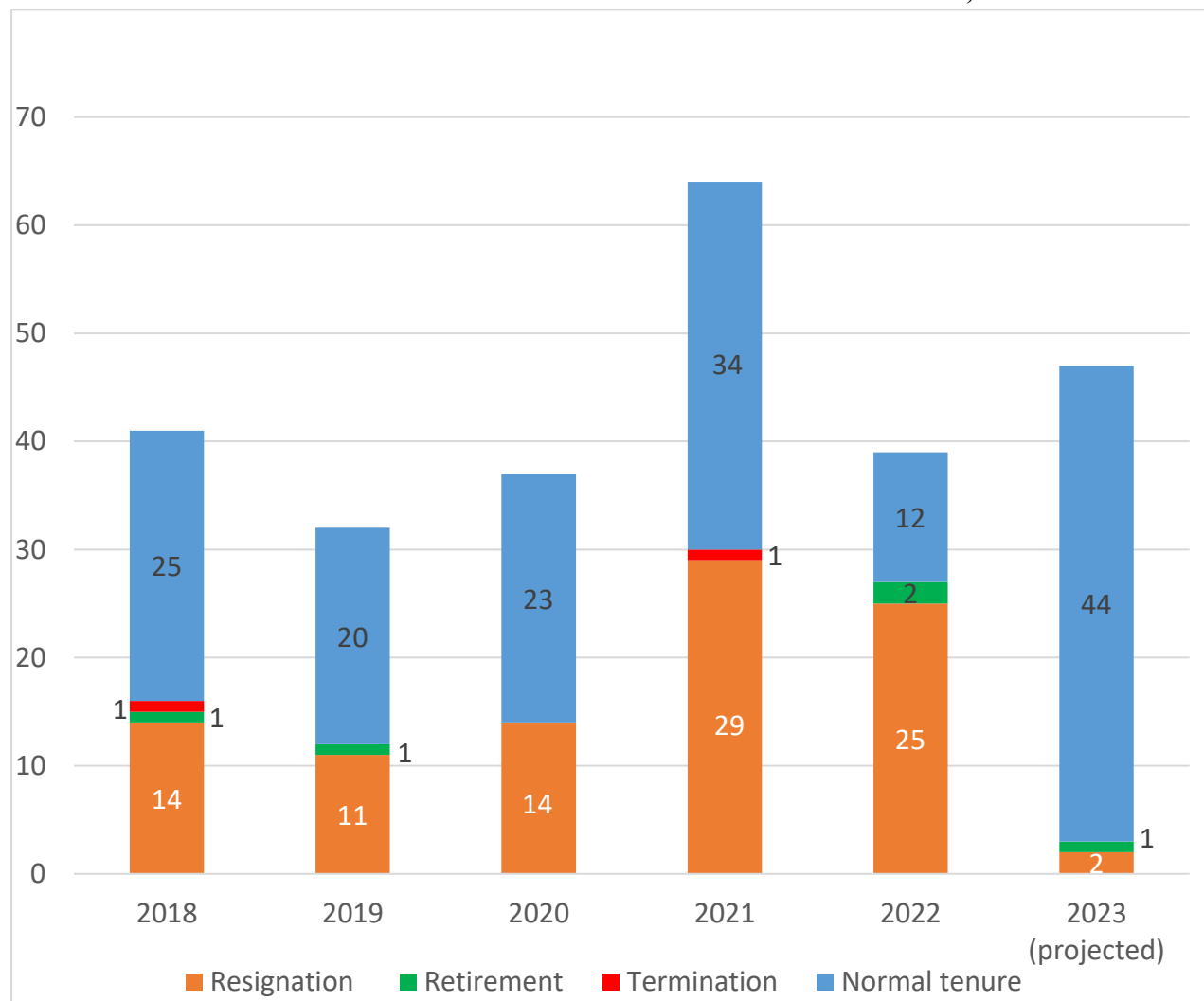
- 4.514 Since the start of the COVID-19 pandemic, the OPCW has experienced a substantial increase in resignations, especially within the professional staff category. Combined with the general reduction in budgeted posts (6% fewer posts than in 2013), in mid-2022 the OPCW had the lowest number of staff since the Organisation's inception in 1997. By contrast, the OPCW had 22% more staff at the end of 2014, and 13% more staff as recently as two years ago. This has a significant effect on overall staff productivity and on the ability of the Organisation to deliver on its mandate. This situation is also a significant draw on resources across the Organisation in regard to aspects such as offboarding, recruitment, and onboarding.

CHART 17: OPCW STAFF TREND, 2013–2021



- 4.515 The past two years have shown that the OPCW is not immune from the pandemic-related global trend of increased resignations. This compounds an already acute workforce situation arising from the OPCW tenure policy, whereby the annual rate of turnover is significantly higher than the 14% annual turnover stipulated in the tenure policy decision of the States Parties.
- 4.516 Based on the rate of resignations in recent years, and scheduled separations because of tenure (see Chart 18 below), it is projected that by the end of 2023 approximately 80% of those tenured staff who were in post in January 2021 will have left. This is an alarming rate of turnover for any organisation, but all the more so for one such as the OPCW that relies on the skills, experience, and knowledge of its staff in order to deliver on behalf of States Parties. Not only does this excessive turnover erode the capability of the Organisation, it also severely diminishes the possibilities to best leverage the funds committed by States Parties, both assessed contributions and otherwise, including for the flagship project of the ChemTech Centre.

