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the Fourth Review Conference**

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



WGRC-4/S/1
page 2

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TABLE OF CONTENTS

1.	INTRODUCTION.....	5
2.	COMMENTS BY THE DIRECTOR-GENERAL.....	6
	THE CHEMICAL WEAPONS CONVENTION’S ROLE IN ENHANCING INTERNATIONAL PEACE AND SECURITY AND ITS CONTRIBUTION TO GLOBAL ANTI-TERRORISM EFFORTS	6
	VERIFICATION.....	7
	CAPACITY DEVELOPMENT.....	7
	ENGAGEMENT WITH EXTERNAL PARTNERS.....	9
	ORGANISATIONAL GOVERNANCE	11
	THE FOURTH REVIEW CONFERENCE.....	11
3.	DEVELOPMENTS IN SCIENCE AND TECHNOLOGY	12
4.	OPERATION OF THE RELEVANT PARTS OF THE CHEMICAL WEAPONS CONVENTION SINCE THE THIRD REVIEW CONFERENCE	18
A.	THE ROLE OF THE CHEMICAL WEAPONS CONVENTION IN ENHANCING INTERNATIONAL PEACE AND SECURITY.....	18
B.	THE CONTRIBUTION OF THE CHEMICAL WEAPONS CONVENTION TO GLOBAL ANTI-TERRORISM EFFORTS.....	19
C.	VERIFICATION.....	24
	GENERAL OBLIGATIONS AND DECLARATIONS RELATED THERETO	25
	DESTRUCTION OF CHEMICAL WEAPONS AND DESTRUCTION OR CONVERSION OF CHEMICAL WEAPONS PRODUCTION FACILITIES	27
	OPTIMISING THE VERIFICATION ACTIVITIES OF THE OPCW	33
	ACTIVITIES NOT PROHIBITED UNDER THE CHEMICAL WEAPONS CONVENTION	38
	CONSULTATIONS, COOPERATION, AND FACT FINDING.....	46
	CHALLENGE INSPECTIONS AND INVESTIGATIONS OF ALLEGED USE OF CHEMICAL WEAPONS	49
D.	CAPACITY DEVELOPMENT	51
	NATIONAL IMPLEMENTATION MEASURES.....	52
	ASSISTANCE AND PROTECTION AGAINST CHEMICAL WEAPONS.....	58
	ECONOMIC AND TECHNOLOGICAL DEVELOPMENT	63
E.	ENGAGEMENT WITH EXTERNAL PARTNERS	72
	ENSURING THE UNIVERSALITY OF THE CHEMICAL WEAPONS CONVENTION	72
	COOPERATING WITH OTHER RELEVANT INTERNATIONAL ORGANISATIONS	78
	ENGAGEMENT WITH OTHER EXTERNAL PARTNERS, INCLUDING CHEMICAL INDUSTRY AND OTHER RELEVANT STAKEHOLDERS.....	80
F.	ORGANISATIONAL GOVERNANCE	88
	ARTICLES XII TO XV AND FINAL CLAUSES.....	88
	PROTECTION OF CONFIDENTIAL INFORMATION	88

	GENERAL FUNCTIONING OF THE ORGANISATION FOR THE PROHIBITION OF CHEMICAL WEAPONS	91
5.	CONCLUDING REMARKS BY THE DIRECTOR-GENERAL.....	110
	CHALLENGES AHEAD	110
	MORE EFFECTIVE AND EFFICIENT VERIFICATION TO STRENGTHEN CONFIDENCE IN COMPLIANCE.....	111
	ADVANCING CHEMICAL SAFETY AND SECURITY	112
	CAPACITY DEVELOPMENT TO PREVENT THE HOSTILE USE OF TOXIC CHEMICALS AND TO FOSTER INTERNATIONAL COOPERATION.....	113
	ENHANCING ENGAGEMENT WITH THE WIDEST POSSIBLE RANGE OF STAKEHOLDERS	114
	FUTURE DIRECTION OF THE ORGANISATION	114

1. INTRODUCTION

- 1.1 The Technical Secretariat (hereinafter “the Secretariat”), in accordance with the practice established by the First, Second, and Third Special Sessions of the Conference of the States Parties to Review the Operation of the Chemical Weapons Convention held in 2003, 2008, and 2013 respectively, hereby submits this Note to the Open-Ended Working Group for the Preparation of the Fourth Review Conference. This Note is intended to contribute substantially to the preparatory process for the Fourth Special Session of the Conference of the States Parties to Review the Operation of the Chemical Weapons Convention (hereinafter “the Fourth Review Conference”)¹ in order to assist States Parties in reviewing the operation of the Chemical Weapons Convention (hereinafter “the Convention”) and setting a strategic direction for the Organisation for the Prohibition of Chemical Weapons (OPCW) for the next five years and beyond.
- 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 Third Special Session of the Conference of the States Parties to Review of the Operation of the Chemical Weapons Convention (hereinafter “the Third 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 Third 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, 2017 – 2021” (EC-83/S/1 C-21/S/1, dated 8 April 2016).
- 1.3 Section 4, which covers the operation of the Convention since the Third Review Conference, is structured as follows:
- (a) the role of the Convention in enhancing international peace and security;
 - (b) the Convention’s contribution 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) challenge inspections and investigations of alleged use of chemical weapons;

¹ Unless otherwise specified, the cut-off date of this Note is 31 January 2018; it will be updated in October 2018 to cover the entire review period prior to the Fourth Review Conference.

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

1.4 Finally, Section 5, which contains the 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 November 2018, States Parties will conclude the process of reviewing the operation of the Convention since the Third Review Conference. The period subject to this appraisal has been particularly challenging but also rewarding. Together with the advances in all programme areas, the Organisation successfully carried out high-profile, demanding, and risky missions. The following comments are aimed at summarising the main developments and achievements since the Third Review Conference.

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

2.2 Despite considerable challenges, the Convention has remained one of the most successful instruments of disarmament that completely prohibits an entire category of weapons of mass destruction (WMD), under strict international control. The contributions that the Convention and the OPCW have made to the objectives of global peace and security were recognised in 2013, when the Nobel Peace Prize was awarded to the Organisation for "its extensive efforts to eliminate chemical weapons".

2.3 The threat of chemical terrorism, which materialised during the period under review, required the Organisation to play a more significant and meaningful role in the context of global anti-terrorism efforts. This has been reflected in the substance of the Organisation's ongoing work and the landmark decision addressing the threat posed by the use of chemical weapons by non-State actors (EC-86/DEC.9, dated 13 October 2017), adopted by consensus by the Executive Council (hereinafter "the Council").

Verification

- 2.4 A robust and unique verification regime is one of the key features of the Convention that distinguishes it from other disarmament treaties and contributes to the success of the Organisation. In the period under review, the Secretariat verified the destruction of all of the declared chemical weapons stockpiles in Libya, the Russian Federation, and the Syrian Arab Republic, thereby confirming the destruction of 96% of the worldwide declared stockpile. The United States of America, as the last State Party still to complete destruction of its declared chemical weapons, is on track to meet its planned completion date. This significant achievement towards demilitarisation would not be possible without the cooperation of the States Parties and the dedication of the Secretariat staff, who at times were required to work in extraordinary and challenging circumstances. The progress in the elimination of chemical weapons stockpiles should not, however, be seen as a reason for complacency in the future. The Organisation should serve as a repository of knowledge on issues related to the implementation of the Convention and maintain sound expertise in this area for as long as chemical weapons continue to exist.
- 2.5 In addition to the significant achievements in the destruction of declared chemical weapons stockpiles, progress has continued to be made 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 such weapons to the Secretariat, while ACW also continue to be recovered and excavated. Destruction of both OCW and ACW continues to take place in accordance with the Convention.
- 2.6 The industry verification system, set up pursuant to Article VI of the Convention, continues to uphold the confidence of States Parties that chemicals will not be diverted for purposes prohibited by the Convention. Since the Third Review Conference, the number of Article VI inspections has remained stable. In line with the risk assessments undertaken, industry inspections are conducted in an effective, efficient, and consistent manner in relevant facilities, and with a balanced geographical distribution. The Secretariat has continued to adapt the verification regime to changing risk patterns, including through dialogue with and among States Parties.
- 2.7 During the period under review, the Secretariat had to supplement its regular verification activities with non-routine missions to assist the Syrian Arab Republic in clarifying all of the outstanding issues related to its initial declaration, and to address the allegations of use of toxic chemicals as weapons in that country. The work of the Declaration Assessment Team (DAT) and the OPCW Fact-Finding Mission in Syria (FFM), both of which were established by the Director-General to uphold the object and purpose of the Convention, has demonstrated the Organisation's resilience in addressing unexpected situations and its potential to adapt.

Capacity development

- 2.8 The Organisation's capacity-development activities aim to support States Parties in their efforts to implement the Convention. Following the recommendations of the Third Review Conference, the Secretariat has introduced new approaches and initiatives to adapt its programmes under Articles VII, X, and XI to assist State Parties

in the full and effective implementation of the Convention and to respond to new challenges. These efforts also figure prominently in the endeavours to enhance the participation of States Parties and their sense of ownership in the Convention regime.

National implementation

- 2.9 In order to further advance the implementation of Article VII of the Convention, the Secretariat has developed innovative methods of providing assistance through tailor-made approaches to national implementation. In addition to regular capacity-building activities, country-to-country support has been encouraged. The Mentorship/Partnership Programme for National Authorities of States Parties to the Chemical Weapons Convention (hereinafter the “Mentorship/Partnership Programme”) is one example of such support. The Secretariat also introduced the Influential Visitors Programme to promote the adoption of national implementing legislation. Through the Programme, key national decision makers are invited to attend briefings at OPCW Headquarters.
- 2.10 Since the Third Review Conference there has been steady progress both in the establishment or designation of National Authorities of States Parties to the Convention and in the adoption of legislative and administrative measures by those States. As at 31 July 2017, 190 States Parties had established or designated their National Authority and 153 States Parties had adopted national implementing legislation, of which 122 had legislation covering all the initial measures.

Assistance and protection

- 2.11 Assistance and protection against the use or threat of use of chemical weapons continues to be a key pillar of the Convention. The Secretariat has provided expert advice on the establishment or further development of States Parties’ capacity to respond to an emergency in the event of the use of chemical weapons or the misuse of toxic chemicals, and has maintained a state of readiness to provide assistance to affected States Parties upon request.
- 2.12 The changing security context, including the growing threat of the use chemical weapons by non-State actors, underlined the importance of programmes in the area of assistance and protection as well as the interest of States Parties in such programmes. In response to this demand and in order to respond to the recommendation of the Third Review Conference that the Secretariat further strengthen its capacity to respond promptly to requests for assistance under Article X, the Secretariat established the Rapid Response and Assistance Mission (RRAM). States Parties can now call upon the RRAM to request assistance in case of an incident of alleged use of toxic chemicals by non-State actors.
- 2.13 As at 31 December 2017, 158 States Parties had submitted, at least once, information on their national programmes for protective purposes, in accordance with paragraph 4 of Article X, while 81 States Parties had made offers of assistance to the OPCW as required by paragraph 7 of Article X.

International cooperation

- 2.14 The Secretariat has continued to implement the decision entitled “Components of an Agreed Framework for the Full Implementation of Article XI”, adopted by the Conference of the States Parties (hereinafter “the Conference”) at its Sixteenth Session (C-16/DEC.10, dated 1 December 2011). The decision provides guidance for the full, effective, and non-discriminatory implementation of Article XI. The Secretariat has also continued to identify avenues for further work that would advance its objectives.
- 2.15 In order to better meet the needs of the States Parties, the Secretariat has launched new programmes and initiatives that focus on integrated chemicals management, the enhancement of laboratory capabilities (analytical chemistry courses and twinning of laboratories), and the promotion of chemical knowledge.
- 2.16 From 2013 to 2017, the Secretariat organised 529 activities under Article XI of the Convention, benefiting a total of 2,884 participants from various States Parties. Furthermore, the Secretariat has offered financial sponsorship for 56 scientific fellowships and 70 international conferences. It has also directly funded 88 research projects and co-funded, with the International Foundation for Science, 105 others. From 2013 to 2017, the Secretariat also donated and/or facilitated the transfer of 92 pieces of functional laboratory equipment.

Chemical safety and security

- 2.17 The Third Review Conference encouraged the 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, the Secretariat has conducted relevant activities in support of chemical safety and security as part of its international cooperation efforts. In addition, chemical security was discussed as one of the main themes of the conference on “Chemical Safety and Security in a Technologically Evolving World”, held in May 2016 as part of events to mark the International Day for the Foundation of the OPCW, and during the international workshop on chemical security coordination in September 2017. As a result of the activities undertaken, the Secretariat accumulated knowledge useful for the examination of how to further strengthen its efforts in support of global chemical security. This information has been shared with States Parties and may be used to stimulate discussions at the Fourth Review Conference.

Engagement with external partners

- 2.18 Further progress has been made towards universal adherence to the Convention. Since the Third Review Conference, four countries joined the Convention (Angola, Myanmar, the Syrian Arab Republic, and Somalia). As a result, 192 States Parties are now committed to a world free of chemical weapons. Only four States (the Democratic People’s Republic of Korea, Egypt, Israel, and South Sudan) remain outside the Convention. The Secretariat and States Parties continue to call on the remaining countries to join the Convention.

- 2.19 The Third Review Conference acknowledged the role of education and outreach and encouraged engagement with external partners. In a globalised and complex world, the successful implementation of the Convention should be supported by the development of partnerships with relevant stakeholders from academia, scientific communities, chemical industry, and others, in order to leverage their expertise to address new challenges and maintain the Convention's role as a bulwark against chemical weapons.
- 2.20 In 2015, following the recommendations of the Third Review Conference and the Scientific Advisory Board's Temporary Working Group on Education and Outreach, the Advisory Board on Education and Outreach (ABEO) was established. In 2017, the Board submitted its first report on the role of education and outreach in preventing the re-emergence of chemical weapons. The findings of the ABEO can contribute to the development of a more coherent and strategic approach to the Organisation's education and outreach activities.
- 2.21 Since the Third Review Conference, the Secretariat has undertaken numerous initiatives to increase public understanding of the Organisation and its work. The demand for such efforts increased significantly when the Organisation gained global prominence in 2013 after receiving the Nobel Peace Prize.
- 2.22 The Secretariat has also supported closer links between the Organisation and the chemical industry. The partnership with the chemical industry was strengthened in 2015 when a coordination mechanism was established with the International Council of Chemical Associations (ICCA) through the creation of the OPCW-ICCA Joint Steering Committee, as well as the establishment of the Chemical Industry Coordination Group (CICG). As a result, the Organisation is perceived more as a partner rather than an auditor or regulatory agency.
- 2.23 The Organisation's increasing focus on preventing the re-emergence of chemical weapons has been accompanied by increasing cooperation with other relevant international organisations. In 2017, the Organisation signed a memorandum of understanding with the World Customs Organization (WCO) designed to tighten global controls on the trade in dual-use chemicals. The Organisation has also spearheaded efforts across the United Nations system to improve coordination, particularly through initiating and co-chairing a project within the United Nations Counter-Terrorism Implementation Task Force (CTITF), designed to enhance interagency cooperation and communications following a terrorist attack involving chemical and/or biological weapons. The Organisation has continued its cooperation with the United Nations based on a long-standing relationship agreement.
- 2.24 Interaction between the Organisation and scientific communities has been steadily increasing, as embodied by the signing in 2016 of a memorandum of understanding between the Organisation and the International Union of Pure and Applied Chemistry (IUPAC). 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

- 2.25 Since the Third Review Conference, the Secretariat has continued to apply a zero nominal growth policy to its regular budget, which decreased to EUR 67.2 million in 2018 as compared to EUR 69.8 million in 2013. This reduction is mostly driven by a decrease in activities related to the destruction of chemical weapons. Authorised fixed-term staff levels also declined to a total of 456 posts in 2018, down from 491 in 2013. Despite the reduction in its budget, the OPCW is making efforts to fulfil the goals of the Convention and to achieve results with fewer resources through more efficient and effective management.
- 2.26 During the period under review, voluntary financial contributions received by the Secretariat became an important source of financing for contingency operations and non-routine missions. Voluntary contributions by individual States Parties and international entities such as the European Union (EU) have also been instrumental in providing additional support for its programme activities.
- 2.27 The Secretariat has continued to improve its internal management policies and processes, including through implementation of results-based management (RBM). In addition, the enterprise resource planning (ERP) project was launched in 2015, and is expected to replace a significant portion of the legacy applications in the administrative support domain in 2018. The Secretariat has also recently adopted an information technology strategy, which aims at ensuring that information technology-related solutions will be implemented in a sustainable and outcome-focused manner.

The Fourth Review Conference

- 2.28 The Organisation has achieved considerable progress in advancing the goals of the Convention since the Third Review Conference. This is true for the enhancement of the universality of the Convention, the verified elimination of 96% of worldwide declared chemical weapons, and the elevation of the Organisation's position to play a more significant and meaningful role in the context of global anti-terrorism efforts. However, challenges remain. The threat of chemical terrorism and the possibility of misusing toxic chemicals are drivers for the Organisation's renewed focus on the preventive aspects of its work, especially its priority in preventing the re-emergence of chemical weapons.
- 2.29 Apart from conducting a review in accordance with paragraph 22 of Article VIII of the Convention, the Fourth Review Conference should provide strategic guidance and a long-term vision to support the evolution of the Organisation and its adaptation to a changing and challenging security environment. The outcome of the Review Conference will contribute significantly to ensuring that the OPCW remains fit for purpose and to strengthening its role as an integral part of the international security architecture.
- 2.30 In preparation of the Fourth Review Conference, States Parties may wish to refer, in addition to this Note, to the Medium-Term Plan (EC-83/S/1 C-21/S/1) and to the Note by the Secretariat entitled "The OPCW in 2025: Ensuring a World Free of Chemical Weapons" (S/1252/2015, dated 6 March 2015)—also known as the "Vision Paper". States Parties could also take into account the views expressed at the informal

ambassadorial retreat that took place in October 2015 (S/1316/2015, dated 14 October 2015) and in the Secretariat's presentations given within the framework of the Open-Ended Working Group on the Future Priorities of the OPCW and the Open-Ended Working Group for the Preparation of the Fourth Review Conference.

3. DEVELOPMENTS IN SCIENCE AND TECHNOLOGY

Introduction

- 3.1 Science and technology is crucial to the full and effective implementation of the Convention, with scientific and technological underpinnings found throughout its articles. The OPCW's operating environment is one of increasingly rapid scientific and technological advancement that influences political, social, and economic change. This external environment affects how the OPCW operates both externally and internally. The worldwide diffusion and globalisation of scientific knowledge demands scientific literacy and the ability to bring practical scientific advice into decision making.
- 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 allow him to render specialised advice in areas of science and technology to the Conference, the Council, and States Parties.² Furthermore, in undertaking its verification activities, the OPCW, through the Convention, shall consider measures to make use of advances in science and technology.³ Finally, scientific and technological issues intersect with the work of units across the Secretariat.
- 3.3 Given current security concerns and the rapid pace of technological change, the need for scientific expertise and literacy in chemical disarmament has never been greater. 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 capabilities, and a strong science-policymaker partnership.

Developments since the Third Review Conference

- 3.4 Since the Third Review Conference, the Secretariat has sought to more effectively institutionalise scientific discourse and input into its operations. With reference to the current and highly visible work of the OPCW, scientific advice has been especially important in terms of the support for the Inspectorate, and the OPCW and designated laboratories for contingency operations. Furthermore, in this time of change and transition in the mission of the OPCW, there is recognition that effectively preventing the re-emergence of chemical weapons will require ever greater levels of science-policymaker partnerships and the seizing of opportunities presented by technological change, to enable the OPCW to remain fit for purpose across all of its

² See paragraph 21(h) of Article VIII of the Convention.

³ See paragraph 6 of Article VIII of the Convention.

functional areas. In this regard, robust technical advice from the SAB is vital to the work of the Secretariat and the States Parties.

Twenty-first century science and technology

- 3.5 Scientific development has become increasingly transdisciplinary and convergent. The emergence and practical applications of new and innovative technologies, as well as the repurposing of existing technologies for unanticipated new applications relevant to chemistry, contribute to the rapid pace of change. With advances across the chemical sectors being increasingly enabled by ideas and tools originating from outside the traditional field of chemistry, Convention-relevant developments in science and technology may not be easily recognised if the scientific review process is limited to chemical-specific forums. Furthermore, there is a need for practical considerations on the impact of new developments, as there will always be uncertainty in how a new development will ultimately find use.
- 3.6 Given the enormity of the task to review new chemicals and technologies that can be used in unexpected ways to challenge chemical security and the norms of the Convention, the SAB has placed value on seeking opportunities from technological change. In this way, advice is provided on technologies and scientific methods that provide capabilities to recognise unexpected chemical change and that can be translated in fieldable and laboratory-based tools to aid in the identification of unexpected and/or unknown chemicals and chemical effects. This requires that science should not be considered solely by discipline, but rather by the capabilities that it enables from across disciplinary boundaries. In this regard, the report of the SAB's workshop on emerging technologies (SAB-26/WP.1, dated 21 July 2017) provides pertinent examples and discussion.
- 3.7 In addition to considerations on new technologies, making use of existing scientific knowledge and understanding gaps, and where new developments can mitigate these gaps, remains a priority. Examples include a lack of biomolecular understanding of how sulfur mustard induces blistering (a key aspect of the ability to develop effective countermeasures), though this chemical was first reported in scientific literature nearly 200 years ago, or the difficulties encountered with post-incident identification of chlorine gas exposure.
- 3.8 Assessing developments in science and technology should be forward-looking, maintain awareness of the transdisciplinary nature of technological advancement, and consider both technological discoveries and their driving forces. The SAB has approached its review of developments in science and technology from these perspectives and produced recommendations to the Fourth Review Conference (RC-4/DG.1, dated 30 April 2018).

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 SAB and its temporary working groups (TWGs), and greatly facilitated the OPCW's effort to deepen its outreach into relevant scientific communities.

- 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 Third 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.⁴ Secretariat briefings on science and technology also regularly occur at the annual meetings of the National Authorities and the new diplomat induction workshop. These activities have raised the visibility of the SAB and helped to inform States Parties about the science and technical dimensions of implementation of the Convention.
- 3.11 The Secretariat has made science and technology more visible externally with the launch of a special science and technology section on the OPCW website which provides access to scientific materials and the work of the SAB.⁵

The Scientific Advisory Board

- 3.12 In the performance of his 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 Third Review Conference, the SAB has held eight sessions, the most recent being its Twenty-Seventh Session in March 2018. It has also produced five intersessional reports in response to requests from the Director-General, providing advice on subjects such as medical countermeasures and longer-term treatment for victims of chemical agent exposure,⁶ scheduled chemicals,⁷ sample storage and stability,⁸ and riot control agents.⁹
- 3.14 Three SAB TWGs have produced substantive reports whose recommendations have been discussed with States Parties and, in a number of cases, implemented into the work of the Secretariat. The TWG on the convergence of chemistry and biology, which met from November 2011 to November 2013,¹⁰ considered the transdisciplinary scientific landscape and how its impact on both the chemical and life sciences intersects with the Convention.¹¹ The TWG on education and outreach,

⁴ For further information on the initiative, see www.opcw.org/special-sections/science-technology/science-for-diplomats/.

⁵ See www.opcw.org/special-sections/science-technology/.

⁶ See SAB-21/WP.7 (dated 29 April 2014) and SAB-22/WP.2/Rev.1 (dated 10 June 2015).

⁷ See SAB-23/WP.1 (dated 28 April 2016).

⁸ See SAB-23/WP.2 (dated 25 May 2016).

⁹ See SAB-25/WP.1 (dated 27 March 2017).

¹⁰ See Annex 3 to SAB-17/1 (dated 23 November 2011); Annex 3 to SAB-19/1 (dated 12 September 2012); SAB-20/WP.3 (dated 11 April 2013); and SAB-21/WP.2 (dated 25 November 2013).

¹¹ The final report of the TWG on Convergence of Chemistry and Biology was published as SAB/REP/1/14 (dated 27 June 2014) and is available at: www.opcw.org/fileadmin/OPCW/SAB/en/TWG_Scientific_Advisory_Group_Final_Report.pdf.

which met from November 2012 to September 2014,¹² recommended the formation of the ABEO.¹³ The TWG on verification, which met from March 2013 to May 2015,¹⁴ considered the potential uses of advances in science and technology and methodologies for the verification regime, including Article VI inspections.¹⁵

- 3.15 As of February 2018, the SAB had one single active TWG—on investigative science and technology (which had held one meeting).¹⁶ This TWG was established to undertake an in-depth review of methods and technologies that could be used by OPCW inspectors for investigative work. The TWG has a two-year mandate.
- 3.16 As part of the preparations for its report to the Fourth Review Conference, the SAB held four international workshops, with funding from an EU grant, covering topics such as chemical forensics,¹⁷ mechanisms of toxicity and response to chemical agents,¹⁸ emerging technologies,¹⁹ and trends in chemical production.²⁰ Each workshop was organised with a different partner organisation to maximise reach into appropriate scientific communities.
- 3.17 In drawing on the inputs of the four TWGs, the regular sessions of the SAB, intersessional reports, and the four international workshops, a total of 27 meetings and workshops were held with a combined participation of 747 (comprising 289 individuals from 58 States Parties); 32 reports were produced, and 453 presentations and briefings were received (from 201 individual speakers).
- 3.18 Beyond its annual meetings, the activities of the SAB, such as those carried out by the TWGs, have been supported in part by the Trust Fund for the Scientific Advisory Board. Since establishment of the trust fund in 2006, 15 States Parties (Australia, Chile, the Czech Republic, Iraq, Japan, New Zealand, Nigeria, Qatar, Saint Lucia, Saudi Arabia, Spain, Switzerland, Turkey, the United Kingdom of Great Britain and Northern Ireland, and the United States of America) and the EU have contributed to it. In addition, the EU has supported the meetings of the SAB and its TWGs through decisions of the EU Council adopted in 2009, 2012, and 2015.

¹² See Annex 2 to SAB-18/1 (dated 19 April 2012); SAB-20/WP.1 (dated 25 February 2013); and SAB-21/WP.3 (dated 7 January 2014).

¹³ The final report of the TWG on Education and Outreach was published as SAB/REP/2/14 (dated 25 November 2014) and is available at: www.opcw.org/fileadmin/OPCW/SAB/en/Education_and_Engagement-v2.pdf.

¹⁴ See SAB-20/WP.2* (dated 27 March 2013); SAB-21/WP.1 (dated 25 September 2013); SAB-21/WP.6 (dated 9 April 2014); and SAB-22/WP.1 (dated 1 October 2014).

¹⁵ The final report of the TWG on Verification was published as SAB/REP/1/15 (dated June 2015) and is available at: www.opcw.org/fileadmin/OPCW/SAB/en/Final_Report_of_SAB_TWG_on_Verification_-_as_presented_to_SAB.pdf.

¹⁶ SAB-27/WP.1 (dated 26 February 2018).

¹⁷ SAB-24/WP.1 (dated 14 July 2016).

¹⁸ SAB-24/WP.2 (dated 14 October 2016).

¹⁹ SAB-26/WP.1.

²⁰ SAB-26/WP.2 (dated 19 October 2017).

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, including that of the United Nations Secretary-General's Scientific Advisory Board in 2016. 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 Interaction between the OPCW and scientific communities has been steadily increasing, embodied by the signing in 2016 of a memorandum of understanding between the OPCW and IUPAC. Additionally the IUPAC President has addressed the Conference each year since 2015. Further engagement with IUPAC has includes the Secretariat's participation in the IUPAC Committee on Chemistry Education and the IUPAC Interdivisional Committee on Green Chemistry for Sustainable Development.
- 3.21 In 2015, the Board of Directors of the American Chemical Society (ACS), the world's largest chemical sciences professional society, recognised the OPCW for its contributions to promoting peaceful uses of chemistry.
- 3.22 In addition to IUPAC and the ACS, the Secretariat and the SAB have engaged with professional scientific societies including the Bangladesh Chemical Society, the Brazilian Academy of Sciences, the Brazilian Chemical Society, the European Association for Chemical and Molecular Sciences, the Federation of Asian Chemical Societies, the German Chemical Society, the South African Chemical Institute, and the United States National Academies of Science. These interactions have helped to foster greater interaction within scientific communities and have provided access to broad scientific expertise that has contributed to the SAB's scientific review.
- 3.23 Meanwhile, the work of the OPCW has 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 and science engagement activities. This has been augmented through the science and technology section of the OPCW website and participation in scientific social media.

Science and technology engagement with other security-focused organisations

- 3.24 The Secretariat has also fostered 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 Organisation (CTBTO), The Hague Security Delta, the International Atomic Energy Agency (IAEA), the Organisation for Animal Health (through its Biothreat Reduction Programme), the

Spiez Laboratory (in particular in the CONVERGENCE workshop series), and the United Nations Interregional Crime and Justice Research Institute (UNICRI).

Future considerations

- 3.25 Scientific and technological evolution will continue to move forward at an accelerated pace, with increasing convergence across scientific disciplines and collaboration at both national and international levels. New and innovative funding strategies have also emerged, circumventing the traditional avenues from where scientific research has oversight. This comes through the so-called “do-it-yourself” (DIY) communities, crowdfunding, and citizen science initiatives. It is inevitable that new and enabling technologies will become operational across a broad range of industries and sectors, in particular, for chemical production and analysis and through advances in information and data sciences (which have supply chain and chemical-tracking applications).
- 3.26 Effective implementation of the verification regime will require keeping pace with technological change, and the continuous review of advances in science and technology is necessary. Such review, as currently conducted by the Secretariat and the SAB, would benefit from more active engagement with innovation communities that could provide access to tools and technologies for field evaluation. The SAB has recommended that the Secretariat look at engagement approaches, including through crowdsourcing competitions and scientific collaboration to access such communities (see SAB-26/1 (dated 20 October 2017) and Corr.1 (dated 18 December 2017) and SAB-26/WP.1)).
- 3.27 Particularly relevant areas of technological advancement would include detection, analysis, countermeasures, and protection technologies, as well as familiarity with broader ranges of relevant toxic chemicals, production equipment, and production processes. The Secretariat will increasingly rely on staff with expertise in extracting information from large amounts of data and on information tools for handling such large data sets. It will also need at its disposal augmented, state-of-the-art methods and technologies for sampling and analysis.
- 3.28 The Secretariat (including the OPCW Laboratory in Rijswijk), along with partner designated laboratories, could usefully consider exploring new technologies with a view to augmenting capabilities to implement the Convention in the face of unexpected chemical events (and those involving unscheduled chemicals). Other units across the Secretariat that are involved in chemical security best practices would also benefit from considering technological opportunities for the implementation of effective security measures.
- 3.29 The dynamic nature of world events and the current security environment have brought forward unforeseen challenges. Adequately including scientific and technological consideration into the work of the Organisation will require maintaining and further strengthening science-policymaker discourse through the work of the SAB and Science Policy Adviser. This is the benefit of having operational staff from within the Secretariat available to provide briefings to the SAB to allow it to better contextualise its recommendations. It will also be necessary to augment the

Organisation's networking with relevant scientific communities, international and regional scientific organisations, and science advice mechanisms.

- 3.30 Maintaining and strengthening scientific literacy for implementation of the Convention should be considered a priority.

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

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

- 4.1 The date of 29 April 2017 marked a milestone for the Convention, commemorating 20 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 those two decades, the implementation of the Convention's provisions has moved the world to the verge of being free from chemical weapons. Through the work of the OPCW and the States Parties, the Convention has 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, the vast majority 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-discriminate 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. Inspections of industrial sites and laboratories, as well as a requirement for rules controlling the transfer of dual-use chemicals, give further 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, especially since the Third Review Conference. In this respect, under Article X—Assistance and Protection Against Chemical Weapons—the OPCW has been able to provide, 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. This function has been reinforced in recent years with the establishment of the Rapid Response and Assistance Mission (RRAM).
- 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 challenge inspections. 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 Even though the Convention has been confronted by major challenges over the past 21 years, some of which were not anticipated by the Convention’s drafters, it has proven to be flexible and agile enough to adapt to each new situation. Consequently, as the States Parties and the OPCW face the inevitable and imminent shift in focus towards the prevention of the re-emergence of chemical weapons, the Convention has the capacity under its existing provisions to maintain its relevance and continue to contribute to international peace and security.

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

Introduction

- 4.11 The period under review marked an important phase in the Organisation’s history, as the security landscape continued to unfold in an alarming way. Acts of chemical terrorism became a grim reality in specific States such as Iraq and the Syrian Arab Republic, and continued to threaten the security of the international community, as terrorism has shown to have no geographical boundaries. The challenge of foreign terrorist fighters has heightened this threat and provided the means for its expansion.
- 4.12 Terrorists 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 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 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 sectors of contemporary society, including private sector companies, academia, national governmental institutions, and regional and international actors.
- 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 profile of activities, while oriented mainly towards ensuring the verified destruction of States Parties' declared chemical weapons, must be intently reshaped to bear in mind the aspect of the threat of non-State actors to global chemical security, so as to spare no effort to support, within the purview of the Convention, States Parties wishing to enhance chemical security in their national and regional context.
- 4.16 With the above in mind, the Council's Open-Ended Working Group on Terrorism (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.²¹

Developments

- 4.17 At its Eighty-Sixth Session, the Council adopted decision EC-86/DEC.9 entitled "Addressing the Threat Posed by the Use of Chemical Weapons by Non-State Actors," which underscored the role of Organisation, within its mandate, to prevent and respond to the threat posed by the use of chemical weapons by non-State actors. The decision provided additional impetus on specific matters to guide the Secretariat's activities. The decision also fully recognised the important role of assistance and cooperation in support of capacity building, and of assisting States Parties in investigating and prosecuting non-State actors for crimes related to the Convention or in countering terrorism as it relates to chemical weapons.
- 4.18 In November 2015, the OEWG-T established a sub-working group on non-State actors as a means to support it in fulfilling its mandate, considering that some delegations had expressed an interest in a more technical forum. Throughout the period under review, States Parties exchanged views on a number of issues during the 14 meetings of the OEWG-T and the 11 meetings of its sub-working group. Forty expert guest speakers from international and regional organisations attended these meetings, along with representatives of industry and private sector entities, professors of law, and a number of State Party representatives who shared their national experiences.

²¹ 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).

- 4.19 In 2015, the Secretariat issued three discussion papers related to the topical areas of legal accountability of non-State actors under the Convention,²² measures to prevent the hostile use of toxic chemicals by non-State actors,²³ and ensuring an effective response to the hostile use of toxic chemicals.²⁴ These subjects served to provide a framework within which States Parties and experts could exchange views on how the Organisation could achieve more in those areas by taking a holistic view of the Convention, rather than on reviewing each article in isolation of one another.
- 4.20 With regard to legal accountability, the obligation under Article VII for States Parties to adopt and extend national penal legislation to criminalise all activities prohibited by the Convention that are undertaken by natural and legal persons was viewed as critically important. Further, the adoption by all 192 States Parties of national implementing legislation covering all initial measures required by the Convention, as well as enforcement of such legislation, would have a powerful global effect denying non-State actors impunity when acts of chemical terrorism are committed. Also, States Parties that have already adopted legislation may find it opportune to review the effectiveness of their legislative framework in the light of the threat of chemical terrorism, and to share their experience with other States Parties.
- 4.21 Other key issues raised in the area of legal accountability included the wide range of mutual legal assistance arrangements that States Parties have already implemented and the value of such arrangements to meet their national needs (e.g. to prosecute foreign terrorist fighters), and the complexity of States Parties' obligations stemming from a number of international legal instruments dealing with counterterrorism, including the Convention, which also cover the misuse of conventional explosives, biological, radiological, and nuclear materials.
- 4.22 With regard to measures to prevent the hostile use of toxic chemicals, the Secretariat issued three discussion papers during the reporting period. The Secretariat's Note on "The Contribution of the OPCW to Chemical Safety and Chemical Security" (S/1129/2013, dated 30 September 2013) was in response to States Parties' interest to explore further the conceptual aspects of chemical safety and chemical security, and provided a contemporary review of those concepts in the light of relevant articles of the Convention and of the Secretariat's activities at that time. The Secretariat issued two other papers that explored the potential for the OPCW to enhance its role in supporting global chemical security in a manner that is fully consistent with the Convention,²⁵ and how the measures taken under Article VI would contribute

²² "The Chemical Weapons Convention and Accountability of Non-State Actors – Discussion Paper," (S/1254/2015, dated 9 March 2015).

²³ "Measures to Prevent Hostile Use of Toxic Chemicals by Non-State Actors – Discussion Paper," (S/1291/2015, dated 26 June 2015).

²⁴ "Ensuring an Effective Response to the Hostile Use of a Toxic Chemical – Discussion Paper" (S/1325/2015, dated 6 November 2015).

²⁵ "The OPCW's Role in the Field of Chemical Security – Discussion Paper" (S/1395/2016, dated 13 June 2016).

significantly to preventing non-State actors from accessing toxic chemicals when fully implemented.²⁶

- 4.23 In terms of national preventive measures, the management of chemical security consists of a number of key elements deemed appropriate by a State Party, which could include a framework of laws and regulations, the adoption of voluntary measures by industry, the fostering of a chemical security culture, national lists of chemicals of concern, etc. Also highlighted was the need for chemical security throughout each stage of a chemical's life cycle, e.g. from research and development to manufacturing to toxic waste disposal, including points along the supply chain like transportation and customs control.
- 4.24 In addition to national measures, international cooperation was noted as vital to prevention, as it reinforces the global commitment to a robust chemical security regime. In this regard, the Organisation would be a useful platform to foster such cooperation. Customs agencies were acknowledged as playing a key role in preventing illicit trade of chemicals at a time of growing international trade and evolving threats of terrorism. Such trade, therefore, is a global concern requiring national, regional, and international cooperation.
- 4.25 In terms of ensuring an effective response to the hostile use of toxic chemicals, States Parties exchanged views on the Secretariat's capability to provide, in response to a chemical attack, swift emergency measures of assistance to a State Party upon its request. Such assistance was outlined in the Secretariat's Notes entitled "Establishment of a Rapid Response Assistance Team" (S/1381/2016, dated 10 May 2016) and "Guidelines for States Parties Requesting a Rapid Response and Assistance Mission" (S/1429/2016, dated 17 October 2016).
- 4.26 To improve the coordinated response of the United Nations and other international organisations, the OPCW co-chaired, with the IAEA, a project within the CTITF framework related to the enhancement of interagency interoperability and coordinated communications in the event of an attack involving a chemical or biological weapon. The first two phases of the project, which began in January 2015, resulted in the analysis of the activities and mandates of United Nations and international organisations in response to such an attack, and a table-top exercise involving the RRAM and 14 key organisations. The exercise was held at OPCW Headquarters in January 2017 with a financial contribution from the Government of Canada.
- 4.27 Key issues that related to each of the topical areas of legal accountability, prevention, and response included the importance of different approaches to assistance and capacity building for States Parties and regions in order to achieve the common objectives of the Organisation, and the fundamental and critical importance to the aims of the Convention, particularly in light of the threat of chemical terrorism, of both national and regional laboratory capacity to analyse Convention-related substances and the international network of OPCW designated laboratories.