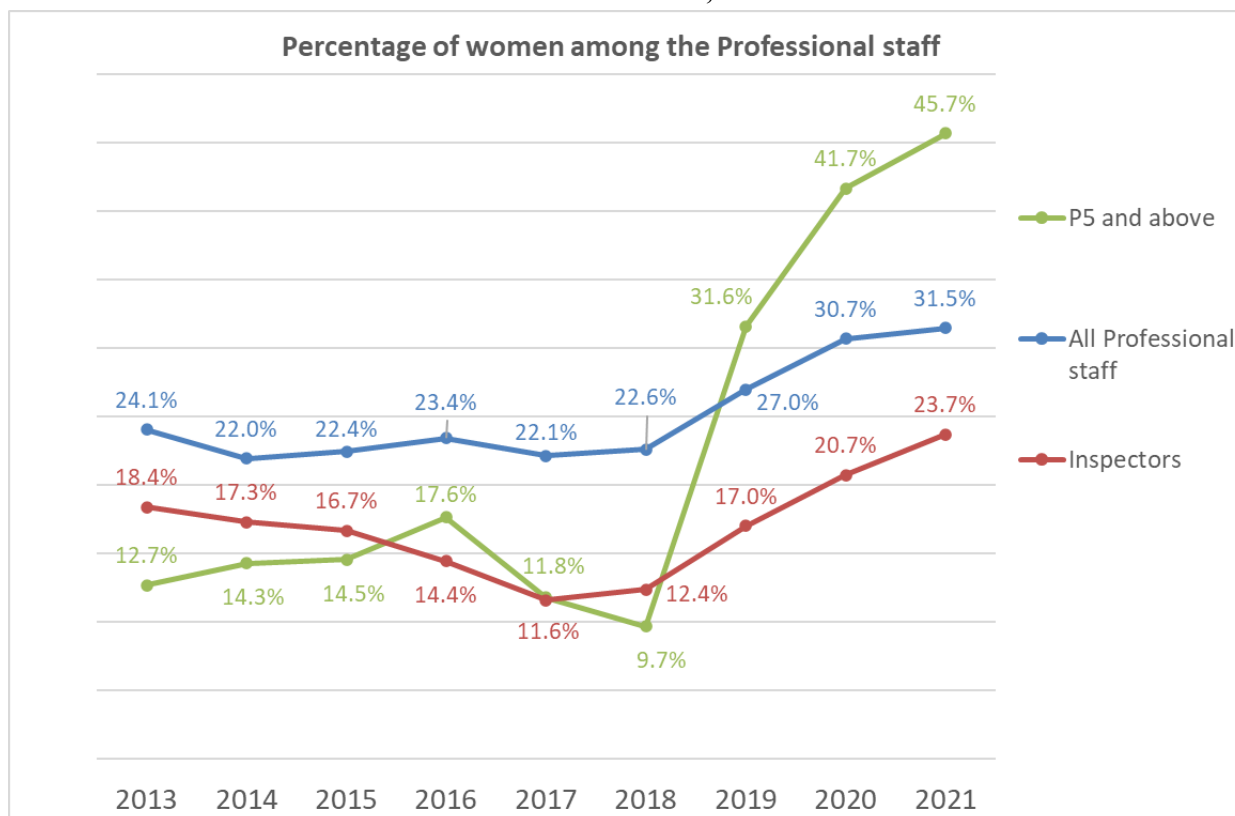
CHART 18: SEPARATION OF STAFF SUBJECT TO TENURE, 2018–2023



- 4.517 Enhancing the human resources capability of the Secretariat to address current and future challenges remained a priority in the period since the Fourth Review Conference. The OPCW has modernised its human resources policies and processes, which are designed to maximise the contribution of all staff and to allow the OPCW to attract the talent it needs to achieve its objectives.
- 4.518 Maintaining policy alignment with the Organisation’s needs and the external environment remained a key consideration. Two examples that encapsulate this are the establishment of a flexible working arrangements policy in April 2022— benchmarked against other international organisations and incorporating lessons learned from the COVID-19 pandemic—and the revision of the OPCW Code of Conduct.
- 4.519 Duty of care has continued to be promoted as a principle that underpins management action. Drawing on the lessons learned from the COVID-19 pandemic, the capacity of health-related services providing medical and psychosocial support has improved to build the resilience and well-being of staff, to further broaden occupational health and safety measures, and to foster collaborative relations and a harassment-free work environment.

- 4.520 Discussions continued on the OPCW tenure policy, an area where optimisation, modernisation, and alignment with comparable international organisations has not yet been possible to achieve. Based on discussions at the Fourth Review Conference, a 2018 review was undertaken by independent experts on the approach of comparable non-career organisations. Sets of proposals have also been discussed in the organisational governance facilitations, but without any agreement reached to date on changes to be adopted.
- 4.521 Ensuring as broad a geographical balance as possible remained a core human resources theme. The Secretariat has worked to broaden the pool of potential candidates from across all regions by expanding its initiatives and outreach efforts. This has been achieved through an improved use of technology and by strengthening partnership with the International Cooperation and Assistance Division, the ABEO, and external stakeholders, including National Authorities, to reach more diverse audiences and to raise awareness about professional opportunities at the OPCW. These efforts have been complemented by providing capacity-building opportunities through tailored initiatives such as the Associate Programme and the Junior Professional Officer Programme. The ChemTech Centre will further augment the Organisation's capability to offer capacity-development opportunities.
- 4.522 Improving the gender balance among the staff of the Secretariat has also remained a priority. Significant strides have been made since 2018, in particular in the representation of women in professional-level posts (see Chart 19 below). This followed a prolonged period where progress had stalled. While this progress stood out across all professional posts, the commitment to achieve balance was most striking at the level of Deputy Director-General and Division Directors, where an increase from 10% to 50% was achieved by 2020. Work to achieve these results has been multifold. At the leadership level it included the Director-General joining the International Gender Champions initiative, a senior leadership network of gender champions from international organisations, including the United Nations Secretary-General, governments, and civil society. At the policy, programme, and process levels, a network of Gender Focal Points comprising all divisions was set up to advance efforts in this area.

CHART 19: OPCW GENDER BALANCE, 2013–2021



Conclusions and future considerations

- 4.523 A fit-for-future and sustainable Organisation needs at its core a diverse, capable, and committed workforce working in an inclusive environment where it can contribute to the maximum of its abilities. This objective will remain at the forefront of the human resources agenda, with policies and processes framed and implemented accordingly.
- 4.524 Ensuring that the OPCW remains appropriately resourced and attracts top talent will continue to be a challenging task because of increasing competition from private and public sector organisations.
- 4.525 To be sustainable and efficiently deliver on its complex mandates, the Secretariat's workforce should strike a balance between the regular injection of new talent, ideas, and experiences from across all regions, while at the same time retaining knowledge, skills, and expertise and leveraging existing resources. This will allow the Organisation to preserve top capability and drive down costs significantly by reducing excessive turnover.
- 4.526 Therefore, renewed consideration should be given to adjusting the OPCW's tenure policy at this crucial juncture of challenges and opportunities, so it can be applied in a more flexible manner in order to effectively meet organisational and programmatic needs, while preserving the OPCW's non-career principle. Such adjustments may include the possibility for the Director-General to grant limited exceptional modalities (limited extensions of staff and rehiring of former staff) similar to those in place in other tenure-based organisations, such as the CTBTO, the IAEA, and the Organization for Security and Co-operation in Europe. While preserving the non-career principle of

the OPCW, such modest and elsewhere routine flexibility would allow the Organisation to ensure that it is able to attract the top human resource talents at the lowest cost, while also providing additional means to address geographical balance and gender parity through access to a pool of qualified, experienced candidates.