²⁶ "The Contribution of Article VI to States Parties' Efforts to Counter Terrorism," (S/1387/2016, dated 19 May 2016).

- 4.28 Lastly, the Director-General, as requested by the Council at its Sixtieth Session (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.²⁷ These Notes provide a more comprehensive summary of developments during the period under review. The most recent Note (EC-87/DG.17) also includes a description of the Secretariat's efforts to implement Council decision EC-86/DEC.9.

Conclusions and future considerations

- 4.29 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 the implementation of the Convention, must play a role commensurate with this threat and ensure that the Convention remains a bulwark against the re-emergence of chemical weapons.
- 4.30 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, in concert with the CTITF.
- 4.31 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 integrate the threat of chemical terrorism more fully into its existing capacity-building programmes, particularly those focused on national implementation, chemical security, and assistance and protection, and require the Secretariat to continue to augment its rapid response capabilities.
- 4.32 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.
- 4.33 With regard to the first area of focus, the Secretariat will need to augment its situational awareness and analytical capabilities in regard to the use of chemical weapons by non-State actors, capabilities that will be essential to informing its policy and operational responses in support of States Parties. This would entail building upon the existing Situation Centre, as well as initiating appropriate information-sharing arrangements with other relevant international organisations, exploring the possibility of using the range of information the Organisation holds to build a global threat picture, and developing the Secretariat's internal expertise relevant to States Parties' capacity-building requirements in this area, such as on chemical security measures. The further development of capabilities (both human and technical) supporting the RRAM will also remain a priority.

²⁷ EC-75/DG.3 (dated 12 February 2014); EC-78/DG.6 (dated 5 February 2015); EC-81/DG.7 (dated 9 February 2016); EC-84/DG.14 (dated 8 February 2017); and EC-87/DG.17 (dated 23 February 2018).

- 4.34 With regard to the second area of focus—providing support to States Parties—the changing threat landscape is likely to continue to transform the Organisation’s understanding of national implementation of the Convention against that backdrop. In line with decision EC-86/DEC.9, this will lead to an increased emphasis—in terms of countering chemical terrorism—on the full and effective implementation of Articles VI and VII, and on the nature of the “necessary measures” referred to therein. The need to ensure that both scheduled and non-scheduled toxic chemicals do not fall into the wrong hands will be an important factor driving these responses. In all capacity-building programmes there will also need to be increased emphasis on countering the threat of non-State actors. There will 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.

C. VERIFICATION

- 4.35 The verification-related activities of the Secretariat encompass operational tasks related to the implementation of the verification regime provided for under the Convention. The aim is to achieve the disarmament of chemical weapons and to prevent their re-emergence, as well as to provide technical input concerning implementation of the Convention by States Parties, participation in capacity building and OPCW policy development. This includes overseeing national declarations, on-site inspections both at military installations and chemical industrial facilities, mechanisms for consultation and clarification, as well as provisions for challenge inspections and investigations of alleged use.
- 4.36 Through the years, the Organisation has improved its capacity for more effective and efficient verification activities. New tools and training programmes have been developed both for States Parties and the Organisation, 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.
- 4.37 With the increasing achievement of results in the area of disarmament of declared chemical weapons, preventing their re-emergence will assume greater 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 in part goes beyond the Convention’s verification regime, the reduction of destruction-related verification activities will not obviate the need to retain the Secretariat’s critical knowledge related to chemical weapons. Appropriate knowledge management activities will need to be further developed in general, and more specifically for that purpose.
- 4.38 Since the Third Review Conference, the number of missions carried out in accordance with Council decisions has increased substantially. This trend has had consequences on the work and approach of the Organisation, including with regard to information management, policy, and equipment and working methods, and will likely affect the

future role of the Verification Division and the Organisation's knowledge management practices.

General obligations and declarations related thereto

Introduction

- 4.39 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 facilitate this trust by maintaining awareness of chemicals relevant to the Convention and ensuring that declarations are processed in a manner consistent with the requirements of the Convention.
- 4.40 Since the Third Review Conference, the Secretariat has continued to process declarations from States Parties efficiently, and has initiated the establishment of a contemporary information management system and data analytics tools to facilitate and improve decision-making processes in verification-related activities. It has also placed more emphasis on maintaining its awareness of developments regarding Convention-related chemicals, including riot control agents.

Developments

Declarations from States Parties

- 4.41 Since the Third Review Conference, there has been significant progress regarding the submission of initial declarations. As at 6 April 2018, 191 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.
- 4.42 In the period under review, the Secretariat had received 12 initial declarations under Article III and/or Article VI, including four initial declarations from new States Parties (Angola, Myanmar, Somalia, and the Syrian Arab Republic) that joined the Convention since 2013. However, only two of these 12 States Parties submitted their declarations within 30 days of entry into force of the Convention for them, as required by the Convention.
- 4.43 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. The Syrian initial declaration has been evaluated by the Secretariat as neither accurate nor complete according to the requirements of the Convention and the relevant decisions of the Council. A Declaration Assessment Team (DAT) was established in 2014 to assist the Syrian Arab Republic in clarifying all outstanding issues related to its initial declaration. Further information on the operation of the DAT is provided under the subsection entitled "Consultations, cooperation, and fact finding" (see paragraphs 4.158 to 4.176).

- 4.44 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 abandoned chemical weapons (ACW), bringing the total number of confirmed ACW in China to more than 62,000 items.
- 4.45 States Parties continue to declare new discoveries of old chemical weapons (OCW) and to destroy them in accordance with the requirements of the Convention. Since the Third Review Conference, two additional States Parties have declared the discovery of OCW on their territory. There are currently 17 States Parties that have declared the presence of OCW, amounting to in excess of 141,000 OCW manufactured both before 1925 and between 1925 and 1946; it is expected that this number will continue to rise. Of these 17 State Parties, 12 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.
- 4.46 Since 2013, the Secretariat has increased 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. 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). This information helps States Parties to update their declarations of such agents.

Declarations of industrial facilities

- 4.47 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 five years. Further details are provided under the subsection “Activities not Prohibited Under the Chemical Weapons Convention” (see paragraphs 4.119 to 4.157).

Handling of declarations

- 4.48 In order for States Parties to provide timely, complete, and accurate declarations, the Electronic Declarations for National Authorities (EDNA) tool has been improved and new releases have regularly been made available to States Parties. The most recent version (3.3.1) was released in January 2018, and a new major update of the tool is in progress and expected to be completed in 2019.
- 4.49 Regarding the transmission of declarations, in 2014 a Secure Information Exchange (SIX) system was implemented 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. Currently it is also possible for States Parties to use the system to resolve transfer discrepancies using the Secretariat as an information hub. As at 8 March 2018, 53 States Parties had registered to use the SIX system.
- 4.50 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 related to verification-related activities, an enterprise content management system has been acquired and is being implemented over a multi-year time frame.

- 4.51 In this context, the Verification Information System remains the central repository for verification-related data. The system has been regularly enhanced to improve the processing of data collected from States Parties. These enhancements include the implementation of new modules for the handling of data related to transfer discrepancies, inspection issues, and OCW and ACW, among others.

Conclusions and future considerations

- 4.52 Since the Third Review Conference, significant 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, tools have been made available to States Parties to submit their annual declarations in a timely matter. The EDNA tool is widely used in this regard, and the new SIX system, already adopted by 53 States Parties, allows States Parties to submit declarations in a secure way.
- 4.53 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

- 4.54 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.²⁸ 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

- 4.55 Since the Third Review Conference, possessor States Parties have made significant progress towards the achievement of the total destruction of declared chemical weapons stockpiles. Iraq, Libya, the Russian Federation, and the Syrian Arab Republic completed the destruction of their declared stockpiles of chemical weapons. The United States of America, the only remaining possessor State Party, has

²⁸ Paragraph 9.23 of the report of the Third Review Conference (RC-3/3*, dated 19 April 2013).

continued its efforts to overcome challenges while exploring options to accelerate destruction, with a planned target date of completion in 2023.

- 4.56 As at 28 February 2018, 67,877 metric tonnes (MT), or more than 96% of declared Category 1 chemical weapons, had been destroyed under verification by the Secretariat. In total, 1,811 MT of Category 2 chemical weapons had been declared and were verified as fully destroyed on 23 November 2017. The destruction of Category 3 chemical weapons had been completed previously.
- 4.57 Since the Third Review Conference, the Syrian Arab Republic joined the Convention and declared a stockpile of 1,300 MT of chemical weapons, comprising ready-to-use sulfur mustard and binary weapons to generate nerve agent.
- 4.58 Of the 1,300 tonnes of chemical weapons declared by the Syrian Arab Republic, 300 tonnes of isopropanol were destroyed by Syrian authorities inside the country's territory. The remaining 1,000 MT of chemicals were transported out of the country to be destroyed. Some 600 MT of sulfur mustard and methylphosphonyl difluoride were destroyed by hydrolysis at sea on the vessel Cape Ray, which was provided by the United States of America. A smaller amount of precursor chemicals were destroyed at a government facility in the United Kingdom of Great Britain and Northern Ireland, and the remainder of the chemicals were disposed of at commercial facilities operated by Veolia in the United States and Ekokem in Finland.
- 4.59 All the chemical weapons declared by the Syrian Arab Republic were destroyed by the end of 2014 under OPCW verification. A dedicated trust fund was established to cover the costs of operations that could not be absorbed by the regular budget of the Secretariat, supplemented in large part by various forms of in-kind assistance.
- 4.60 Since the Third Review Conference, the Russian Federation has completed destruction operations at all five remaining chemical weapons destruction facilities (CWDFs) at Kizner, Leonidovka, Maradykovsky, Pochev, and Shchuchye. Kizner, the last CWDF in operation, completed the destruction of Category 1 chemical weapons on 27 September 2017. This marked the completion of the destruction of the Russian Federation's declared chemical weapons stockpile, ahead of its December 2020 deadline.
- 4.61 Libya completed the destruction of its Category 1 chemical weapons in February 2014. Despite numerous challenges, Libya was able to complete the destruction of a portion of its declared stockpile of Category 2 chemicals, specifically isopropanol alcohol and pinacolyl alcohol. In February 2016, Libya informed the Secretariat that it was unable to complete destruction of the remaining stockpiles without international assistance.
- 4.62 Based on Council decisions from July 2016 and United Nations Security Council resolution 2298 (2016), Libya's remaining Category 2 chemicals were transported to Munster, Germany for destruction at the *Gesellschaft zur Entsorgung von chemischen Kampfstoffen und Rüstungsaltslasten mbH* (GEKA mbH). GEKA mbH completed the destruction of all remaining Category 2 chemicals on 20 January 2017. This concluded the destruction of Libya's declared stockpile.

- 4.63 Since the Third Review Conference progress has also been made on the issue of Iraq's declaration of chemical weapons remnants. In February 2017, Iraq submitted its general plan for destruction of chemical weapons remnants stored at the Al Muthana site, which proposed the neutralisation and encapsulation of Bunker 13 at that site. Subsequently, Iraq submitted modifications to the plan for destruction, which allowed it to proceed with the encapsulation of Bunker 41 at the Al Muthana site. Video recordings of the neutralisation and encapsulation of the contents of Bunkers 13 and 41 allowed the Secretariat to confirm that Iraq's chemical weapons remnants had been destroyed.
- 4.64 The United States of America has declared 27,770 MT of Category 1 chemical weapons, of which the Secretariat had verified the destruction of 90.6% as of March 2018. 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 uses explosive destruction technologies to eliminate a portion of the munitions at PCAPP and BGCAPP. Specifically, the Explosive Destruction System (EDS) has been used to destroy problematic munitions at PCAPP in the period 2015 to 2016. The Static Detonation Chamber (SDC) will be used to destroy problematic mustard-filled munitions at the BGCAPP. The United States plans for the destruction of its remaining declared Category 1 chemical weapons to be completed by 2023.
- 4.65 In line with paragraph 12 of Article IV, a number of States Parties have provided assistance for possessor States in their efforts to eliminate their chemical weapons stockpiles. Such assistance was critical to the successful outcome of those destruction operations.

Decision on the final extended deadline of 29 April 2012

- 4.66 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.
- 4.67 Among such measures were visits to possessor States Parties by delegations representing the Council. Since the Third Review Conference, five visits by representatives of the Council have taken place. These included two visits to the Russian Federation in 2014 and 2016 (Kizner CWDF). Three other visits have taken place in the United States of America: at the PCAPP in 2013 and 2015 and at the BGCAPP in 2017. These visits allowed the Council's representatives to address questions or concerns about each State Party's programme for fulfilling its destruction obligations. Pursuant to the same decision, 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 in the future and will include in the visit programme, as appropriate, meetings with government officials.
- 4.68 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

- 4.69 Upon acceding to the Convention, the Syrian Arab Republic declared 12 chemical weapons storage facilities (CWSFs), which increased the total declared number of CWSFs worldwide to 47. Progress in destruction activities has led to a further decrease in the number of CWSFs. Among the 47 declared CWSFs, 45 have been closed and two currently remain subject to verification in the United States of America. Since the Third Review Conference, improvements in stockpile configurations and enhanced cooperation between the Secretariat and possessor States Parties have led to more efficient and cost-saving inspection processes at these facilities.
- 4.70 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

- 4.71 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 reported to the Secretariat. China and Japan jointly submitted to the Council session in March 2017 a destruction plan beyond the year 2016 (EC-84/NAT.6, dated 2 March 2017). 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).
- 4.72 China and Japan have continued to make progress on excavations, recoveries, and destruction operations. As at 31 January 2018, over 62,000 items of ACW have been recovered, of which 49,607 ACW items have been verified as destroyed by the Secretariat.
- 4.73 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 and the static detonation chamber. In addition, to date, mobile destruction facilities have completed their destruction operations in Nanjing, Wuhan, and Shijiazhuang. Works are ongoing in Harbin to set up a mobile destruction facility by the end of 2018.
- 4.74 Pursuant to the decision of the Council (EC-67/DEC.6), three visits by representatives of the Council to the Haerbaling site have taken place since the Third Review Conference (in September 2013, in June 2015, and in June 2017). 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 Seventy-Fourth, Seventy-Ninth, and Eighty-Fifth Sessions.

Old chemical weapons

- 4.75 Information on declarations concerning the new discovery of OCW is provided in paragraph 4.45 above. In relation to OCW, the issue of guidelines to determine the usability of chemical weapons produced between 1925 and 1946 remains outstanding.²⁹ Although the Secretariat has developed its own internal usability criteria which have, since 2000, been applied uniformly and efficiently to all States Parties declaring OCW and/or ACW from the period between 1925 and 1946, these criteria have never been endorsed by the Conference.

Destruction or conversion of chemical weapons production facilities

- 4.76 Since the Third Review Conference, the Syrian Arab Republic declared possession of 27 CWPFs. Consequently, the total number of declared CWPFs worldwide is now 97, in 14 States Parties. Of these, all have been deactivated, with 72 having been destroyed and 23 having been converted for peaceful purposes, in accordance with the Convention. As at 28 February 2018, two facilities declared by the Syrian Arab Republic remain to be destroyed.
- 4.77 All former CWPFs scheduled for destruction or conversion that have been converted or are under conversion are subject to systematic verification by the Secretariat. At present, 23 such facilities in six States Parties are subject to systematic verification.
- 4.78 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, 12 such facilities in three States Parties remain subject to verification. Pursuant to the same decision, the Secretariat has terminated the verification of seven former CWPFs since the Third Review Conference.

Other activities

- 4.79 Since the Third Review Conference, the Secretariat has also conducted technical assistance visits (TAVs) in Cambodia, Iraq, Latvia, Poland, and the United Kingdom of Great Britain and Northern Ireland. The missions in Cambodia, Latvia, and Poland were aimed at assessing items of concern and at providing the requesting States Parties with the necessary information to determine whether declarations were required. The missions in Iraq consisted of providing assistance in investigating the allegations of attacks by terrorists using toxic chemicals. The mission in the United Kingdom was aimed at verifying that State Party's analysis with regard to the reported use of a nerve agent against individuals in Salisbury.

²⁹ Paragraph 5 of Part IV(B) of the Verification Annex.

Conclusions and future considerations

- 4.80 Significant progress has been made towards the destruction of declared chemical weapons stockpiles worldwide; less than 4% 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.
- 4.81 The last destruction facility has been built and is now undergoing systemisation work to ensure that the remaining chemical weapons of the only remaining possessor State Party are destroyed in accordance with its national plan.
- 4.82 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.³⁰
- 4.83 In the last 12 months the Secretariat has carried out five TAVs to four States Parties. This indicates that States Parties recognise the expertise and assistance that the Secretariat can provide via the TAV mechanism. This further highlights the need to further strengthen the management of chemical weapons knowledge within the Secretariat.
- 4.84 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.
- 4.85 The destruction of chemical weapons remains a challenge, especially for States Parties with no experience in destroying chemical weapons 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.

³⁰ Paragraph 23 of the “Report of the Advisory Panel on Future Priorities of the Organisation for the Prohibition of Chemical Weapons” (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.

Optimising the verification activities of the OPCW

Introduction

- 4.86 In addition to verification of the destruction of chemical weapons and CWPFs, the analysis of transfer discrepancies and the verification of Article VI facilities 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 4.53 above), while this subsection describes steps taken to optimise verification activities in a number of key areas.

Developments

Optimisation of information management solutions supporting verification

- 4.87 Tools to assist States Parties in fulfilling their declaration obligations are managed in the Enterprise Content Management (ECM) system and analysed in the Verification Information System (VIS).
- 4.88 To facilitate and enhance management of information and to streamline business processes related to verification activities, the Secretariat has started with the phased implementation of the new ECM system. The first phase is focused on providing initial document and records management as well as workflow functionalities, along with additional functionalities required to support management of information related to non-routine missions. This will be followed by further phases focused on other business areas.
- 4.89 The VIS continues to serve as an important software application tool for the processing of declarations, the planning of inspections, and the analysis of verification data. Significant progress has been made with VIS implementation, and it is now the key business-enabling technology platform supporting verification activities. For instance, all of the annual Article VI declarations of past and anticipated activities are routinely evaluated using the VIS.
- 4.90 The data captured in the ECM system and the VIS, as well as other relevant data sources, will be consolidated in a new data warehouse as part of the advanced data analytics project, which 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 and collected from State Parties will be organised and structured in a suitable way for automated data analysis and reporting purposes.

Optimisation of verification of chemical imports/exports

- 4.91 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.

- 4.92 In December 2013, the Secretariat released a major revision of the Declarations Handbook to bring it in line with the Council and Conference decisions that had been taken since the previous release in 2008, and to improve the guidance for States Parties, particularly under Article VI. This update includes detailed guidance on resolving transfer discrepancies, and incorporates examples of common problems identified in Article VI declarations and recommendations to States Parties on how to avoid such problems, as requested by the Third Review Conference.
- 4.93 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 schedule chemicals and, ultimately, to ensure complete and accurate trade declarations crucial to the resolution of transfer discrepancies.
- 4.94 The first phase of the HS project, which focuses on the 33 most traded scheduled chemicals, was successfully completed and resulted in the inclusion of these 33 chemicals with unique international subheadings (six-digit HS codes) in the 2017 edition of the HS Nomenclature.

Optimisation of verification of destruction of chemical weapons

- 4.95 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.
- 4.96 Currently, in an operational CWDF, the Secretariat verifies the destruction of chemical weapons under the “optimised verification regime”, with a team of approximately five inspectors at each facility. 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 possessor States Parties, is further optimising activities in the field during the systematic quality assurance visits.