- 4.527 Tailored talent sourcing initiatives will continue to focus on the themes of geographical balance and gender equality. Building on this foundation towards a more diverse OPCW, the Secretariat will seek to expand its efforts on other aspects of diversity in the interest of maximising its modern, inclusive, and efficient work culture.

Knowledge management

Introduction

- 4.528 The OPCW relies on the expertise, knowledge, and skills of its staff towards achieving a world free of chemical weapons. Undoubtedly, these need to be retained in order to enable the Organisation to carry out its mission efficiently and remain fit for purpose. The Third Review Conference stressed that “the OPCW should remain the global repository of knowledge and expertise with regard to chemical weapons disarmament, the verification of their non-possession and non-use, and their destruction, and requested the Secretariat to identify and implement ways of ensuring continuity in its knowledge base and expertise in these areas”.⁴⁷
- 4.529 To operationalise this guidance from the policy-making organs, during the reporting period the Secretariat established the senior position of Knowledge Management Advisor as well as several Knowledge Management Officer positions. On a policy level, the Secretariat’s Information Circular OPCW-S/IC/129 (dated 9 July 2021) on “Knowledge Management Strategy” provides consistent guidance on the full scope of the management of knowledge, and ensures that the retention and preservation of knowledge, skills, and expertise are an integral part of its operations. Substantive work is under way to update the relevant administrative directive as well.
- 4.530 The following sections highlight specific activities relating to the implementation of the knowledge management strategy. They also describe progress made by the Secretariat, with a focus on its core knowledge⁴⁸ in the Inspectorate and Verification Divisions, and the prospects for the continued development of knowledge management activities at the OPCW in the coming years.

Developments

- 4.531 The Secretariat coordinates the knowledge management activities of the entire Organisation through the Knowledge Management Team, comprised of the Knowledge Management Advisor and Knowledge Management Officers, engaging various stakeholders, enabling cross-divisional projects, and providing guidance and training sessions to staff. To this end, the Knowledge Management Advisor developed the Continuous Knowledge Management Strategy, which is adapted to the needs of the

⁴⁷ Subparagraph 9.155(h) of RC-3/3*.

⁴⁸ For the purpose of the knowledge management strategy, “core knowledge” or “core business area” is defined as knowledge in the areas of chemical weapons disarmament, the verification of their non-possession and non-use, and their destruction, while “non-core knowledge” constitutes other areas of knowledge relevant to the work of the Secretariat to support its primary business function.

Organisation. The goal of the Strategy is to ensure that expertise and knowledge are identified, developed, and retained continuously. It emphasises several areas such as knowledge profiling, knowledge repository, knowledge development, and knowledge transfer, fitting a wide range of tools and activities. Such an approach enables the Secretariat to sustainably retain and transfer the experiential and explicit knowledge of its staff for the benefit of the Organisation.

- 4.532 The Secretariat relies on its staff for implementation of the Continuous Knowledge Management Strategy by identifying and facilitating the work of focal point staff, designated by respective division directors. These “Knowledge Management Champions” initiate and support knowledge management activities tailored to the needs of their units, using the guidance and methodology provided by the Knowledge Management Team. Recently the Secretariat further elaborated the role of the champions and engaged them in more activities. As of June 2022, the group included over 30 champions representing most of the Secretariat’s organisational units.
- 4.533 In recent years, a multitude of knowledge management activities have been carried out across the Secretariat in relation to the identification, sharing, and retention of knowledge. Many of these activities use one or more tools from the knowledge management toolbox, maintained and guided by the guidance of the Knowledge Management Team.
- 4.534 Knowledge-sharing activities are essential for the implementation of the Continuous Knowledge Management Strategy within the Organisation. Among other things, new information technology such as OrgNet, the internal communication portal moderated by the Knowledge Management Team, was leveraged, allowing for information sharing within the Secretariat and enabling units to create and contribute their own information.
- 4.535 Over 30 Secretariat-wide knowledge sharing events have been conducted in recent years within the framework of OPCW Share—a seminar series organised by the Knowledge Management Team featuring the work of different organisational units.
- 4.536 The central, non-confidential Correspondence Management System was recently migrated to a new digital platform based on Microsoft SharePoint. It was developed and adapted to enhance all operations related to the management of the OPCW official documents and transactions, improving the preservation and discoverability of explicit knowledge.
- 4.537 A knowledge management clearance has also been integrated into the exit process for staff members leaving the Organisation. The Secretariat has intensified efforts to retain the accumulated knowledge and expertise of staff. A systematic approach to this was achieved through knowledge transfer sessions that enable departing staff members to best transfer their tacit knowledge.
- 4.538 Significant progress has been made recently in the implementation of knowledge management-related structures, documents, tools, and activities, in full accordance with the organisational Continuous Knowledge Management Strategy. For example, in the Inspectorate, a tailored knowledge management framework was designed to complement and reinforce the continuous transfer of knowledge throughout regular mission-related activities. The framework was formalised through the adoption of a standard operating procedure which, among other things, defined specific core knowledge areas in the Inspectorate and set forth the requirements for the proper capture, maintenance, and development of that knowledge.

- 4.539 The Inspectorate has also been developing and implementing an integrated portfolio of knowledge management tools and initiatives, covering the three pillars of the Continuous Knowledge Management Strategy, namely, knowledge profiling, knowledge development, and knowledge transfer. This portfolio comprises mechanisms including a formal mentoring programme, a series of regular knowledge sharing presentations, ad hoc knowledge transfer sessions, a network of communities of practices, a lessons-learned database, and more.
- 4.540 A mentoring programme has also been designed to enable the direct sharing of knowledge between experienced and new Inspectorate staff, relying on a formal and documented series of meetings that enable the mentees to acquire additional substantive and tacit knowledge in technical and non-technical fields from experienced inspectors. The recently implemented programme has supported the integration and enhancement of skills of 14 junior Inspectorate staff.
- 4.541 The Inspectorate performed knowledge transfer sessions, in which knowledge was captured in a codified format and disseminated to peers via the Inspectorate knowledge repository. As of October 2022, the Inspectorate had organised 12 such sessions engaging more than 100 staff members and covering more than 40 topics and 160 specific questions.
- 4.542 Knowledge sharing presentations have offered staff the opportunity to share their insights, recommendations, and lessons learned from on-site verification activities. More than 45 such presentations have been organised by the Inspectorate to date.
- 4.543 The Inspectorate has also implemented several communities of practice focusing on areas such as standards and policy, sampling and analysis, and training and professional development of inspectors, among others.
- 4.544 The Continuous Improvement Platform, a knowledge management tool for capturing and sharing lessons learned from inspections, has also been developed and is being implemented.
- 4.545 The Verification Division has made significant progress in defining divisional knowledge management frameworks and introducing knowledge management activities as a routine business procedure.
- 4.546 As part of the knowledge transfer exercise, a lessons learned page was created on an internal digital depository containing non-confidential information on the destruction programme in Libya, which took place from 2016 to 2022.
- 4.547 The Declarations Branch has created and launched a new knowledge repository known as VERCOM. Since its launch in June 2021, 445 entries have been migrated from the previous archiving tools, and more than 120 new entries have been registered. The VERCOM database aims to retain all communications between the Division and States Parties to capture lessons learned.
- 4.548 The Verification Division continues to carry out knowledge transfer interviews with departing staff members to retain core knowledge and to identify areas of potential gaps in expertise.

- 4.549 The Chemical Demilitarisation Branch has structurally improved the retention of chemical weapons-related knowledge within the Organisation by developing a series of knowledge management tools. Examples include lessons learned, knowledge audits, and knowledge repositories. To support these activities, a knowledge management focal point has been nominated in the Branch and works closely with the Verification Division's Knowledge Management Officer. In addition, 80% of the staff within the Chemical Demilitarisation Branch have acquired knowledge management-related certifications.
- 4.550 The Verification Division continues to maintain explicit knowledge on OCW by maintaining and regularly updating its reference database. New entries have been shared where possible inside the Organisation on a need-to-know basis.

Conclusions and future considerations

- 4.551 In addressing various challenges, including among other things the impact of the COVID-19 pandemic on Secretariat operations and the effects of the tenure policy and attrition of staff, knowledge management has become essential not only for operational activities but also for the medium- and long-term strategic planning in the Organisation.
- 4.552 Knowledge management activities are continually evolving at the OPCW, among other reasons because of the diminishing availability of chemical weapons-related knowledge, less readily available expertise in the relevant areas, and the identification of new areas of knowledge, which are important for achieving the OPCW mission and effectively addressing emerging challenges and contingencies.
- 4.553 The Secretariat has made substantial progress on the issues of knowledge retention, transfer, and identification, including a rigorous methodology and a dedicated framework guided by the Continuous Knowledge Management Strategy. Over the past several years, the Secretariat has built a solid foundation for the mid- and long-term management and retention of knowledge and skills, towards cementing the role of the OPCW as a repository of chemical weapons knowledge.
- 4.554 As the destruction of chemical weapons stockpiles approaches completion, the Secretariat will continue to collect and store explicit and tacit knowledge in a dedicated knowledge repository.
- 4.555 To capitalise on the numerous successful initiatives described in this section, one of the most important future priorities of the Secretariat will be to build on and further implement integrated, cross-divisional knowledge sharing and retention frameworks, enabled by a holistic approach and supported by quality documentation and modern digital tools comprising repositories of knowledge.
- 4.556 The prerequisites for such an objective include continued support by the States Parties in the form of dedicated resources at the Secretariat, with a focus on the core chemical weapons-related knowledge, and the leveraging of the capabilities at the ChemTech Centre as the hub for the skills, knowledge, and expertise of the OPCW. Training and equipment, both strengthened by the ChemTech Centre, are relevant to the Secretariat's operational capabilities. The indoor and outdoor training areas at the ChemTech Centre will allow for the enhancement of training courses through the creation of realistic and relevant scenarios that better match real world situations. As part of the expanded hub for

technology and equipment, technological developments in various inspection-related fields such as protection, detection, decontamination, communication, and medical countermeasures will be monitored and tested for suitability in OPCW operations.

- 4.557 Knowledge management at the OPCW will also benefit from the enhancement of networking and collaboration with the knowledge management teams of other international organisations and intergovernmental bodies, the establishment of synergies, the exchange of methodologies and lessons learned, promoting the OPCW's unique expertise and knowledge management work. As the Organisation shifts emphasis from the verification of chemical weapons destruction to preventing the re-emergence of chemical weapons, soliciting external funding from various funding organisations would allow the Secretariat to pursue ideas for proof-of-concept and prototype stages to identify areas of greatest impact. Project-based funding would allow the Secretariat to pursue small-scale, non-core projects that are not covered by the regular budget. Such funding mechanisms could initiate science and technology activities at the ChemTech Centre and spur on collaborations with relevant international organisations.
- 4.558 The OPCW would also benefit from the implementation of a learning unit under the auspices of knowledge management, to expand its engagement with early and mid-career professionals by creating educational materials and learning resources to be made available to universities, professional associations, and industry, filling a void in WMD counterproliferation in which chemical security does not have the same advocacy as nuclear or biological security. The learning unit could assist in developing knowledge modules assisting in the prevention of the re-emergence of chemical weapons.
- 4.559 One of the key upcoming ways to address the strategic goal of augmenting knowledge management to ensure that the Organisation remains fit for its purpose and successfully mitigates related risks will be the continued development of a knowledge management-informed operational capability. By leveraging the skills and knowledge of its staff, the Secretariat could anticipate trends in chemical threats and develop trainings, procedures, and equipment to enhance operational capabilities to respond to chemical emergencies.