Optimisation of verification of industry facilities

- 4.97 Since the Third 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 Third Review Conference, these practices have become quite

regular, with the number of sequential inspections growing from 96 in 2012 (48 pairs of sequential inspections) to 124 in 2018 (62 pairs of sequential inspections).

- 4.98 Since the Third Review Conference, a reduction in the average size of inspection teams for Article VI inspections has become routine. The vast majority of Schedule 2 and Schedule 3 inspections and inspections at other chemical production facilities (OCPFs) are now conducted with teams of two inspectors.
- 4.99 In order to improve the quality of on-site verification reporting and the efficiency of Article VI inspections, since the Third Review Conference the Secretariat has revised the format for preliminary findings and final inspection reports for all Article VI inspections. In addition, with the possibility for States Parties to use the SIX system to not only transmit declarations (see paragraph 4.49) but also to transmit inspection documents, more information security and effectiveness can be achieved. The same can be said for the recent introduction of password-protected memory devices during Article VI inspections.
- 4.100 The Secretariat is of the view that further improving the accuracy and completeness of declarations would contribute to efficient, effective, and consistent implementation of the Convention.
- 4.101 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

- 4.102 Sampling and analysis is one of the verification tools identified in the relevant provisions of the Convention. Since the Third 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.
- 4.103 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 (such as FirstDefender handheld Raman technology) have been used alongside gas chromatography-mass spectrometry (GC-MS) with a view to evaluate if they could be used to reduce the analytical burden on the inspected plant sites.
- 4.104 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 ensure transparency.
- 4.105 Confidence in and knowledge of sampling and analysis techniques and their purpose have increased since the Third Review Conference. This progress will continue to be evaluated to achieve further efficiencies.

Technical support provided by the OPCW Laboratory

- 4.106 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 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.
- 4.107 At the time of the Third Review Conference, the OPCW Laboratory was conducting two proficiency tests for environmental samples per year and had started to conduct yearly exercises for the analysis of biomedical samples. After a total of five exercises, official biomedical proficiency tests started on a yearly basis, leading to the designation of laboratories for the analysis of authentic biomedical samples in a separate designation scheme. Laboratories can be designated for either environmental or biomedical samples, or both.
- 4.108 In 2018, the OPCW Laboratory will be conducting the Third Biomedical Proficiency Test. In parallel, biomedical sampling capabilities were expanded by the introduction of a new biomedical sampling kit in cooperation with the Inspectorate. Since the Third Review Conference, numerous biomedical samples were analysed by designated laboratories, providing essential analytical results to establish that victims had been exposed to chemical warfare agents.
- 4.109 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

has begun to introduce trace samples into proficiency tests to allow participating laboratories to test and enhance their skills and capabilities in analysing relevant chemicals at very low concentrations.

- 4.110 The threat posed by toxins—toxic chemicals produced by living organisms—remains high. Therefore, the OPCW Laboratory, with financial support from the EU, has conducted a number of exercises on the analysis of ricin and related protein toxins, and plans to continue these exercises while also focusing on the Schedule 1 toxin saxitoxin.
- 4.111 The OPCW Central Analytical Database (OCAD) continues to be released on a yearly basis with an ever-increasing quantity of data covering a continuously growing number of chemicals. Up to 2017, only scheduled chemicals, some analytical derivatives of scheduled chemicals, and chemicals relevant for instrument performance tests were allowed in the OCAD. The expansion of the OCAD to also include data for non-scheduled chemicals relevant to the Convention was repeatedly requested by the SAB at Review Conferences. In accordance with a decision by the Council at its Eighty-Sixth Session (EC-86/DEC.10, dated 13 October 2017), such chemicals can now be added to the database, though their use in inspections is optional and requires the consent by the inspected State Party. This does, however, significantly enhance the capabilities of on-site analysis during investigations of alleged use and also helps to avoid false-positive identifications during inspections in industry.
- 4.112 The development of analytical instruments continues at a high 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 Third Review Conference include, among others, a nuclear magnetic resonance spectrometer and a high-resolution Orbitrap mass spectrometer. The OPCW Laboratory also expanded its capability to synthesise reference chemicals.

Conclusions and future considerations

- 4.113 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.
- 4.114 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 regular inspection activities (i.e., physical inspection of the facilities and a review of records), should become more and more routine.

- 4.115 In the view of the Secretariat, the number of sampling and analysis inspections since the Third Review Conference has provided a balance between the verification requirements of the Convention and the availability of resources within the Secretariat. 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.
- 4.116 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

- 4.117 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. Such activities have been considered in the planning and design process for a new laboratory building and should be implemented once the required infrastructure is available (see paragraphs 4.430 to 4.432 below).
- 4.118 At the same time, the OPCW Laboratory, together with the Analytical Chemistry Cell in 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

- 4.119 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

4.120 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.³¹ In this context, the Third Review Conference encouraged the Secretariat to provide appropriate assistance, upon request, to any State Party with a view to meeting its declaration obligations.³²

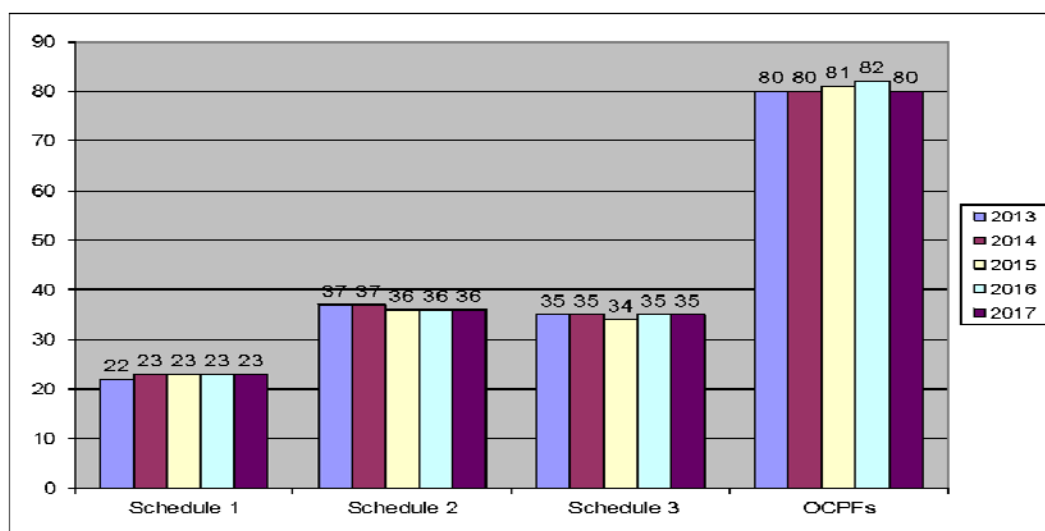
Status of submissions

4.121 There has been a significant improvement in the number and percentage of on-time submissions of annual declaration of past activities (ADPAs) since the Third Review Conference, which was maintained for all subsequent ADPAs up to and including ADPA 2016.

4.122 For ADPA 2016, 76 (83%) out of 92 States Parties submitted their ADPA on time, compared to 56 (60%) out of 93 for ADPA 2012. The highest number and percentage of declarations submitted on time since 1997 was ADPA 2015, for which 79 (85%) out of 93 States Parties submitted on time.

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

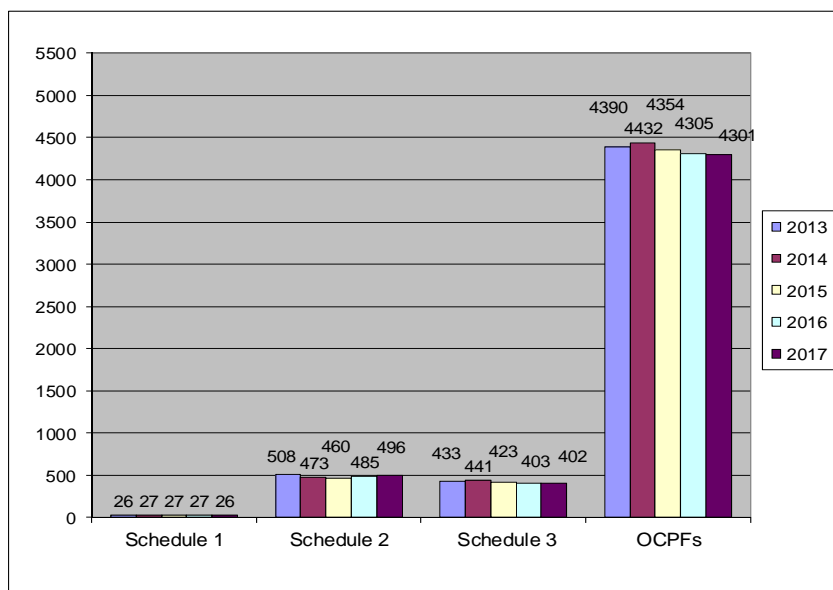
CHART 1: NUMBER OF STATES PARTIES DECLARING ARTICLE VI FACILITIES



4.124 The number of declared Schedule 1 and Schedule 2 facilities has remained relatively stable in the period since the Third Review Conference. The number of Schedule 3 plant sites and OCPFs declared in 2017 decreased slightly compared to the number declared in 2013, by 7% and 2%, respectively (see Chart 2 below).

³¹ Paragraphs 9.72 and 9.83 of RC-3/3*.
³² Subparagraph 9.79 (a) of RC3/3*.

CHART 2: NUMBER OF DECLARED PLANT SITES



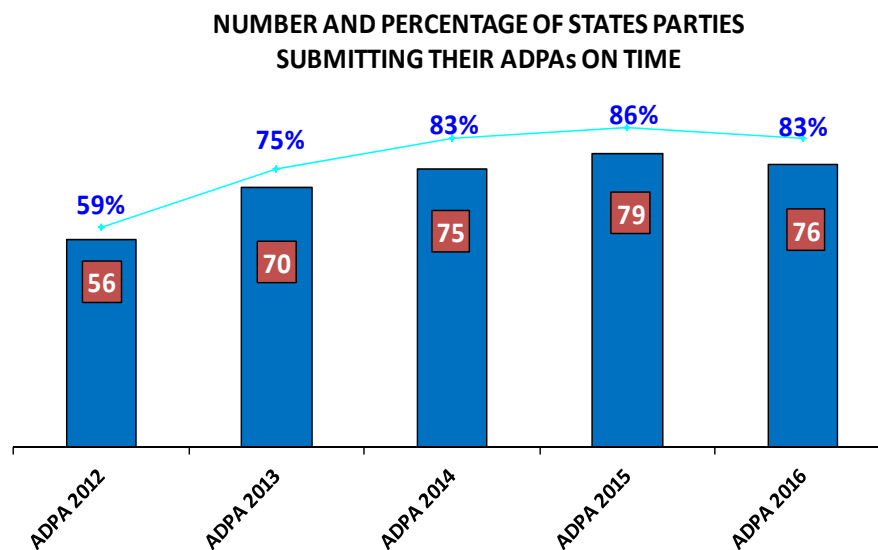
Late submissions

- 4.125 The importance of the timely submission of initial and annual declarations was stressed by the Third Review Conference,³³ since late declarations have a significant impact on verification activities.
- 4.126 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, the Secretariat has prepared regular status reports to the Council on the decision's implementation.³⁴
- 4.127 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. This resulted in a measurable increase in the number of States Parties submitting their declarations on time (see Chart 3 below).

³³ Paragraph 9.83 of RC-3/3*.

³⁴ EC-73/DG.6 (dated 24 June 2013); EC-75/DG.1 (dated 15 January 2014); EC-76/DG.10* (dated 11 June 2014); EC-78/DG.4 (dated 12 January 2015); EC-79/DG.13 (dated 11 June 2015); EC-81/DG.4 (dated 14 January 2016); EC-82/DG.14 (dated 13 June 2016); EC-84/DG.8 (dated 17 January 2017); and EC-85/DG.17 (dated 16 June 2017).

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



Assistance to States Parties

- 4.128 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 engage with the States Parties to enhance their capacity in declaring their facilities in an accurate way.
- 4.129 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.³⁵ An updated version of the Handbook on Chemicals, which was released in 2017 and supersedes the previous 2014 version, includes the updated HS codes that have been in effect since 1 January 2017. Furthermore, the Secretariat has made available the “OPCW Online Scheduled Chemicals Database”, which is more exhaustive and contains information on over 32,000 scheduled chemicals.

Number of inspections

- 4.130 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

³⁵ Paragraph 9.86 of RC-3/3*.

(C-17/DEC.4, dated 27 November 2012), and 241 for 2014 (C-18/DEC.6, dated 4 December 2013).

4.131 As a result of these decisions, the last time the total number of inspections was increased was in 2014, and that number has remained stable since then. Among the four categories of Article VI inspections, the number of Schedule 1 and Schedule 2 inspections has remained stable. In 2014, the number of Schedule 3 inspections was decreased and the number of OCPF inspections was increased (see Table 1 below).

TABLE 1: NUMBER OF INSPECTIONS – 2013 TO 2017

Year	Schedule 1	Schedule 2	Schedule 3	OCPF	TOTAL
2013	11	42	29	147	229
2014	11	42	19	169	241
2015	11	42	19	169	241
2016	11	42	19	169	241
2017	11	42	19	169	241

Schedule 1 chemicals and related facilities

4.132 There are currently 26 declared and inspectable Schedule 1 facilities in 23 States Parties that are subject to systematic verification, including eight single small-scale facilities, 17 other facilities for protective purposes, and one other facility for research, medical, or pharmaceutical purposes.

4.133 Of the 303 Schedule 1 inspections conducted since the entry into force of the Convention, the 60 (11 per year) that have taken place since the Third Review Conference have reported no uncertainties as specified in the Verification Annex to the Convention (hereinafter “the Verification Annex”). Between the Third Review Conference and 31 December 2017, two inspections recorded issues requiring further attention from the inspected State Party and the Secretariat.

4.134 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, in 2017 and 2018, the Secretariat used the FirstDefender (Raman technology) as a tool to verify inventories during eight Schedule 1 inspections.

Schedule 2 chemicals and related facilities

4.135 The number of inspectable Schedule 2 plant sites has increased by 20% since the Third Review Conference. There were 169 such sites in 22 States Parties in December 2012, and 203 in 20 States Parties in December 2017. Eight States Parties declared 10 or more inspectable plant sites; these States Parties represent 86% of all Schedule 2 inspectable plant sites.

4.136 Among the 246 Schedule 2 inspections conducted since the Third Review Conference, no uncertainties as specified in the Verification Annex have been

reported. Thirty-five of these inspections (up to 31 December 2017) have recorded issues requiring further attention from the inspected State Party and the Secretariat.

- 4.137 From 2006, sampling and analysis has been incorporated each year as a routine verification tool during 10 Schedule 2 inspections (on average). From 2012, sampling and analysis has been incorporated successfully into two Schedule 3 or OCPF inspections per year. Since entry into force of the Convention, sampling and analysis activities based on GC-MS have been conducted at 113 plant sites. Through these inspections, effective verification has been achieved and the Secretariat has gained valuable experience in effectively conducting sampling and analysis under a broad range of conditions.
- 4.138 Since the Third Review Conference, the Secretariat has routinely used FirstDefender (Raman technology) as an additional analytical tool alongside GC-MS. Some preliminary discussions have been held as to whether it would be appropriate to use this tool independently of GC-MS to reduce the cost to the Secretariat of sampling and analysis inspections, as well as to reduce the burden of these activities to the inspected plant site and the National Authority. More work is needed in this regard before this could be done routinely.

Schedule 3 chemicals and related facilities

- 4.139 Since entry into force of the Convention, the OPCW has conducted 489 inspections at Schedule 3 facilities, including 119 since the time of the Third Review Conference. 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.
- 4.140 No uncertainties as specified in the Verification Annex have been reported for Schedule 3 inspections. As at 31 December 2017, 13 inspections had recorded issues requiring further attention from the inspected State Party and the Secretariat. In addition, discrepancies between declared and verified information have been identified in a significant number of inspections. These discrepancies were 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.
- 4.141 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.
- 4.142 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.
- 4.143 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 30% at the time of the Third Review Conference, that figure has now risen to 47%.

Other chemical production facilities

- 4.144 Since entry into force of the Convention, the Organisation has conducted a total of 2,141 OCPF inspections. Of these, 961 have taken place since the Third Review Conference. Up to 31 December 2017, 33 of these plant sites were found not to be inspectable for various reasons. No uncertainties as specified in the Verification Annex have been reported. Fifteen of these inspections recorded issues requiring further attention from the inspected State Party and the Secretariat.
- 4.145 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.
- 4.146 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.

Conclusions and future considerations

- 4.147 Article VI inspections have been conducted at more than 2,000 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.
- 4.148 The OCPF regime covers facilities 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.
- 4.149 The current OCPF site selection methodology has been in effect since January 2012. 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.
- 4.150 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.
- 4.151 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.

- 4.152 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 EDNA, the Declarations Handbook, and other tools, as well as the development of e-learning modules.
- 4.153 The Director-General has 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;
 - (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.
- 4.154 Several of these topics have been discussed at great length within the Industry Cluster and 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. For example, the appropriate consideration of biologically mediated production processes and the production of mixtures of discrete organic chemicals appear to be topics where decisions could be possible.
- 4.155 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 needs to be considered.
- 4.156 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.
- 4.157 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.

Consultations, cooperation, and fact finding

Bilateral consultations

- 4.158 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 Council

- 4.159 Since the 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.

Fact-finding mission

- 4.160 The OPCW Fact-Finding Mission in Syria (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.
- 4.161 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) and further by United Nations Security Council resolution 2209 (2015). Financial and in-kind contributions have been provided by over 30 States Parties and the EU to support all OPCW activities related to the Syrian Arab Republic.
- 4.162 In both EC-M-48/DEC.1 and EC-M-50/DEC.1, the Council supported the FFM's scope of work by "[e]xpressing support for the continuation of the work of the Fact-Finding Mission, in particular studying all available information relating to allegations of use of chemical weapons in Syria 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 Fact-Finding Mission does not include the question of attributing responsibility for [the] alleged use".
- 4.163 As at 29 March 2018, the FFM activities since April 2014 had included 34 deployments investigating 74 separate incidents. The Mission had interviewed 376 individuals and collected 257 samples. Eight findings reports were issued to States Parties. The FFM reported 13 events of likely or confirmed use of chemical weapon.

- 4.164 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 FFM activities as part of his monthly reports (in accordance with EC-M-33/DEC.1, dated 27 September 2013), and to the United Nations Security Council pursuant to resolution 2118 (2013). The Secretariat has also provided detailed reports on FFM findings to States Parties.

Declaration Assessment Team

Introduction

- 4.165 Following its accession to the Convention on 14 September 2013,³⁶ 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.
- 4.166 The Secretariat has undertaken a continuous review of all declarations and other information provided by the Syrian Arab Republic in order to ensure that all the declaration-related requirements of the Convention are met. As a result of this process, the Secretariat identified a number of gaps, discrepancies, and inconsistencies, which were raised with the National Authority of the Syrian Arab Republic.

Developments

- 4.167 In order to facilitate the process of engagement with the Syrian Arab Republic on outstanding issues with respect to its initial declaration and subsequent amendments, the Director-General established, in April 2014, a mixed team of technical experts from the Secretariat known as the Declaration Assessment Team (DAT).
- 4.168 At the request of the Director-General, the Syrian Arab Republic agreed to engage in consultations with the DAT, and the first round of technical consultations took place from 22 to 28 April 2014. The procedures and methods of work followed by the DAT have been in conformity with standard work instructions and capabilities available within the Secretariat.
- 4.169 Considering the absence of documentation supporting the Syrian Arab Republic's declaration, additional transparency measures were agreed between the Secretariat and the Syrian Arab Republic, including visits to sites/locations of interest as well as written statements and interviews with the relevant individuals associated with Syrian chemical weapons programme.
- 4.170 Between April 2014 and 29 March 2018, the DAT activities included, inter alia, 19 rounds of consultations³⁷ and more than 100 technical meetings with the Syrian

³⁶ The Convention entered into force for the Syrian Arab Republic on 14 October 2013.