Goods and services

Developments

- 4.560 During the reporting period, the administrative directive on "Procurement of Goods and Services" (AD/FIN/1/Rev.6, dated 13 December 2021) was revised to address the recommendations of the Internal and External Auditors, recommendations from the European Union's Pillar Assessment, and those stemming from the Committee on Contracts, as well as suggestions from the Office of the Legal Adviser. Other changes were made to reflect actual practice or to enhance the clarity of some aspects of the directive.

- 4.561 As recommended by the External Auditor, AD/FIN/1/Rev.6 includes an oversight role on the procurement function by the Committee on Contracts. The directive is aligned with actual practice reflecting best practices in public procurement and is harmonised with the practices of other international organisations.
- 4.562 The ERP system introduced the module that supports contract management and vendor performance management. This module and other procurement-related functionality in the ERP enable more proactive involvement in contract and vendor performance management.

Conclusions and future considerations

- 4.563 The planned upgrade of the ERP system and integration with the business intelligence tool will bring further functionality to support contract and performance management by a wider user base. Improving contract and vendor performance management is essential to achieving the best value for money during the implementation stage of contracts. This area, where much can still be gained, will continue to be a focus of attention in the coming years.
- 4.564 The OPCW will continue to develop its procurement practices (harmonised with other international organisations) and to cooperate with relevant others to benefit from their procurement and contracting practices to achieve best value for money and/or reduce the administrative effort in concluding contracts.
- 4.565 Incorporating sustainability considerations into procurement, including the combatting of human trafficking and forced labour in supply chains as well as incorporating gender responsive procurement, is a high priority among international organisations and the OPCW aims to follow this trend.

Information services

Developments

- 4.566 The Information Services Branch, in line with the wider role played by the Administration Division, has focused on its dual role of simultaneously delivering trusted support to teams across the OPCW, while also driving organisational efficiency through stronger systems, tools, and controls.
- 4.567 At the time of the Fourth Review Conference, OPCW administrative systems were outmoded and in need of replacement. This resulted in a decision to replace the legacy ERP platform, which had already been taken prior to the Fourth Review Conference.
- 4.568 The ERP project was a challenging one. Initial developments of the platform did not fully align with OPCW processes and system control needs, and the initial project launch date did not hold. Further into the project, challenges emerged based upon the length of the project itself: aside from the financial implications of extending the implementation phase, there were tensions that arose from extensive testing and planning against already stretched internal resources.

- 4.569 In 2020, however, the project turned a corner with the approval of a more OPCW-centred implementation approach, and the system was successfully launched in January 2021. The platform, go-live process, and financial statements generated from the new ERP were extensively evaluated by the external audit team, which provided an unqualified audit opinion and multiple recommendations towards even further leveraging and investment in this robust new platform.
- 4.570 Beyond the ERP, the COVID-19 pandemic highlighted that the OPCW's systems were not robust enough to support the Organisation efficiently. Based upon briefings and discussions held within the United Nations Digital and Technology Network, the level of operations that were achievable for the OPCW during the first weeks of the crisis were lower than nearly all equivalent international organisations. Other organisations had the core technical foundations, policies, equipment, and training in place that enabled them to limit exposure and maintain operations in the early phases of the COVID-19 pandemic. The OPCW had none of these things. Some of the key factors that set the OPCW apart from nearly all other United Nations and other international organisations included the:
- (a) OPCW's aging Windows 7/desktop PC-based approach;
 - (b) lack of availability of any effective collaboration platform and critical tools for OPCW staff to communicate online with one another;
 - (c) lack of a platform for hybrid and online statutory meetings with stakeholders;
 - (d) intrinsic challenge of the OPCW's work with protectively marked information on the SNCN, limiting suitability of standard remote access tools; and
 - (e) need for tools to support the requirements to classify, protectively mark, protect, and track information.
- 4.571 Other agencies had at least some of the above elements in place prior to the COVID-19 pandemic; the OPCW for its part had a significant task to adapt to the new needs driven by this context.
- 4.572 Within weeks of the start of the pandemic, the OPCW had rolled out hardened laptops, and an enterprise-grade collaboration platform, both of which were critical to maintaining operational readiness despite the COVID-19 restrictions.
- 4.573 However, significant longer-term challenges remained, and these factors prompted a strategic IT review. In June 2020, the IT Strategic Advisory Committee approved a Digital Resilience Strategic Plan with the high-level goals of making the OPCW's systems:
- (a) Secure: To have an updated and secure IT environment that significantly improves the ability to protect OPCW information assets.
 - (b) Resilient: To provide tools to the OPCW that reduce dependency on physical presence in the building, and that are available 24 hours a day, 7 days a week, 365 days a year with the ability to absorb, defend, and deflect cyberattacks. Additionally, solutions must adhere to common technology platforms, and new software must be evaluated holistically in order to promote a coherent architecture.

- (c) Collaborative: Roll out tools that will allow people to work together in new ways. Systems that make it easy and natural to build, create, and communicate with both colleagues and external stakeholders.

4.574 These principles have served as the foundation to the OPCW's digital transformation, which continues to deliver system improvements in the Organisation at an unprecedented pace. The OPCW has rolled out replacements or major upgrades to nearly every administrative system used in the Organisation. Some key focus areas have been on:

- (a) replacement of the OPCW Intranet (OrgNet);
- (b) the extranet (Catalyst);
- (c) a messaging platform (Exchange Online);
- (d) a collaboration platform (Microsoft 365/SharePoint);
- (e) asset management (HardCat);
- (f) scheduling (Quintiq);
- (g) the Correspondence Management System (CMS);
- (h) official-series documents (OSD);
- (i) hybrid meeting systems (ConnectedViews/Teams/Kudo);
- (j) human resources management (Talentsoft);
- (k) reporting and business analytics (Qlik Sense); and
- (l) identity management (Okta/Azure AD).

4.575 This list, albeit non-exhaustive, demonstrates the scale of the OPCW's digital transformation during the reporting period. The IT strategy was further revamped in July 2021, seeking to build on the lessons learned to enable an agile and flexible modern workplace and to embrace the possibilities of hybrid meeting and working.