³⁷ 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.

National Authority, 48 interviews with individuals linked to the Syrian chemical weapons programme, and 32 visits to chemical weapons-related sites during which 121 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.

4.171 The work of the DAT was endorsed by the Council, in particular at its Seventy-Sixth (EC-76/6, dated 11 July 2014) and Eightieth (EC-80/4*, dated 8 October 2015) Sessions. The Council also adopted the following two decisions that relate to the activities of the DAT:

- (a) In decision EC-81/DEC.4, the Council expressed its concern regarding the conclusions by the Director-General in the “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 to meet with officials of the Syrian Arab Republic and, in parallel with the efforts of the DAT, to address the unresolved issues, including the gaps, inconsistencies, and discrepancies, and to underscore the importance of fully verifying that the declaration and related submissions of the Syrian Arab Republic were accurate and complete. 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.
- (b) In paragraph 6 of decision EC-83/DEC.5 (dated 11 November 2016), the Council demanded 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”.

4.172 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 two new chemical agents; information about the repurposing into conventional munitions of a large number of previously undeclared chemical weapons munitions (aerial bombs); information regarding destruction, use in testing activities and/or spillage of large quantities of chemical agents and precursors; amendments correcting quantities of certain declared chemical agents and precursors; and other supplementary information regarding various other aspects of the chemical weapons programme.

4.173 Notwithstanding these outcomes, some gaps, discrepancies, and inconsistencies still remain in the Syrian Article III declaration. A total of 22 outstanding issues have been grouped into three clusters:

- (a) the role of the Scientific Studies and Research Centre (SSRC) in the Syrian chemical weapons programme;
- (b) the results of analyses of samples collected at multiple locations in the Syrian Arab Republic (15 issues), including indicators of six previously undeclared chemical warfare agents (two 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; and
- (c) other chemical weapons-related activities (six issues), 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.

Conclusions and future recommendations

- 4.174 In keeping with Council decisions EC-81/DEC.4 and EC-83/DEC.5, the Director-General has continued to report to the Council on unresolved issues regarding the Syrian declaration and related submissions. The Director-General has also continued to report to the Council on the work of DAT as part of his monthly reports entitled “Progress in the Elimination of the Syrian Chemical Weapons Programme”, in accordance with EC-M-33/DEC.1, and to the United Nations Security Council pursuant to resolution 2118 (2013). The DAT has also continued to provide its technical reports to the States Parties.
- 4.175 While the Syrian Arab Republic has remained engaged with the Secretariat in its efforts to clarify outstanding issues, the nature and substance of information provided thus far does not enable a resolution of the identified gaps, inconsistencies, and discrepancies in the declaration of the Syrian Arab Republic. The Secretariat is therefore still unable to state that the Syrian Arab Republic has submitted a declaration that can be considered accurate and complete in accordance with the Convention and Council decision EC-M-33/DEC.1.
- 4.176 The Secretariat will continue to assist the Syrian authorities with the full implementation of its declaration obligations under the Convention and Council decision EC-M-33/DEC.1, and to report the outcomes of its engagements to States Parties.

Challenge inspections and investigations of alleged use of chemical weapons

Introduction

- 4.177 Challenge inspections (CI) and investigations of alleged use (IAU) are key elements of the Convention, which are aimed at mitigating the risk of activities prohibited by it. CI and IAU 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

- 4.178 Since the entry into force of the Convention, no CI or IAU has been requested by a State Party.
- 4.179 In response to the recommendations from the Third Review Conference and as a result of internal measures taken by the Secretariat, additional processes were initiated to increase preparedness to successfully conduct a CI or IAU and to streamline related processes.
- 4.180 Measures taken by the Secretariat include:
- (a) developing the skills of a relatively new workforce (52% of inspectors have less than two years of experience within the OPCW);
 - (b) creating and enhancing a Capacity-Building and Contingency-Planning Cell (CBCP) and an extended group of trained inspectors known as the Contingency Operations Core Group; and
 - (c) enhancing the rapid deployment concept by selecting and training Secretariat staff outside of the CBCP to be prepared and trained to deploy and conduct a CI or IAU at very short notice.
- 4.181 The rapid deployment concept was further supported by adopting a “leaner team” approach, based on lessons learned from recent contingency operations. This approach takes accumulated competencies from the Secretariat and allows for a smaller and more adaptable team to be created and deployed, with less impact on routine missions.
- 4.182 The many 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 TAVs, have further supplemented the CI and IAU preparedness efforts of the Secretariat.
- 4.183 The Secretariat also introduced new training courses to further improve the ability of the Inspectorate to successfully conduct non-routine missions, including CIs and IAUs. These 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. Additionally, supplemental internal and interagency table-top exercises were conducted.
- 4.184 In order to properly manage the command and control elements of a CI or IAU, the Secretariat developed a Mission Support Group, alongside other operational working groups that meet on a regular basis to work through and pursue solutions to complex operational problems. The Secretariat also streamlined and supplemented the former Operations Centre with new technology and appropriate staffing to create a Situation Centre capable of managing CI and IAU missions along with the routine and other non-routine missions taking place at any given moment. With the enhanced capabilities of the Situation Centre, the Organisation now has a nascent capability to scan and track the alleged use of chemicals as weapons worldwide.

Conclusions and future recommendations

- 4.185 The Secretariat will continue to be committed to improving its preparedness to conduct a CI, IAU, or other non-routine missions 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;
 - (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;
 - (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 CI, IAU, and other non-routine missions in the future.
- 4.186 Consideration should be given, through the continued development of the Situation Centre and associated analytical capabilities, to further developing the Secretariat's ability to better understand the global threat environment as it pertains to the use of chemicals as weapons. This capability 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 of non-State actors.

D. CAPACITY DEVELOPMENT

- 4.187 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, "[p]rovide technical assistance and technical evaluation to States Parties in the implementation of the provisions of this Convention, including evaluation of scheduled and unscheduled chemicals".
- 4.188 In terms of international cooperation and assistance, the Secretariat continued to serve as an international provider of and platform for specialised and technical assistance. The Secretariat's wide range of programmes and projects were aimed at contributing to enhancing States Parties' capacity in three programmatic areas: national implementation (Article VII), assistance and protection against threats involving toxic chemicals (Article X), and promotion of international cooperation among States Parties in the responsible and beneficial uses of chemistry for peaceful purposes to enhance the economic and technological development of the States Parties (Article XI).

- 4.189 During the period under review, the Secretariat introduced new approaches and initiatives to adapt its capacity-building programmes to assist States Parties in implementing the Convention in response to an evolving security environment. Such approaches and initiatives continued to be guided by the principles of engaging relevant stakeholders, ensuring sustainability, and adopting a more results-oriented approach.
- 4.190 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 result achieved.
- 4.191 The Secretariat continued to implement the OPCW Programme to Strengthen Cooperation with Africa on the Chemical Weapons Convention (hereinafter "the Africa Programme"). During the period under review, the Secretariat completed the third phase of the Programme in 2016 and designed and launched, in close consultation and coordination with the African States Parties, the fourth phase covering the period 2017 to 2019. This phase set seven objectives covering support for implementation, including legislative support, development of national/regional protective capacity, including regional response capacity, and the promotion of the peaceful use of chemistry.
- 4.192 Since the Third Review Conference significant progress has been made in all three of the aforementioned programmatic areas. The overview below describes the developments in each area. It is noted that since the programming methodology still remains largely event-focused and activity-driven, there remains a need to improve the monitoring and evaluation of such events and activities to enhance their actual impact on the ground.

National implementation measures

Introduction

- 4.193 The provisions of Article VII contain general obligations for the national implementation of the Convention. In order 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

4.194 In the period since the Third Review Conference, four additional States Parties have established or designated their National Authority, leaving only two States Parties that have not fulfilled this requirement. Seventeen 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, and have provided copies of the texts of adopted measures.

TABLE 2: STATUS OF IMPLEMENTATION OF ARTICLE VII OBLIGATIONS

Obligations	As at 31 December 2012 (188 States Parties)	As at 31 July 2017 (192 States Parties)	Progress
National Authority designated or established	186 (99%)	190 (99%)	+4
Article VII (5) submission received	143 (76%)	160 (83%)	+17
Text of adopted measures provided	125 (66%)	142 (74%)	+17
Legislation covers all key areas/initial measures	90 (48%)	122 (64%)	+32

4.195 In addition, since the Third Review Conference, 32 States Parties informed the Secretariat that they had adopted legislation covering some of the initial measures. The Secretariat continues to work and liaise with the remaining 70 States Parties that have yet to adopt comprehensive implementing legislation. As a result of various legislative assistance programmes, 56 out of these 70 States Parties have developed draft implementing legislation, three of which have submitted their draft bills before their respective parliaments.

Implementation support programmes

4.196 Following the recommendations of the Third Review Conference, the Secretariat continued to develop its implementation support programmes and tools in line with the comprehensive approach to national implementation. The portfolio of legislative assistance programmes has been considerably expanded and further adapted to the needs and requirements of States Parties, and includes:

- (a) the Internship Programme for Legal Drafters and National Authority Representatives, intended to provide assistance to States Parties in the development of draft national implementing legislation that is in line with the provisions of the Convention, meets the requirements of their respective national legislative bodies, and is suitable for submission to their parliament. Since the Third Review Conference, 26 States Parties have participated in the Programme;
- (b) subregional legal workshops, aimed at providing support to States Parties in the development of their national implementing legislation. In addition, the

Secretariat reviews, upon request, draft implementing legislation and provides comments thereon;

- (c) the Influential Visitors Programme, which assists States Parties in promoting the adoption of national implementing legislation by inviting for briefings at OPCW Headquarters key national decision makers from States Parties that are at an advanced stage of the adoption process, so they can serve as advocates for implementation of the Convention in their countries upon their return home. Since its launch in 2015, three sessions of the Programme have been organised, with the first resulting in adoption by Uganda of its implementing legislation;
- (d) stakeholder forums on the adoption of national implementing legislation, aimed as sensitising various national stakeholders about the importance of adopting national implementing legislation. Since 2016, four forums have been held, with the participation of 29 States Parties from Africa, Asia, and Latin America and the Caribbean, and resulted in each State Party developing detailed road maps for the adoption of implementing legislation, including specific actions to be undertaken within indicative timelines; and
- (e) TAVs, a number of which have been carried out by the Secretariat since 2013. The provision of support for national events has proven to be very effective in raising the awareness of national stakeholders on the importance of Convention implementation and has led to tangible results such as the adoption of national legislation, the submission of initial declarations, and the establishment of National Authorities.

4.197 The Secretariat has continued to provide assistance to the National Authorities to ensure effective cooperation among them and to develop, enhance, and maintain their capacity to effectively implement the Convention through the following programmes:

- (a) annual and regional meetings of National Authorities, which provide an opportunity for States Parties to receive updates on the status of Convention implementation, share experiences and best practices, and provide feedback on capacity-building programmes, as well as discuss their needs and requests with the Secretariat. Since the Third Review Conference, 165 States Parties (86%) have participated in at least one annual meeting;
- (b) the basic course for National Authorities, which helps educate on the main tenets of the treaty personnel assigned to work on the implementation of the Convention. Since 2013, 132 States Parties (69%) have attended the basic course at least once;
- (c) Article VI-related courses, which aim to increase the efficiency of National Authorities in submitting annual declarations and in receiving OPCW inspections. Since 2013, 118 States Parties have attended Article VI-related courses. Of the 102 States Parties that submitted their declaration reports in 2016, 82 participated in such courses at least once; and
- (d) the Mentorship/Partnership Programme, which provides a platform for bilateral cooperation between States Parties, with a primary focus on providing

assistance to those States Parties that have in place no national implementing legislation covering all initial measures. Fifteen partnerships have been formed under the Programme since 2013.

- 4.198 The Secretariat assists National Authorities in building effective partnerships with other relevant national stakeholders by providing new programmatic platforms, such as the annual meeting of National Authority and chemical industry representatives, subregional stakeholder forums on national implementation, and courses for customs officials and representatives of customs training institutions. The OPCW has also engaged with several partner organisations to support States Parties in implementing the Convention, including the WCO, with which it signed a memorandum of understanding to enhance cooperation in 2017.
- 4.199 To assist States Parties in the implementation of education and outreach activities, the Secretariat organised six regional meetings on education and outreach with relevant stakeholders. The follow-up survey indicated that more than half of the States Parties attending the meeting in 2016 conducted or planned to conduct national education and outreach events.
- 4.200 In fulfilment of the Third Review Conference's recommendation to develop e-learning tools, the Secretariat has introduced a number of e-learning courses and tools, including the Legislative Assistance Support Tool (LAST), which comprises a series of six e-learning courses for National Authorities on various aspects of implementation of the Convention, as well as e-learning modules for customs officers on the Convention transfers regime for scheduled chemicals.
- 4.201 The Secretariat has closely engaged States Parties on how to further increase the relevance and effectiveness of its capacity-building activities through multilateral and bilateral meetings and consultations. The Secretariat has developed a feedback mechanism which allows for the regular review and assessment of the immediate results of the capacity-building events as well as the identification of lessons learned for improvement. In addition, the Secretariat has been piloting RBM approaches in its programmes, which include using log frames for better planning, monitoring, and evaluation of results at the output and outcome levels.

Reporting mechanism

- 4.202 As requested by the Third Review Conference, the Secretariat continues to prepare and submit to the policy-making organs its annual reports on the status of implementation of Article VII. 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 are aimed at providing a more comprehensive and objective overview of the implementation of the Convention by States Parties, and provide solid guidance to the Secretariat for planning and providing specific technical assistance to requesting States Parties, thus moving from a “one-size-fits-all” to a “tailor-made” approach. 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.

- 4.203 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 also 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.

Challenges to the enactment of implementing legislation

- 4.204 Since the Third Review Conference, significant progress has been made in regard to the enactment of implementing legislation by States Parties. However, gaps still remain. The adoption of national legislation is a slow and challenging process that is beyond the control of the Secretariat. It involves the full engagement of all relevant stakeholders, whose political will and commitment are critical to the process. The reasons provided by States Parties for delays have not changed since the adoption of the original OPCW Action Plan on Article VII Implementation in 2003, and include the following:

- (a) prioritisation in the national agenda. In some countries, adoption of the legislation is not considered a priority, as there may be other overarching concerns that rank higher in the political agenda, as well as security issues;
- (b) lack of stakeholder coordination. In other countries, there may be lack of coordination, agreement, or awareness among the relevant stakeholders, or there is no follow through on the legislative adoption process; and
- (c) complexity of obligations. Some countries also report that they lack the technical expertise to undertake effective outreach with relevant stakeholders on their national obligations under the Convention, and that they require assistance from the Secretariat.

- 4.205 The Secretariat also needs to reach out to small countries, including small island developing States, to stress the urgency of adopting Convention implementing legislation. While these countries may have other priorities, they should also be aware of the risks they face as potential trafficking routes owing to weak regulatory and enforcement mechanisms on chemical imports and exports control. While these countries may not have large chemical industries or engage in any significant trade in chemicals, universal implementation of the Convention will not be achieved unless all of the remaining 70 States Parties that have yet to do so adopt comprehensive legislation covering all the initial measures.

Conclusions and future considerations

- 4.206 Considering the shifting focus of the Organisation towards the prevention of the re-emergence of chemical weapons, and in light of current and emerging threats related to the possible misuse of toxic chemicals for hostile purposes (or purposes contrary to the aims of the Convention), the role of national implementation is even more critical. In this context, the adoption of national implementing legislation by all

States Parties, as well as the effective functioning of their National Authorities and their cooperation with relevant stakeholders at the national and regional levels, will remain the focus of the capacity-building support.

- 4.207 Outreach activities should be undertaken to approach the remaining countries that have yet to initiate the process of drafting comprehensive national legislation. Additional focus will be on assisting States Parties in the development of relevant regulations, including through the sharing of best practices. Promoting the role of national implementing legislation in addressing current and emerging threats related to toxic chemicals should also be emphasised. In this regard, the focus can be placed on enhancing the understanding of the implementation of the penal aspects of Convention implementing legislation as well as other enforcement issues.
- 4.208 As the one-size-fits-all approach cannot address specific needs related to national implementation by States Parties, tailor-made approaches that achieve a balance between regional and national approaches for capacity building should be pursued. Experience has shown that States Parties benefit more from receiving technical support from the Secretariat at the national level, as this ensures the involvement of a wide range and number of stakeholders, including high-level policymakers, and facilitates effective coordination in national implementation.
- 4.209 Outreach to all relevant national, regional, and international stakeholders is critical to ensuring effective implementation of the Convention. The Secretariat will continue to explore additional avenues for engagement and collaboration with the chemical industry, chemical trade associations, customs administrations, parliaments, academic and educational and research organisations, and civil society organisations. The Secretariat will also continue to encourage States Parties to provide bilateral assistance to one another, with a view to enhancing national implementation.
- 4.210 The further implementation of RBM, with a more systematic approach for monitoring and evaluation, will be a useful tool for logical programming and delivery of capacity-building support. Also, to sustain the results of such support, more emphasis should be placed on using the “train-the-trainers” approach, which helps integrate the results into the existing systems and procedures in the States Parties.
- 4.211 Capacity-building programmes offered by the Secretariat would benefit from a shift towards multi-year programming, which helps ensure continuity and predictability of available resources in response to the need assessments and road maps developed by the States Parties.
- 4.212 National Authorities will continue to play a crucial role in assessing the quality and impact of the capacity-building support. To fulfil this role, the Organisation will increasingly rely on National Authorities to conduct needs assessment and to ensure ownership of the national implementation process and sustainability of the results achieved. In this context, it is necessary for States Parties to regularly assess the status and progress of their implementation and fulfilment of national obligations under the Convention, as well as to identify gaps and challenges that may require capacity-building support and assistance. They should also develop road maps for effective implementation.

Assistance and protection against chemical weapons

Introduction

- 4.213 Assistance and protection against the use or the threat of use of chemical weapons continues to be a key pillar of the Convention, and has growing significance in the context of a changing security environment.
- 4.214 Through its provisions, Article X makes a significant contribution to countering the threats associated with the use of chemical weapons, which includes the misuse of toxic chemicals. It does so by providing expert advice on establishing or further developing States Parties' emergency response capacity for this kind of event. It also does this by maintaining the Secretariat's state of readiness to provide assistance in case of a request from a State Party that has been attacked or threatened by chemical weapons.
- 4.215 The Secretariat has continued to assist States Parties by means of a number of programmes and activities that have been detailed in regular reports.

Developments

Exchange of equipment and information concerning means of protection

The International Support Network for Victims of Chemical Weapons

- 4.216 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 on the basis of decision C-16/DEC.13 (dated 2 December 2011). According to that decision, activities undertaken in the context of the network are financed solely from voluntary contributions through the trust fund. Voluntary contributions to the trust fund rose from EUR 35,000 in 2013 to EUR 212,000 in 2018.
- 4.217 In order to assist and support the victims of chemical weapons, the Secretariat developed a "Practical Guide for Medical Management of Chemical Warfare Casualties", which was launched in December 2015. Electronic versions in English and Arabic have been made available on the OPCW website³⁸ for all practitioners and medical experts around the world. Translation of the medical guidebook into the other OPCW official languages is ongoing.
- 4.218 The Secretariat strengthened its outreach efforts to organisations and stakeholders relevant to the Network. Consequently, an international symposium on medical treatment of chemical weapons victims will be held in The Hague on 28 and 29 June 2018. The symposium aims to provide an international forum to exchange experiences and ideas regarding medical assistance for chemical weapons victims, and to raise awareness and reinforce cooperation regarding care for people suffering the long-term effects of chemical weapons. The creation of a platform to strengthen scientific collaboration for improved medical assistance for the victims of chemical weapons is envisaged.