Conclusions and future considerations

4.576 The IT strategy has continued to focus on flexible and cost-effective resourcing, with smart usage of subscriber-based or externally managed services wherever feasible. This ensures currency with IT market practices and helps to mitigate the risks of disruption associated with the rotation of key IT staff as a result of the tenure policy.

4.577 The Information Services Branch is currently focused on a complete overhaul of the SCN and supplementary systems. This will be the foundation for a robust secure network, with the flexibility needed to adapt to future requirements.

- 4.578 More generally, the Branch is focused on systems that support organisational resilience, via both increased usage of cloud-based platforms and the upcoming utilisation of the ChemTech Centre as a component of robust application hosting.
- 4.579 A critical challenge is the ongoing support and cost requirements to ensure that the OPCW systems are kept up to date, under support, and secure.

Privileges and immunities of the OPCW

Introduction

- 4.580 Paragraph 50 of Article VIII of the Convention requires that the legal capacity, privileges, and immunities referred to in Article VIII be defined in agreements between the Organisation and States Parties, to be considered and approved by the Conference. The Conference subsequently delegated to the Council the authority to consider and approve such agreements.⁴⁹ These agreements are meant to detail the legal capacity, privileges, and immunities of the Organisation, the delegates of States Parties, the Director-General, and the staff of the Organisation, as are necessary for the independent exercise of their functions in the territory and in any other place under the jurisdiction or control of a State Party.
- 4.581 The privileges and immunities of the Director-General and staff members of the Secretariat during verification activities are already detailed in Part II of Section B of the Verification Annex. However, the Organisation and its Secretariat are engaged in a wide variety of activities extending beyond verification activities, and for which privileges and immunities are to be defined in separate agreements between the Organisation and States Parties.
- 4.582 These activities include but are not limited to the conduct of OPCW events (such as regional meetings, training courses, technical assistance visits, and certain non-routine contingency operations) outside the seat of the Organisation, the transfer of samples taken during inspections for off-site analysis, and the preparation of samples or evaluation of proficiency tests. Other such activities include the conclusion by the Secretariat of a wide variety of contracts for the provision of goods or services with commercial suppliers, which range from the procurement of information and communications technology-related goods and services to the acquisition of specialised equipment necessary to support the safe and effective conduct of verification activities.

Developments

- 4.583 As at 14 October 2022, 56 agreements with individual States Parties on the privileges and immunities of the OPCW had been approved by the Council.⁵⁰ There has been no increase in the number of such agreements since the Fourth Review Conference. Since 1 January 2019, no new States Parties signed privileges and immunities agreements with the OPCW. Two privileges and immunities agreements entered into force during the reporting period.

⁴⁹ C-8/DEC.12 (dated 23 October 2003) entitled “Privileges and Immunities Agreements Between the Organisation for the Prohibition of Chemical Weapons and States Parties.”

⁵⁰ This number does not include the OPCW Headquarters Agreement concluded between the OPCW and the Kingdom of the Netherlands, which was approved by the Conference in decision C-I/DEC.59 (dated 14 May 1997).

- 4.584 The Secretariat notes that out of the 56 agreements approved by the Council, 44 have entered into force, thus giving full legal effect to the provisions contained therein. The number of States Parties that have yet to seek approval from the Council for the conclusion of privileges and immunities agreements with the OPCW remains unchanged from the Fourth Review Conference at 137. However, the Secretariat notes that some of these States Parties are currently engaged in negotiations regarding such agreements and welcomes continued efforts towards their conclusion.
- 4.585 In addition, in 2020 the Secretariat concluded one ad hoc privileges and immunities agreement with a State Party in relation to a technical assistance visit requested by the State Party.

Conclusions and future considerations

- 4.586 The Secretariat notes that the number of OPCW privileges and immunities agreements approved, signed, or concluded has remained largely constant since the Fourth Review Conference. In light of the various activities that the Secretariat is requested to undertake, as part of its obligations under the Convention and per the mandates given by the policy-making organs, or upon request by States Parties, the full implementation of paragraph 50 of Article VIII remains an important goal.
- 4.587 While ad hoc privileges and immunities agreements with States Parties can offer some flexibility in relation to, for instance, the conduct of technical assistance visits by the Secretariat to a State Party, such agreements cannot replace the comprehensive privileges and immunities agreements envisaged by the Convention under paragraph 50 of Article VIII, which States Parties and the Organisation are required to enter into according to the Convention. Progress in this area will further facilitate the full implementation of the Convention and increase the geographical scope of available locations for programmes as well as the number of eligible suppliers of goods and services for the Organisation.

Headquarters Agreement⁵¹

Implementation of the Headquarters Agreement and cooperation with the Host Country

Introduction

- 4.588 Good relations between the OPCW and the Host Country are essential for ensuring the effective and efficient operation of the Organisation and for the assured functionality of diplomatic representation accredited to the Organisation, as well as the well-being of the OPCW staff members. In the period under review, the Organisation has continued to enjoy fluent cooperation with the Host Country and the relevant local authorities.

Developments

- 4.589 Through the Committee on Relations with the Host Country, which was established in accordance with a decision of the Conference (C-11/DEC.9, dated 7 December 2006), the Conference addresses issues arising between the Secretariat and Permanent

⁵¹ The OPCW Headquarters Agreement was approved by the Conference in decision C-I/DEC.59. It was signed on 22 May 1997 and entered into force on 7 June 1997.

Representatives of the States Parties on the one hand, and the Host Country authorities on the other. Since the Fourth Review Conference, the Committee was convoked once (in April 2022) at the request of one State Party, and its report was presented to the Council at its 100th Session.⁵²

Future considerations

- 4.590 The Secretariat is of the view that sustained exchanges with the Host Country through the Committee on Relations with the Host Country as well as through bilateral communications between the Secretariat and the Dutch Ministry of Foreign Affairs promote understanding and cooperation that facilitate the full implementation of the Headquarters Agreement.