³⁸

See <https://www.opcw.org/our-work/assistance-protection/practical-guide/>.

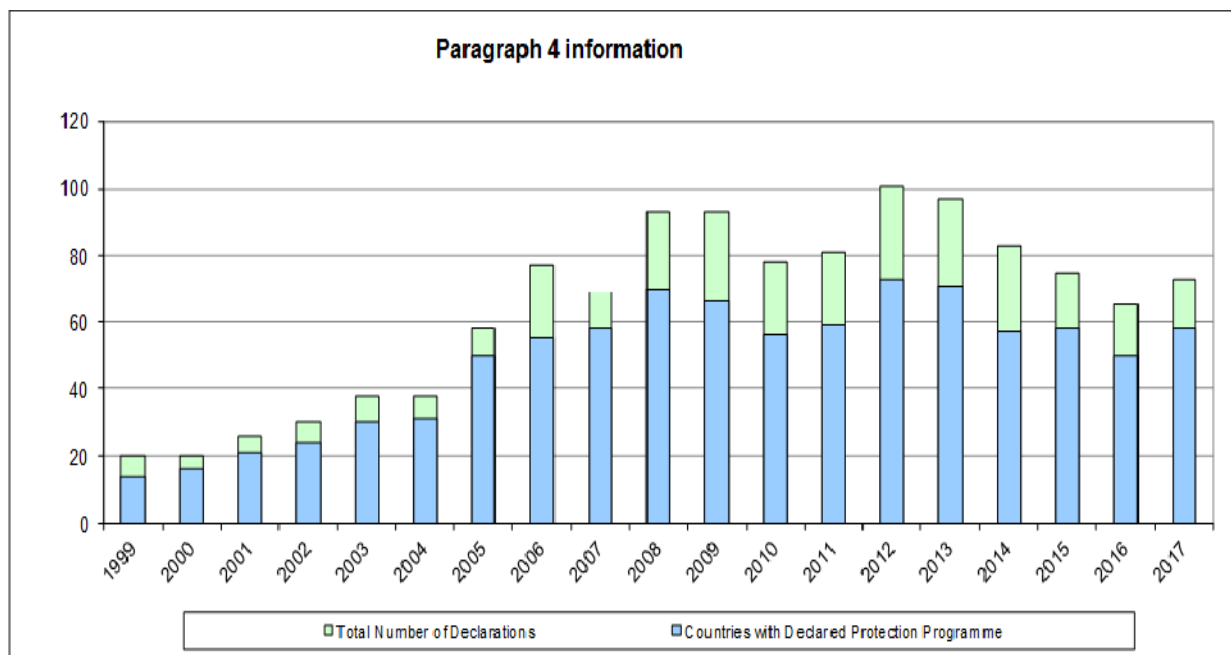
The Instructor Development and Exchange Programme

- 4.219 In order to support the capacity-building strategy discussed below, an Instructor Development and Exchange Programme was introduced to expand and integrate the knowledge and skills obtained in the area of assistance and protection within and among the different geographical regions.
- 4.220 This new Programme has a number of facets, including the use of the train-the-trainers approach, the conduct of specialised training, the performance of evaluation practices, and the 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 and strengthening of OPCW regional training programmes.

Information on national protective programmes

- 4.221 Between the entry into force of the Convention and 31 December 2017, 158 (82%) of the 192 States Parties had submitted, at least once, information on their national programmes for protective purposes, in accordance with paragraph 4 of Article X. In terms of the rates of annual submissions, 2017 saw the stemming of a downward trend as the number of States Parties meeting this annual obligation increased.

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



Capacity building and provision of expert advice to States Parties

- 4.222 The Secretariat has implemented a tailor-made approach to assess the current and strategic needs of States Parties at the national and regional levels. The approach is based on the analysis of information provided by the States Parties and through direct interaction with the main actors, as well as through activities such as informal

consultations, meetings of experts, and coordination at the regional level through the engagement of regional and subregional organisations.

- 4.223 With the central aims of providing expert advice to raise and/or establish a protective capacity against chemical weapons and to facilitate regional coordination, the Secretariat conducted capacity-building activities in several regions and subregions in collaboration with donors and with the assistance of States Parties. In this connection, success was achieved mainly in Asia and in Latin America and the Caribbean, in terms of boosting the capacities of their existing assistance and protection training providers, and in identifying new institutional centres that are ready to integrate into this approach. In addition to the traditional curricula for this kind of training, activities included table-top and practical training exercises in the field involving emergency scenarios, under the supervision of officials from the Secretariat.
- 4.224 In the African region, activities were aimed at fostering subregional response capacity and at supporting African States Parties in the development of protective measures against chemical attacks and threats. These objectives are pursued within the framework of the fourth phase of the Africa Programme (2017–2019) by actively engaging with the regional economic communities in Africa and their Member States. The pilot project using this approach involved the East African Community, and led to Uganda hosting a regional chemical, biological, radiological, and nuclear (CBRN) training centre.
- 4.225 In an effort to improve coordination with States Parties in each region in the selection of its regional assistance and protection activities, the Secretariat in 2014 introduced a tailored approach to training, focused on annual training cycles conducted at the regional level. In line with this approach for capacity-building projects under Article X, most participants selected for this type of training completed a full cycle (basic, advanced, and confirmatory exercise) in one year.
- 4.226 With the purpose of optimising resources and meeting the diversified needs of the States Parties, the Secretariat has provided training through the integration of various capacities at the national or subregional levels, and has 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 act as a team of future master instructors. The Secretariat also expanded its courses to be delivered in other languages, including Russian and Arabic.

Protection data bank

- 4.227 The Secretariat conducted a comprehensive analysis of the OPCW data bank on protection to gauge its effectiveness in serving Article X objectives. The Secretariat is engaged in a process to further develop the concept of the data bank, factoring in recommendations made by States Parties, including having a modern, user-friendly interface that will allow them to more intuitively access the data and offer a simplified means for submitting Article X data, such as national protection programme declarations (paragraph 4) and offers of assistance (paragraph 7).

Provision of assistance by States Parties

- 4.228 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 31 December 2017, 81 States Parties had met this obligation. Forty-eight States Parties have made contributions to the Voluntary Fund for Assistance, as required by subparagraph 7(a) of Article X. As at 31 December 2017, the balance in the fund amounted to EUR 1,557,974. Forty-six States Parties had fulfilled their obligations under subparagraph 7(c) of Article X. Two States Parties 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

- 4.229 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. These workshops 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.
- 4.230 In-house training sessions have been conducted for the members of the Secretariat's Assistance Coordination and Assessment Team (ACAT), with a view to maintaining readiness to provide assistance in the event of a request from a State Party. The training courses covered 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.
- 4.231 Recognising the need for cooperation with relevant international organisations and agencies in response situations, the Secretariat has maintained formal and informal communication with international organisations such as the International Criminal Police Organization (INTERPOL), the United Nations Office for the Coordination of Humanitarian Affairs (UNOCHA), the World Health Organization (WHO), the International Committee of the Red Cross, 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.
- 4.232 With the aim of strengthening the Secretariat's capacity to respond to a request for assistance, the Secretariat participated in TRIPLEX 2013 and 2016. These international exercises jointly organised by the International Humanitarian Partnership and UNOCHA aimed to promote cooperation and coordination between the responding agencies and to reconcile the individual organisations' tasks and mandates.

4.233 In this context, 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. To this end, the Secretariat established the RRAM. This new mechanism, involving the rapid deployment of a team of Secretariat experts to support and advise on response to a chemical incident, may be requested by a State Party affected by an incident of alleged use of toxic chemicals by non-State actors.

Conclusions and future considerations

4.234 In terms of the full and effective implementation of Article X, progress since the Third Review Conference continues and opportunities for further improvement will present themselves in the coming years.

4.235 The progress made in building national protection programmes through engagement with regional mechanisms in Africa has been encouraging. Leveraging the engagement of regional organisations has led to the development of protection programmes at the national level to counter chemical threats, as well as the creation and support of stand-alone training centres at the regional level. The success of these focused programmes also highlights the value of providing tailored national support where warranted, encouraging States Parties to take ownership of their role in broader regional efforts.

4.236 One mechanism that enables the Secretariat to carry out such assessments is the annual reporting of national programmes for protective purposes, as required by paragraph 4 of Article X. There has been some recent improvement in the quantity of reports received and the Secretariat continues to remind States Parties of their obligations, both collectively and individually. However, States Parties may wish to assist in encouraging the full implementation of this obligation, either through 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.

4.237 The Instructor Development and Exchange Programme will take on greater significance in the coming years as subregional training capacity continues to grow. The capacity-building efforts under Article X will require an increased focus on the sustainability of progress made. These instructor exchanges are an important tool for supporting the maintenance of the capacity, knowledge, and engagement of the developed training cadre.

4.238 In terms of the content of Article X capacity-building programmes, there are several areas that could be explored in coming years to enhance the support provided by the Secretariat to States Parties in the field of assistance and protection.

- (a) Following on the successful programmes aimed at developing the capacity of police first responders to operate in a contaminated environment, the Secretariat will examine the broad range of skills required of police in a chemical emergency response as well as the activities that generally fall to them. These efforts will lead to additional tailoring of training for these responders to capture their specific and crucial role in the response to a chemical incident.

- (b) An advanced training package dealing with incident command issues is under development and will be added to training-of-trainer courses. If feedback and demand so indicate, the Secretariat will explore a stand-alone course providing comprehensive training on this separate but key component of chemical incident response.
 - (c) The Secretariat has worked with several partners in the design and delivery of table-top exercises for emergency management personnel. These cost effective and easily transportable packages will see increased use in coming years as the target audience also plays a vital role in ensuring a successful response to a larger-scale chemical incident.
 - (d) Over the course of the past few years, several States Parties have highlighted the need to provide training on preparing chemical response personnel for major events. The Secretariat will leverage the recent experience of some States Parties to hold first training of this type in late 2018.
- 4.239 As part of the broader Secretariat effort to increase its monitoring and evaluation efforts and provide States Parties with results-based reporting, the assistance and protection activities will continue the transition to a programme-focused approach with the attendant logical and results framework. This development will permit increased transparency and more comprehensive reporting for States Parties.

Economic and technological development

Introduction

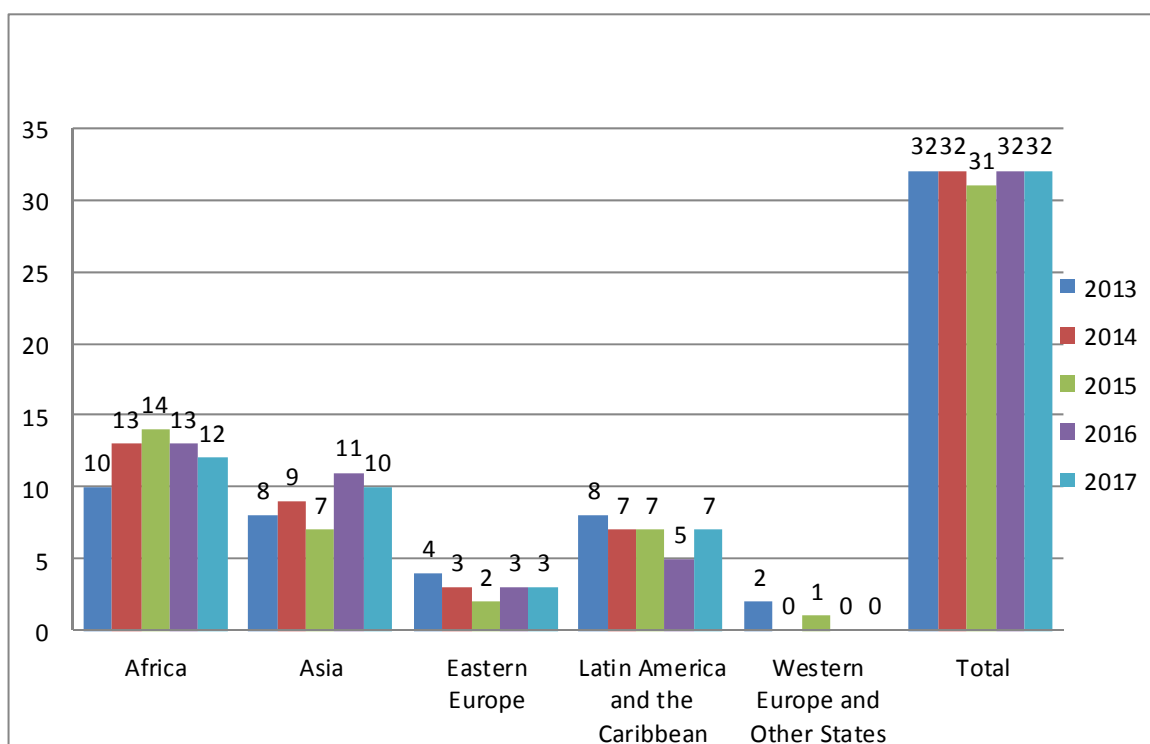
- 4.240 The Third Review Conference reaffirmed that full, effective, and non-discriminatory implementation of Article XI is essential for the realisation of the object and purpose of the Convention. It also commended Conference decision C-16/DEC.10, recognising that the decision provides guidance for the full, effective, and non-discriminatory implementation of Article XI, and identifies avenues for further work that would advance its objectives. The Third Review Conference called for the adequate funding of the OPCW's international cooperation and assistance programmes, through the regular budget and voluntary funding.

Developments

- 4.241 In the period 2013–2017, and in coordination with the States Parties, the Secretariat 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).

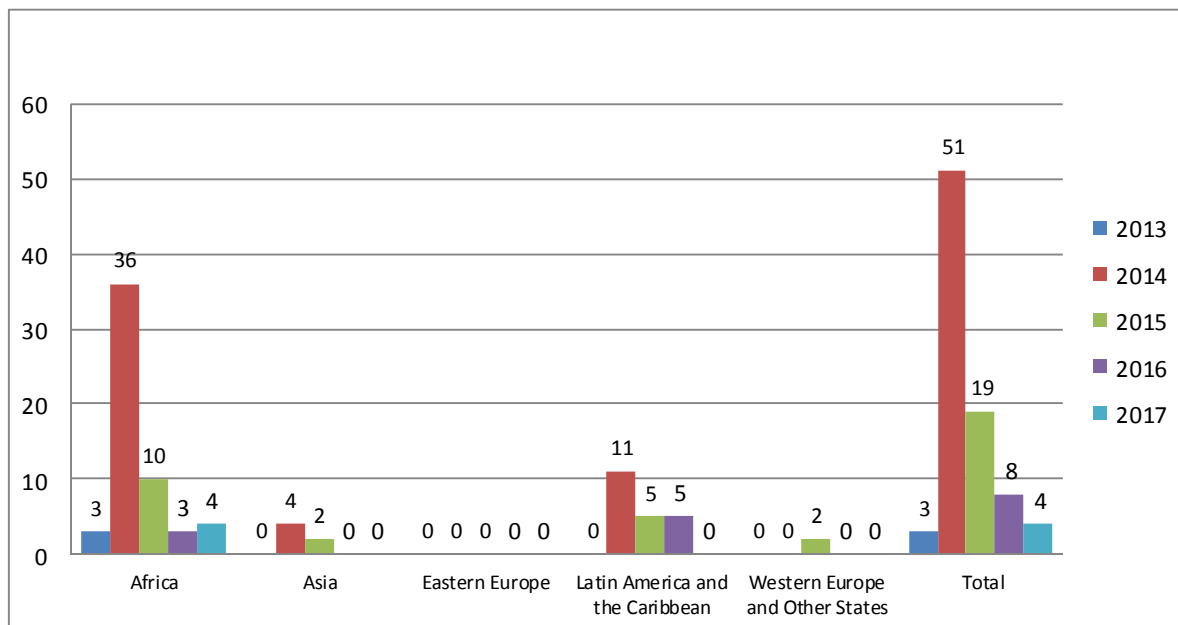
4.242 From 2013 to 2017, the Secretariat organised 130 capacity-building programmes, supported 74 conferences and 200 research activities, and facilitated 85 equipment exchanges under Article XI of the Convention, benefiting a total of 3,068 participants from various States Parties. These activities included five editions of the flagship Associate Programme for 159 participants (see Chart 5) as well as five annual meetings for the alumni network of the Programme. The Secretariat also organised 44 courses, seminars, and workshops under the Chemical Safety and Security Management Programme (for 1,243 participants), 41 analytical skills development courses (for 602 participants), and 16 laboratory assistance courses (for 69 participants).

CHART 5: NUMBER OF PARTICIPANTS IN THE ASSOCIATE PROGRAMME



4.243 Furthermore, the Secretariat has offered financial sponsorship for 61 scientific fellowships and 74 international conferences. It has also provided financial support for 139 research projects, including co-funded research projects with the International Foundation for Science. During the period 2013–2017, the Secretariat also donated and/or facilitated the transfer of 85 pieces of functional laboratory equipment (see Chart 6).

CHART 6: NUMBER OF PIECES EXCHANGED UNDER THE EQUIPMENT EXCHANGE PROGRAMME

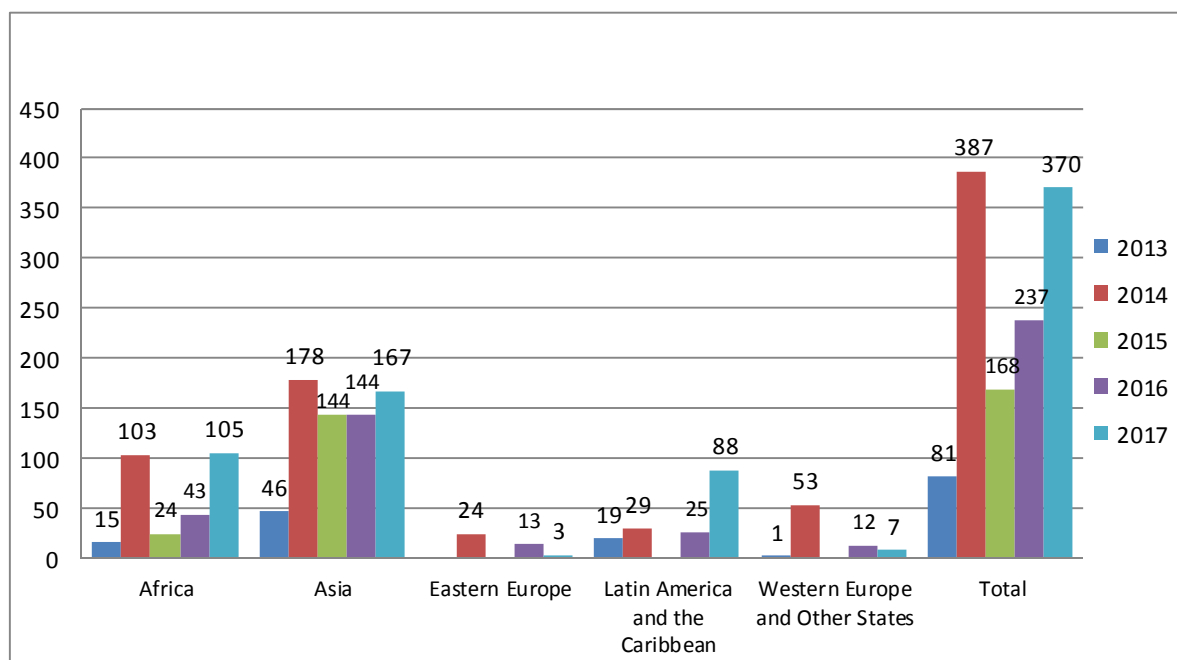


4.244 In order to better meet the needs of the States Parties, the Secretariat has also launched new programmes and initiatives since 2016, namely: the training workshops on the best practices for developing the Responsible Care[®] programme for the chemical industry (2 workshops, 27 participants); workshops on green and sustainable chemistry (2 workshops, 30 participants); workshops on science and diplomacy (2 editions, 35 participants); a seminar on chemical trade management (26 participants); a forum on peaceful uses of chemistry (30 participants); workshops on needs assessment and best practices on chemical safety and security management (2 editions, 61 participants); a workshop on needs assessment and best practices on integrated chemicals management (38 participants); an executive programme on integrated chemicals management (30 participants); and two symposiums on women in chemistry (113 participants), which were followed by analytical chemistry courses organised for the participants at the OPCW Laboratory. Furthermore, the Secretariat has organised five workshops with a view to assisting the States Parties in developing the implementation of Article XI.

Enhancing capacity building to promote the peaceful uses of chemistry

4.245 The Secretariat has continued to engage in State 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 1,900 experts around the world have been trained under this programme. Chart 7 below shows programme participation since 2013.

CHART 7: NUMBER OF PARTICIPANTS IN THE CHEMICAL SAFETY AND SECURITY MANAGEMENT PROGRAMME



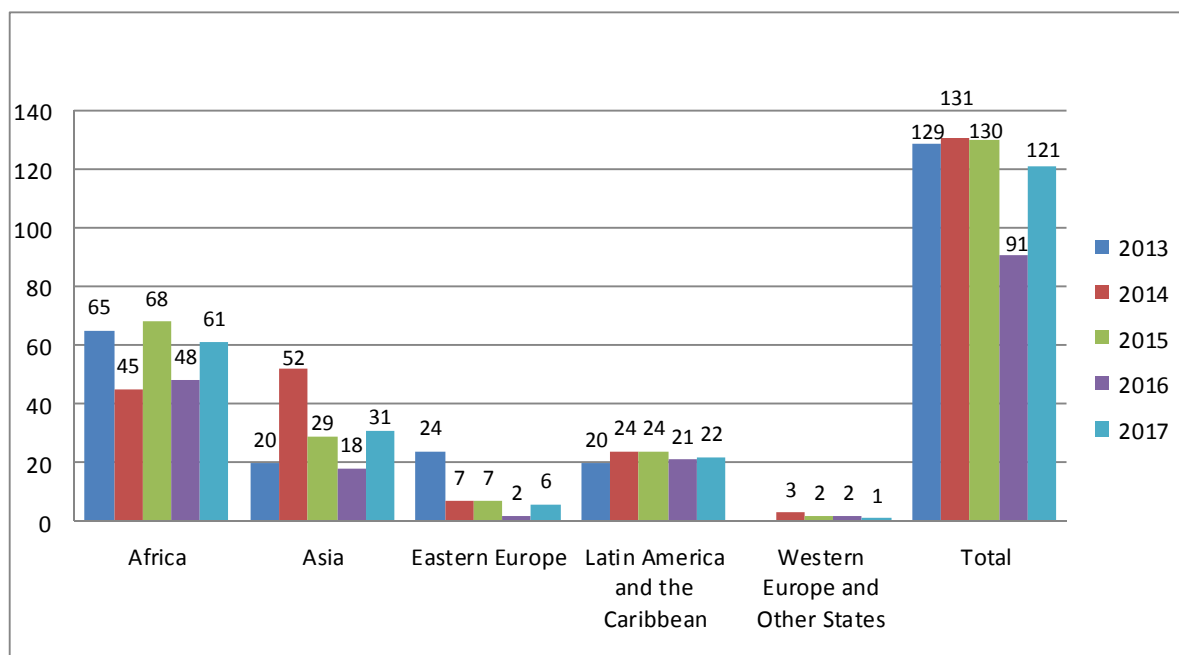
4.246 In addition, the Secretariat has integrated the topic of safety and security culture in events organised within the strategic areas of integrated chemicals management and the Responsible Care[®] programme, as well as specific programmes on chemical safety for laboratories.

Enhancing laboratory capabilities

4.247 The Secretariat continued its capacity-building activities in support of States Parties' efforts to develop their analytical skills and laboratory capabilities through the organisation of a variety of analytical skills development courses and analytical chemistry courses (see Chart 8). The Secretariat also launched a laboratory twinning programme to assist laboratories from States Parties with developing and transitional economies which aspired to obtain OPCW designation status. Since 2015, proficiency test courses have been offered at the OPCW Laboratory.

4.248 Furthermore, the Secretariat has continued to sponsor scientists from States Parties with developing and transitional economies to undertake fellowships in other States Parties with more advanced laboratories and research institutions. The Secretariat has also continued to sponsor relevant scientific events as well as attendance of participants and resource persons therein. In addition, under the Equipment Exchange Programme the Secretariat has continued to facilitate transfers of used but functional equipment between States Parties.

CHART 8: NUMBER OF PARTICIPANTS IN ENHANCEMENT OF LABORATORY CAPABILITES COURSES



Enhancing scientific and technological cooperation

4.249 The Secretariat has continued its efforts to promote and facilitate further scientific and technological cooperation through the Fellowship Programme, the Programme for Support of Research Projects, and Conference Support Programme (see Charts 9 to 11). It also launched the Policy and Diplomacy for Scientists workshops to promote ethics and responsible research practices, by sensitising scientists to the issues of the multiple uses of science, safety, security, and sustainability. Two workshops took place in 2016 and 2017 and hosted 35 participants. The Secretariat also organised two symposiums on women in chemistry to increase women’s participation in the OPCW capacity-building programmes, with a view to highlight the contributions of women in peaceful chemistry.

CHART 9: NUMBER OF PROJECTS SUPPORTED UNDER THE PROGRAMME FOR SUPPORT OF RESEARCH PROJECTS

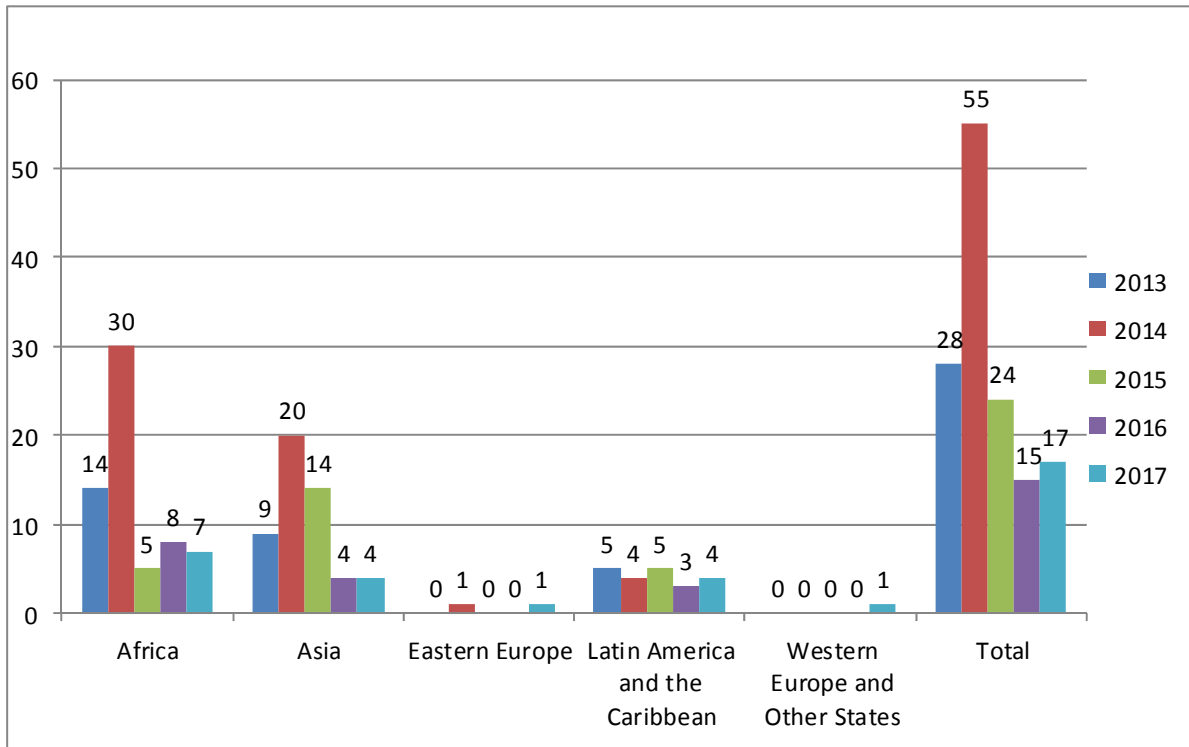


CHART 10: NUMBER OF PARTICIPANTS IN THE CONFERENCE SUPPORT PROGRAMME

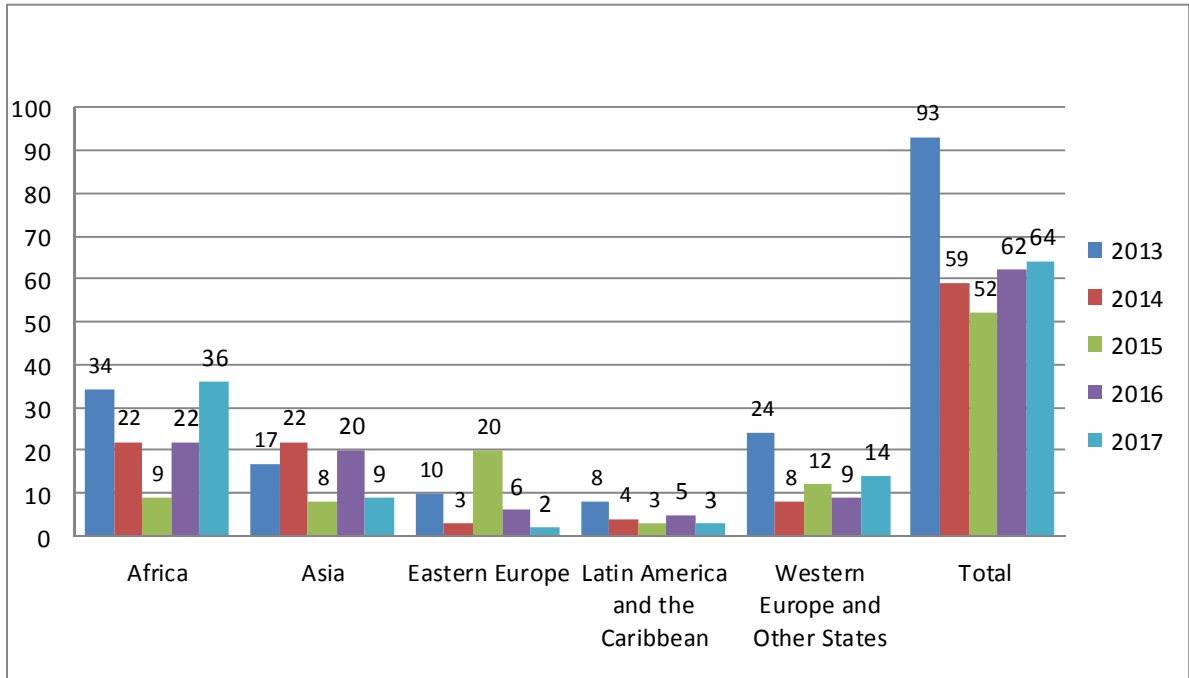
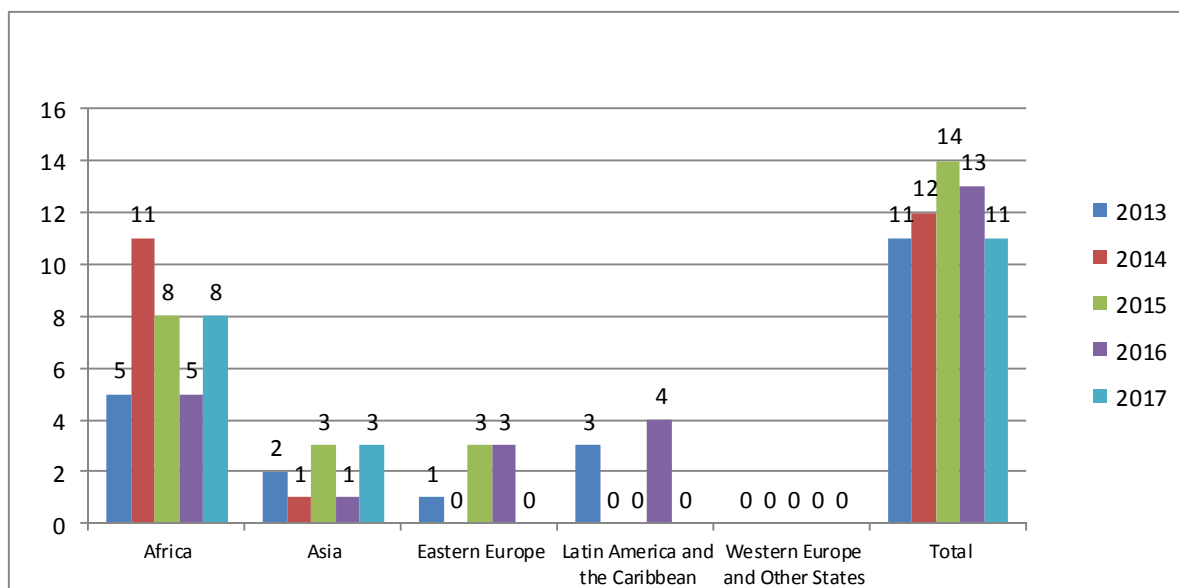


CHART 11: NUMBER OF PARTICIPANTS IN THE FELLOWSHIP PROGRAMME



Enhancing programme effectiveness through evaluation

4.250 The Secretariat has continued to review its international cooperation programmes to ensure that they meet the needs of States Parties in implementing Article XI, even though a systematic mechanism of evaluation and monitoring has yet to be adopted.

4.251 To further improve the quality of the needs assessments underpinning Article XI programmes, the Secretariat initiated needs assessment exercises in 2016 and 2017. States Parties were invited to submit their needs on chemical safety and security.³⁹ The first report on needs and best practices on chemical safety and security management was published on in November 2016.⁴⁰ In addition, the Secretariat organised a series of needs assessment and best practices workshops, and published the informal papers in this regard to better disseminate relevant best practices. A concrete outcome of this exercise was the identification of an outline of a chemical safety and security management framework, including a legal framework, policies/incentives for chemical industries, good procedures for laboratories, and an education and outreach programme. The Secretariat could help bridge relationships between governments, industry, professional associations, and academics to promote chemical safety and security management and to assist the States Parties in evaluating their strengths and gaps in implementation.

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

³⁹ S/1362/2016, (dated 7 March 2016) and S/1483/2017 (dated 30 March 2017).

⁴⁰ Non-paper by the Secretariat: “Needs and Best Practices on Chemical Safety and Security Management” (dated 25 November 2016). Available at: https://www.opcw.org/fileadmin/OPCW/ICA/ICB/OPCW_Report_on_Needs_and_Best_Practices_on_Chemical_Safety_and_Security_ManagementV3-2_1.2.pdf.

for the Chemical Safety and Security Management Programme, the Women in Chemistry initiative, and integrated chemicals management.

Developing partnerships and building synergies to enhance international cooperation

- 4.253 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 in order to raise awareness of the activities of the Organisation.
- 4.254 During the review period, the Secretariat also further developed and expanded its cooperation with industry through three-week industry attachments at modern chemical facilities in Europe, Asia, and Latin America and the Caribbean for Associate Programme participants. The dialogue and cooperation among multiple stakeholders, including scientists and academics, policymakers, and chemical industry representatives, was also strengthened through new initiatives such as Green and Sustainable Chemistry and Policy for Scientists.

Conclusions and future considerations

- 4.255 Under the general framework of Article XI, the Secretariat aims to continue to strengthen its international cooperation programmes to further promote the peaceful uses of chemistry, focusing on three strategic programme areas: integrated chemicals management, enhancement of laboratory capabilities, and chemical knowledge promotion and exchange. Programme objectives and content will be based on risk and needs assessments, with an approach to ensure national ownership, which is key to ensuring that the assistance provided meets the States Parties' needs.

In the area of integrated chemicals management

- 4.256 The objective of this programme area is to assist States Parties in their efforts to integrate, and thereby improve, their systems to manage chemicals. The main focus is on chemical safety and security management, throughout the chemical life cycle, in an integrated manner. The specific programme lines and activity areas that the Secretariat considers effective to achieving this objective are described below.
- (a) While maintaining an approach that builds on a close partnership with industry, the Secretariat will develop its approach towards a national and comprehensive approach to assist States Parties in developing their national policy and legal framework/legislation and standards or guidelines on chemical safety and security management, covering the entire life cycle of chemicals.
 - (b) The Secretariat will consider the development of an educational database to allow the sharing of technical documents, best practices, and guidelines developed by States Parties and which focus on key aspects of chemical safety and security management.
 - (c) The Secretariat will expand the work started in 2016 compiling best practices and lessons learned on chemical safety and security management in order to meet the needs of the States Parties.

In the area of enhancement of laboratory capabilities

4.257 The objective of this programme area is to assist States Parties in the development and enhancement of laboratory capabilities (availability of equipment, analytical procedures, and fully qualified human resources) to undertake analysis that is important for the implementation of the Convention, or that contributes to enhancing chemical safety and security in the States Parties. The specific programme lines and activity areas are described below.

- (a) The Secretariat will further assist laboratories in developing their analytical capacities of Convention-related chemicals for broad peaceful purposes. A special focus will be placed on support for laboratories that aim to achieve OPCW designation status, in order to enhance their capabilities in terms of Convention-related analysis.
- (b) Under the Equipment Exchange Programme, the Secretariat will enhance its networking activities and further encourage States Parties to donate equipment for the benefit of States Parties with developing and transitional economies. It will also compile a database of equipment offers, to be shared on the OPCW extranet.
- (c) The Secretariat will further streamline its outreach mechanisms, including through the ABEO, in order to increase in its activities the participation of stakeholders from technical and scientific backgrounds, including scientists and industry personnel.
- (d) The Secretariat will explore options for developing synergies between the Fellowship Programme, Conference Support Programme, and relevant laboratory training/twinning lab initiatives, in order to better meet the needs of the States Parties in terms of analytical skills and laboratory capabilities.

In the area of chemical knowledge promotion and exchange

4.258 The objective of this programme area is to promote the exchange of knowledge and best practices in the States Parties for the development and application of chemistry for peaceful purposes, consistent with the object and the purpose of the Convention. The specific activity areas are described below.

- (a) Under the Conference Support Programme, the Secretariat will examine the possibility of allocating more targeted funds to sponsor events aimed at raising awareness, building capacity, and sharing best practices to promote the peaceful uses of chemistry.
- (b) The Secretariat will explore the possibility of increasing the portion of sponsorship allocated to fellowships for African States Parties for the Conference Support and Equipment Exchange Programmes, given the special needs of the African region.
- (c) The Secretariat will consider the development of e-learning initiatives.

- (d) 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 the Convention objectives.

On the overall delivery of Article XI programmes

- 4.259 The Secretariat will further engage States Parties to develop targeted capacity-building programmes at the national, regional, and international levels.
- 4.260 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 their needs. The Secretariat will further encourage States Parties' ownership in the process of Article XI implementation.