5. CONCLUDING REMARKS BY THE DIRECTOR-GENERAL

- 5.1 The year 2022 marked the twenty-fifth anniversary of the entry into force of the Convention and the start of operations of the OPCW. The Organisation is an established authority that enjoys widespread political support. Consequently, it has served as a guardian reinforcing the norm against the use of chemical weapons. It has remained resilient and has adapted whenever necessary. States Parties should build on the successful experiences and lessons learned in the Organisation. In the coming years it will continue to face multifaceted challenges from the security, scientific, technological, and economic considerations within a complex international environment. Some of these, together with associated future priorities, are highlighted in the paragraphs below.

Achieving universality of the Chemical Weapons Convention and the complete elimination of chemical weapons

- 5.2 The total elimination of all declared chemical weapons stockpiles will continue to remain a priority task until all destruction activities are completed. The Secretariat will ensure, by means of strict monitoring, that all destruction activities are carried out.
- 5.3 It is also important that OCW and ACW be destroyed as soon as possible, in accordance with the provisions of the Convention and in a manner that is safe for workers, the public, and the environment.
- 5.4 However, the most important objectives of the Convention cannot be fully realised as long as there are still States not Party to the Convention. In this regard, the OPCW should refocus its efforts to promote the universality of the Convention by engaging the last remaining four States not Party. The experience of the past 10 years demonstrates that accession of new possessor States requires the reallocation of significant resources, supported by additional voluntary financial and in-kind contributions made by States Parties, in order to carry out all activities in line with deadlines mandated by the Convention and the policy-making organs. The Organisation draws on these lessons learned, and the Secretariat maintains preparedness for similar scenarios in the future. This requires not only retaining the competence, skills, and resources needed to provide the necessary verification of the destruction of chemical weapons, but also to render technical advice and capacity-building support to States Parties in the post-accession phase.

⁵² EC-100/HCC/1 C-27/HCC/1 (dated 13 May 2022).

Preventing the re-emergence of chemical weapons

- 5.5 As the destruction of chemical weapons nears completion, the Organisation has increasingly shifted its focus to the prevention of the re-emergence of chemical weapons.
- 5.6 Given the repeated use of chemical weapons in recent years, it is crucial that the Secretariat and States Parties be, at all times, prepared for all sorts of contingencies to effectively respond to and prevent further chemical weapons use. In addition, other priority tasks include enhancing the effectiveness and efficiency of the verification mechanism by adapting it to developments in science and technology and the development of the global chemical industry itself; improving the status of national implementation; promoting peaceful uses of chemicals; and strengthening chemical security efforts.
- 5.7 The comprehensive nature of the challenges ahead, as well as the multiple areas of focus for the Organisation, require appropriate tools. The creation of the ChemTech Centre, a much-needed tool, will assist States Parties in the implementation of their obligations under the Convention. States Parties have demonstrated their commitment through their financial and political support of the ChemTech Centre.
- 5.8 Looking ahead, the ChemTech Centre will bolster the capacity of the OPCW in research, analysis, training, and capacity building. It will also reinforce and strengthen the OPCW's verification and inspection capabilities. The ChemTech Centre will host a variety of capacity-building programmes for States Parties. It will also be used to promote the retention and sharing of knowledge and skills, and will serve as a platform to promote expert dialogue, exchange, and collaboration.

Addressing use and threat of use of chemical weapons

- 5.9 In the past five years, the Organisation has dealt with confirmed cases of chemical weapons use by State and non-State actors. In planning for the future, the OPCW must take into account that new cases of chemical weapons use, both small- and large-scale, may occur. The Secretariat will continue to maintain a high level of preparedness and increase its capacity with new and updated equipment, revised training programmes, and realistic exercise environment and scenarios, together with updated procedures. This enhances the Secretariat's capacity to address such scenarios in order to protect the integrity of the norm against chemical weapons.
- 5.10 The experience gained during the preparation and conduct of previous and ongoing non-routine missions is invaluable in order to adapt to new challenges. It has already allowed the Secretariat to maintain and further enhance its ability to conduct CIs and IAUs, as well as other non-routine missions.
- 5.11 The ChemTech Centre will play a crucial role by further increasing the Secretariat's capacity to transfer knowledge and skills as well as to develop new training courses. This will contribute to increasing the pool of staff able to participate in the conduct of non-routine missions. The Technology and Training Hub of the ChemTech Centre will facilitate training programmes and use of testing equipment relevant for addressing the use of chemical weapons. This will directly contribute to enhancing the Secretariat's capability for conducting non-routine missions. In addition, the ChemTech Centre will help to improve the Secretariat's investigative capacity through the exploration of new fields such as chemical forensics and by contributing to the expansion of the network of the OPCW's designated laboratories.

More effective and efficient verification to strengthen confidence in compliance

- 5.12 The effective and comprehensive verification mechanism is a distinct feature of the Convention. Its effective functioning has been a major achievement of the Organisation. The continued relevance of the verification mechanism is essential to upholding the credibility of the Convention and States Parties' confidence in compliance with its provisions.
- 5.13 Achieving more effective and efficient verification may require some adaptations to the current industry verification mechanism, as established by the Convention and the policy-making organs, by taking account of the relevant scientific advances and the rapid expansion of the global chemical industry since the Convention entered into force.
- 5.14 Currently the Secretariat conducts verification activities in less than 5% of inspectable facilities. This is one factor in the challenge to ensure the continued refinement of the industry verification regime in order to meet the requirements set out in the Convention and by the policy-making organs. Separately, there is scope for considering the role that risk-based elements focusing on chemical plants or products, or on the absence of a State Party's implementing legislation might play in the further evolution of the current verification regime.
- 5.15 In addition, in the coming years it will be increasingly difficult to meet the requirements set out in the Convention and by the policy-making organs in respect of Schedule 2 facilities and OCPFs. It should be borne in mind that these facilities produce sensitive chemicals in considerable quantities.
- 5.16 Other challenges to the application of the industry verification regime encompass new production methodologies. The issue of production of chemicals using bio-mediated processes has been discussed by the SAB and the Industry Cluster for some time, without a consensus reached by States Parties as to its impact on the industry verification regime. Therefore, this topic should remain on the agenda. Another challenge concerns the recent development of the production of chemicals below declaration thresholds at small multi-purpose pharmaceutical facilities, including those producing highly active pharmaceutical ingredients.
- 5.17 One way in which the current industry verification mechanism's implementation is being optimised is through the introduction of new digital tools and procedures to increase the efficiency of inspections and how the resulting data is handled. These efforts are designed to reduce the burden on the Secretariat's resources and States Parties, including their domestic industry. The Secretariat will continue to enhance its analytical capabilities to gather, validate, and evaluate information.
- 5.18 Despite significant progress in the destruction of declared chemical weapons, the Secretariat's expertise in verification of demilitarisation activities continues to be in demand as discoveries of OCW and ACW are made. Any new States Parties that join the Convention could conceivably possess chemical weapons that would need to be destroyed under systematic verification. Furthermore, States Parties are entitled to declare to the OPCW, at their discretion, chemical weapons dumped at sea. This category of chemical weapons remains under scrutiny because of environmental concerns as well as potential economic interests.

- 5.19 In conducting regular assessments of its verification activities, and with a view to improving their effectiveness and efficiency, the Secretariat will continue to require the cooperation and support of the States Parties. The ChemTech Centre will play an important role in this endeavour by empowering States Parties and supporting them in fulfilling their obligations under the Convention. This will directly contribute to reinforcing the implementation of the verification regime.

Addressing the threat posed by non-State actors

- 5.20 The Secretariat has been aware of the increased interest by States Parties in enhancing their capacities and capabilities to effectively address the threat posed by non-State actors. It has been widely recognised that full and comprehensive implementation of all of the Convention's provisions is a major contribution to global anti-terrorism efforts.
- 5.21 It is expected that capacity-building activities aimed at addressing the threat of chemical weapons use by non-State actors will continue to be an important area for the OPCW in the coming years. To ensure efficiency of the Organisation's efforts to tackle the threat of chemical terrorism, it will be essential to nurture a comprehensive approach based on the mandates provided for in Articles II, VI, VII, X, and XI of the Convention. This must translate into an increased focus on the following, among others:
- (a) adopting, implementing, and enforcing comprehensive legislation at the national level, which is the first line of defence against re-emergence, in particular with respect to the acquisition of toxic chemicals by non-State actors for malicious purposes;
 - (b) strengthening national capabilities, particularly those of first responders, emergency management authorities, custom officials, law enforcement officials, and medical personnel to respond to incidents involving chemical warfare agents and toxic industrial chemicals; and
 - (c) capacity-building activities aimed at strengthening national chemical security frameworks throughout the lifecycle of the relevant chemicals.
- 5.22 Future activities in these fields will take advantage of the facilities at the ChemTech Centre. For example, in addition to providing more training opportunities than the previous Equipment Store, the Technology and Training Hub at the ChemTech Centre will become an essential tool for the OPCW to provide training with high-end equipment for experts from the States Parties and the Secretariat.

Increasing the effectiveness of capacity-building programmes

- 5.23 Increasing the effectiveness of capacity-building programmes and broadening their impact is an additional priority task for the future. Attaching more importance to OPCW activities in international cooperation and assistance will be an essential element of supporting the prevention of the re-emergence of chemical weapons. In this respect, the Organisation may consider:
- (a) tailoring activities to States Parties' needs by conducting relevant needs assessments on a broader scale than to date, mobilising resources and designing capacity-building activities to address existing gaps;

- (b) increasing the focus on regional and subregional, and national projects to ensure a targeted approach to capacity-building;
- (c) pursuing a more interconnected approach towards programming across the relevant Articles of the Convention;
- (d) continuing the shift towards a result-based approach to capacity building by developing practical and specialised tools or guidelines;
- (e) encouraging States Parties to increase their ownership of the Convention by making greater efforts to retain and transfer knowledge obtained through OPCW capacity-building activities and by assisting the Secretariat in the evaluation and design of new targeted programmes; and
- (f) leveraging to a greater extent the expertise of external stakeholders, as well as building synergies with other international partners, including relevant international organisations.

Organisation that is fit for purpose and engagement with the widest possible range of stakeholders

- 5.24 In order to address a spectrum of challenges and deliver a variety of missions, the Organisation must be agile, sustainable, and fit for purpose. The OPCW has made some tangible progress in this respect, for example by adopting a biennial budget approach. Still, more can be done.
- 5.25 The main resource of the Secretariat is its staff. Because of the rapidly evolving nature of the challenges and tasks to be accomplished, the staff is expected to undertake relevant diverse activities, which is directly related to the retention of knowledge, skills, and expertise in an Organisation with a rigid tenure policy. Because of the existing administrative regulations, the length of service of professional staff in the Secretariat cannot exceed seven years. Therefore, it is pertinent to give consideration to the possibility of introducing certain flexibility in application of the tenure policy, without compromising on the non-career character of the Organisation. Adjustments are necessary not only to support the retention of relevant skills and expertise, but also to ensure that the OPCW is able to attract the best human resource talents.
- 5.26 Regular and effective engagement with the widest range of stakeholders is also essential to deliver cost-effective solutions, to exchange information on best practices, as well as to build the Secretariat's situational awareness.
- 5.27 External engagement should continue to expand and build on achievements of the past years. Cooperation with other international organisations is important, but it is equally important to increase the scope of engagement with scientific communities, the chemical industry, academia, and a broader range of stakeholders represented by civil society organisations and the public. The ChemTech Centre will play a valuable role in advancing this task by augmenting the Organisation's convening power and ability to mobilise by hosting conferences, workshops, and other activities, and by bringing together experts from States Parties, industry, academia, think tanks, and international organisations.

Future of the Organisation

- 5.28 The objective of the Review Conference, and therefore that of States Parties, is to provide strategic direction for the Organisation for the years to come, and to ensure that it has adequate resources to deliver on all its objectives, including the ultimate goal of achieving a world free from chemical weapons. The Secretariat also plays an important role as a source of technical advice, promoter of ideas, forum for consultations, and custodian of the Convention. This Note and the ideas contained herein are meant as a source of inspiration for the ongoing debates between the States Parties within the framework of the preparatory process for the Fifth Review Conference and during the event itself. I encourage States Parties to participate in this process, which will enhance our mission to contribute to peace and security, leaving a legacy that future generations deserve.

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