E. ENGAGEMENT WITH EXTERNAL PARTNERS

Ensuring the universality of the Chemical Weapons Convention

- 4.261 The Secretariat has continued to work with the remaining States not Party in order to realise the universality of the Convention. Since the Third Review Conference, four States (Angola, Myanmar, Somalia, and the Syrian Arab Republic) joined the Convention. As a result, 192 States Parties are now committed to a world free of chemical weapons. This accomplishment is due to the concerted efforts of States Parties and the Secretariat. At present, only four States, the Democratic People's Republic of Korea, Egypt, Israel, and South Sudan, remain outside the Convention.

Introduction

- 4.262 The Third Review Conference reiterated that the concept of the universality of the Convention is essential to achieving its object and purpose and to enhancing international peace and security. It underlined the fact that the goal of universality shall be pursued by the Secretariat and States Parties as a matter of high priority.
- 4.263 The Third Review Conference strongly urged all remaining States not Party to the Convention at that time (Angola, the Democratic People's Republic of Korea, Egypt, Israel, Myanmar, Somalia, South Sudan, and the Syrian Arab Republic) to ratify or accede to it as a matter of urgency and without preconditions.
- 4.264 The Action Plan for the Universality of the Convention provides key guidance to the Secretariat, the Director-General, the policy-making organs, and States Parties, and continues to be implemented following the decisions of the Conference in 2009 and 2011.

Developments

Status of universality

- 4.265 Since the Third Review Conference, four States have joined the Convention —Somalia and the Syrian Arab Republic in 2013 and Angola and Myanmar in 2015.

As a result, the number of States not Party has decreased from eight to 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 Convention

- 4.266 Following the Action Plan and the relevant decisions adopted by the Conference, the Organisation has continued to intensify efforts to achieve universal adherence to the Convention, and the Director-General has 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.
- 4.267 The Secretariat has continued to maintain high-level contacts with officials of States not Party to raise awareness of their need to join the Convention at the earliest date and without preconditions. Universality has 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.
- 4.268 The United Nations has maintained its support for the goal of achieving universal adherence to the Convention, which has been reiterated in messages by the United Nations Secretary-General to OPCW-related events, including commemorative ceremonies and the sessions of the Conference.
- 4.269 Universality also featured prominently in various messages to the OPCW after it was awarded the 2013 Nobel Peace Prize. In this regard, the Director-General repeatedly urged universal adherence to the Convention in various high-profile media interviews and public statements, as well as in his speech at the Nobel Peace Prize award ceremony in Oslo, Norway.
- 4.270 The Director-General continued to address letters to Heads of State and Ministers of Foreign Affairs of the remaining States not Party, including jointly with the United Nations Secretary-General, urging them to join the Convention at the earliest and without preconditions and offering assistance and support to this end.
- 4.271 In addition, in 2014 the Director-General wrote to the Ministers of Foreign Affairs of several States Parties, including the permanent members of the United Nations Security Council, suggesting that they use their bilateral contacts to encourage States not Party to join the Convention without delay or preconditions.
- 4.272 The Secretariat has continued to offer sponsorship to representatives of States not Party to participate in OPCW-related activities, and organised tailored training programmes to assist them in their preparations for ratification or accession. Representatives of some States not Party continued to attend, as observers, the sessions of the Conference, and also attended the Third Review Conference.
- 4.273 The EU continued to contribute to sustaining universality efforts through its Council Decisions 2009/569/CFSP (of 27 July 2009), 2012/166/CFSP (of 23 March 2012), and 2015/259/CFSP (of 17 February 2015) on support for OPCW activities in the framework of the EU Strategy against Proliferation of Weapons of Mass Destruction.

- 4.274 With the progressive reduction in the number of States not Party, the strategy of the Secretariat in implementing the Action Plan has shifted from a focus on regional seminars and events to a bilateral approach, both in terms of technical assistance visits and bilateral contacts at the diplomatic level with the States concerned. At the same time, more emphasis has been placed on outreach and on regular interactions with relevant international and regional organisations.

Developments in Africa

Angola

- 4.275 Since the Third Review Conference, efforts to achieve Angola's accession to the Convention were conducted through its embassy in The Hague, its mission to the United Nations in New York, and officials at both the Ministry of Foreign Affairs and the National Assembly in Luanda. From 2013 to 2015, representatives of Angola actively participated in OPCW-related activities and were sponsored to attend a number of events related to international cooperation and assistance held at the OPCW and others hosted by other States Parties.
- 4.276 On 21 April 2015, the National Assembly of Angola passed a resolution approving the accession of Angola to the Convention, which was followed by Angola's preparation of an instrument of accession for submission to the United Nations.
- 4.277 Angola deposited its instrument of accession to the Convention on 16 September 2015, and the Convention entered into force for it on 16 October 2015, making Angola the 192nd State Party.

Somalia

- 4.278 In November 2012, during his visit to the 67th session of the United Nations General Assembly, the Director-General held a bilateral meeting with H.E. Dr Elmi Ahmed Dualeh, Permanent Representative of Somalia to the United Nations, to further discuss accession to the Convention. In the follow-up to this meeting, the Secretariat undertook a number of initiatives to provide information and support to the Somali authorities with regard to accession to the Convention.
- 4.279 Through a number of bilateral efforts and assistance from States Parties in 2013, Somalia deposited its instrument of accession with the United Nations Secretary-General on 29 May 2013. The Convention entered into force for Somalia on 28 June 2013, making it the 189th State Party to the Convention.

South Sudan

- 4.280 Since the Third Review Conference, dialogue between South Sudan and the Secretariat has been maintained. Representatives of South Sudan participated in several OPCW activities, including regular sessions of Conference. The Director-General, Deputy Director-General, and Secretariat staff have met on a number of occasions with representatives of South Sudan, including with South Sudan's Ambassador to the Benelux countries and members of the Permanent Representation of South Sudan to the United Nations in New York.
- 4.281 The Secretariat continued to provide legal advice to representatives from the Embassy of South Sudan in Brussels and its Permanent Representation to the United Nations in

New York with regard to the issue of accession or succession to the Convention. In December 2017, the Director-General met with the Ambassador of South Sudan to the Benelux countries to discuss South Sudan's progress in relation to succession to the Convention and its capacity needs and requirements, which the Secretariat could help to further bolster. Representatives of South Sudan attended the Twenty-Second Session of the Conference and, in a statement to it, confirmed their intention to join the Convention in the near future.

Cooperation with regional partners

- 4.282 The Secretariat continues its cooperation with the African Union to promote the goals of the Convention and its universality within the framework of the memorandum of understanding signed in January 2006 between the African Union and the OPCW, as well as within the framework of the decision on the implementation and universality of the Convention, adopted at the 38th Ordinary Session of the Assembly of Heads of State and Government of the Organisation of African Unity, held in Durban, South Africa in July 2002 (AHG/Dec.182 (XXXVIII)).

Developments in Asia

Democratic People's Republic of Korea

- 4.283 Notwithstanding the repeated efforts by the Secretariat to reach out to the Democratic People's Republic of Korea, that country has remained unresponsive. No response has been received to the invitation letters sent by the Secretariat inviting representatives of the Democratic People's Republic of Korea to participate in OPCW activities.

Myanmar

- 4.284 Between 2013 and 2015, the Secretariat continued to provide sponsorship to Myanmar's representatives to participate in OPCW-related activities and organised several tailored events for them, including a mock inspection exercise in Yangon, and a national awareness workshop on the Convention in Nay Pyi Taw (both held in August 2014). This was preceded by more than 20 international cooperation and assistance events in which representatives of Myanmar participated in the period 2013–2015.
- 4.285 Myanmar, which signed the Convention in 1993, deposited its instrument of ratification with the United Nations Secretary-General on 8 July 2015. The Convention entered into force for Myanmar on 7 August 2015, making it the 191st State Party to the Convention.
- 4.286 On 9 July 2015, the Union Minister for Foreign Affairs of Myanmar met with the Director-General and addressed the Council at its Seventy-Ninth Session, announcing his country's deposit of an instrument of ratification. Prior to this announcement, representatives of Myanmar had actively engaged in various OPCW activities aimed at building Myanmar's capacity for accession and at clarifying some of the outstanding queries.

The Association of Southeast Asian Nations

- 4.287 The Secretariat has also been looking forward to more active cooperation with both the Association of Southeast Asian Nations (ASEAN) and its Regional Forum, which

represents an emerging regional arrangement with strong potential to contribute towards the goals of disarmament, non-proliferation, and international cooperation. ASEAN has expressed strong support for the Convention and appreciation for the verification work of the OPCW.

Developments in the Mediterranean Basin and the Middle East

- 4.288 The entry into force of the Convention for the Syrian Arab Republic on 14 October 2013, brokered in part through a concerted international diplomatic effort, signalled the beginning of the dismantling of the Syrian chemical weapons programme, which was concluded in 2014. In view of the Syrian Arab Republic's membership of the Convention, the Secretariat reviewed strategies for encouraging Israel and Egypt to join the Convention at the earliest opportunity.
- 4.289 Despite continued efforts by the Secretariat and their engagement with the Organisation, Egypt and Israel (a signatory State) have continued to link accession or ratification to a broader political settlement. Although Egypt and Israel are unlikely to join the Convention in the near future, they have shown a willingness to maintain contacts with the Secretariat.
- 4.290 Representatives of Egypt and Israel have continued to participate in OPCW events, including sessions of the Conference. The Director-General also maintained contacts with the Ambassadors of Egypt and Israel to the Netherlands.

Egypt

- 4.291 In November 2014, the Secretariat briefed a group of diplomats from countries in the Middle East, including Egypt, as part of a training course hosted by the Netherlands Institute of International Relations (Clingendael). Since 2013, Egypt remained unresponsive to invitations by the Secretariat to participate in OPCW-related events, including the sessions of the Conference. The Secretariat met with a representative of an Egyptian non-governmental organisation (NGO) attending the Twenty-Second Session of the Conference to explore the possibility of Egyptian participation in OPCW events.

Israel

- 4.292 From 2013 to 2018, Israel continued to regularly participate 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 have been keen to meet with Secretariat representatives and have expressed interest in further maintaining working contacts with the Organisation, including through participation in OPCW activities.
- 4.293 In August 2014, the Secretariat in cooperation with the International Institute for Strategic Studies, organised a workshop in London titled "Bringing the Chemical Weapons Convention into effect throughout the Middle East". The workshop brought together prominent experts, researchers, and London-based diplomatic representatives from both Egypt and Israel to assess the new security environment in the Middle East in the wake of the Syrian Arab Republic's ongoing chemical demilitarisation. Participants discussed the merits of acceding to the Convention against this backdrop and broader efforts to achieve a WMD-free zone in the region.

4.294 In December 2014, the Secretariat hosted a day-long briefing for 11 senior Israeli journalists at the OPCW Headquarters, in cooperation with Chatham House—the Royal Institute of International Affairs (United Kingdom of Great Britain and Northern Ireland). The briefing prompted a number of articles from participating journalists, reflecting favourably on the successful implementation of the Convention to date and on the potential benefits for Israel in joining the Convention.

Syrian Arab Republic

4.295 The Convention entered into force for the Syrian Arab Republic on 14 October 2013, making it the 190th State Party.

Conclusions and future considerations

4.296 As mentioned above, the number of States Parties to the Convention has increased from 188 in March 2013 to 192 as of December 2017. No other disarmament treaty has shown as much progress towards universal acceptance as the Convention. The Convention now covers 99% of the world's population and 98% of countries have ratified or acceded to it, which demonstrates the success of the Action Plan on Universality.

4.297 As the remaining States not Party cite security and other concerns for not joining the Convention, more synergy, collaboration, and support is needed between the Secretariat and the States Parties in this area. States Parties are also encouraged to raise the issue in their bilateral contacts with the remaining States not Party.

4.298 Further universality efforts will remain focused on providing tailored support to the remaining States not Party, and on working through the bilateral channels of other States Parties, international forums, regional groups/organisations, and think tanks that could further a platform for cooperation and discussion on this matter.

4.299 In Africa, South Sudan remains the only State not Party to the Convention. The OPCW will continue to engage with South Sudan and to provide it with support and assistance to achieve its OPCW membership at the earliest date.

4.300 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.

4.301 In the Middle East, universality will continue to be difficult with respect to Egypt and Israel, as both States have continued to make a conscious political decision to stay out of the Convention.

4.302 The remaining challenges to universality are unique to each State not Party. This calls for a targeted approach to universality, tailored to meet specific national requirements for adherence. Current experience indicates that the programmes of the Secretariat, complemented by bilateral contacts with States Parties, have been effective in promoting universality. The Secretariat will continue to give priority to achieving universal adherence to the Convention; however, given the foreseeable challenges and regional dynamics, such efforts are likely to be more successful if they are supported and strengthened by the continued cooperation and assistance of States Parties. The cooperation and assistance of States Parties may include reaching out to and identifying potential stakeholders and partners in States not Party who may be capable

of exerting influence on decision making, along with additional funding through the OPCW regular budget to support tailor-made programmes or events. In addition, the Secretariat will continue to facilitate the participation of States not Party in OPCW-related events.

Cooperating with other relevant international organisations

Introduction

- 4.303 Cooperation with international and regional organisations is not a new modality for the Organisation. Such cooperation has taken a range of forms, including reciprocal participation in events, mutual learning from experiences and, when appropriate, sharing resources and expertise. Such cooperation has an overall aim of addressing contemporary global challenges in a more effective and efficient manner.
- 4.304 The need to explore further cooperation with relevant international organisations in the context of non-State actors was underscored at the Third Review Conference.⁴¹ However, at that time, the full extent to which the emerging crisis in the Syrian Arab Republic would impact the future of the OPCW was not yet known. Since 2013, the OPCW missions in the field, notably in Iraq, Libya, and the continuing mission in the Syrian Arab Republic, have been anything but “business as usual” and have emphasised the importance of cooperation with relevant international organisations.
- 4.305 Standing agreements, such as the Organisation’s relationship agreement with the United Nations (which entered into force in 2001) and supplementary arrangements, are useful and a good example of two organisations being adequately prepared to work together before a crisis occurs. A particular example is how the OPCW was prepared in 2013 when the United Nations Secretary-General initiated his investigations in the Syrian Arab Republic.
- 4.306 Cooperation with international organisations is not limited to only preparing and responding to contingencies, but it is also essential for the mitigation of the chemical terrorism risk.

Developments

- 4.307 As authorised by the Council, a memorandum of understanding with the WCO was concluded on 13 January 2017. This agreement expands cooperation on tightening national and international controls on the trade in toxic chemicals, and puts in place procedures that will further enhance cooperation between the WCO and the OPCW. In particular, the relationship takes the form of consultations, exchanges of information and documents, technical cooperation, as well as cross-representation at relevant meetings.
- 4.308 Within the CTITF framework, the importance of cooperation with relevant international organisations was highlighted during a table-top exercise focusing on

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“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” (paragraph 9.145 of RC-3/3*).

inter-agency cooperation and communications following a hypothetical chemical and biological weapons attack by a terrorist. This exercise was conducted on 19 and 20 January 2017 at OPCW Headquarters, and involved the RRAM and 14 international organisations. Financial support was provided by the Government of Canada. A follow-up workshop took place in The Hague on 9 and 10 April 2018, during which the participating organisations discussed their action plans containing practical steps towards enhanced preparedness, exchange of information, and cooperation in case of an attack.

- 4.309 On 20 March 2018, the Director-General signed the “Global Counter-Terrorism Coordination Compact”, which espouses the principles under which the 38 CTITF entities will operate. This non-binding framework between the Secretary-General and the heads of CTITF entities is intended to help coordinate their operational-level activities, and avoid duplication of efforts among the entities.
- 4.310 The Secretariat engaged a number of international organisations to explore possibilities of where deeper cooperation would be mutually beneficial. These included the CTBTO and the IAEA, in relation to learning lessons in the area of verification regimes, training and logistical aspects of deploying inspectors, and emerging technologies.
- 4.311 The OEWG-T and its sub-working group on non-State actors also provided opportunities to better understand the mandates of a number of international and regional organisations, such as the Global Partnership Against the Spread of Weapons and Materials of Mass Destruction, the European External Action Service, the United Nations Counter-Terrorism Committee Executive Directorate, the European Union Agency for Law Enforcement Cooperation (Europol), UNICRI, INTERPOL, and the African Centre for the Study and Research on Terrorism.
- 4.312 The Organisation also continued to be responsive in its support of specific initiatives of other organisations in areas of common interest. For instance, the Organisation supported a United Nations Office on Drugs and Crime initiative to strengthen Iraq’s national capacity to address the threat of the dual use of chemical materials for terrorist purposes by briefing a high-level delegation from Iraq on the support the Secretariat can provide in this regard. The Organization for Security and Co-operation in Europe also requested technical support for its projects related to improving the Ukrainian national regulatory system on chemical safety and security, establishing a Ukrainian national reference centre, and strengthening controls over cross-boundary movement of toxic chemicals.
- 4.313 The Organisation has exchanged letters of intent with the WHO aimed at establishing more formal arrangements of cooperation in a number of areas.
- 4.314 The long-standing cooperation with the United Nations Security Council 1540 Committee also continued during the period under review. The OPCW supported the Committee during its comprehensive review in 2016 of the status of implementation of resolution 1540. 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, and customs.

Conclusions and future considerations

- 4.315 For cooperation between international organisations to flourish, the Organisation will need to continue exploring with each relevant international organisation the avenues of cooperation that offer synergies with mutual benefit for the organisations and their members. Existing agreements, such as the memorandum of understanding on cooperation between the Secretariat and the Commission of the African Union, which has been in force since 2006, will need to be reviewed and reinvigorated, keeping in mind the contemporary security context. Concluding standing arrangements with other organisations relevant to the OPCW's work should be pursued further, with priority given to the WHO and INTERPOL.
- 4.316 The lessons from the OPCW missions in Iraq, Libya, and its ongoing mission in the Syrian Arab Republic have shown the value of standing legal arrangements that institutionalise cooperation between organisations, rather than trying to improvise them ad hoc, especially in a time of crisis.

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

Introduction

- 4.317 Since the Third Review Conference, the Organisation has continued to expand its external engagement with key stakeholders, including through its public diplomacy activities. Such activities help increase 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

- 4.318 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.
- 4.319 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 massive 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.

Outreach activities

- 4.320 The Secretariat has made use of major events to raise the profile of the Convention and the Organisation. For instance, a commemorative event was held in Ieper on the occasion of the centenary of the first large-scale use of chemical weapons. The gathering was addressed by the Belgian Minister of Defence and the Mayor of Ieper, and was attended by media representatives. The Ieper Declaration, issued at that gathering, reaffirmed States Parties' enduring commitment to the goals enshrined in the Convention. In support of the Ieper commemorative gathering, the Secretariat made the event accessible via live webcast, and developed a dedicated website (www.ieper100.org), which includes a link to "Commemorating the Centenary of the First Large-Scale Use of Chemical Weapons", a film record of the gathering. The website also features a digital exhibition with contributions from Belgium, Germany, Latvia, Poland, and the Russian Federation.
- 4.321 The Director-General hosted several commemorative ceremonies, including for the victims of chemical attacks at Halabja and Sardasht, and the annual Remembrance Day for All Victims of Chemical Warfare each 29 April.
- 4.322 The Conference, at its Twentieth Session in 2015, adopted a decision to designate 29 April—the date of the entry into force of the Convention—as the "International Day for the Foundation of the Organisation for the Prohibition of Chemical Weapons" —or "OPCW Day". The Secretariat hosted a conference from 2 to 4 May 2016 entitled "Chemical Safety and Security in a Technologically Evolving World", to inaugurate the first OPCW Day. The event brought together stakeholders from across relevant communities to discuss three themes—chemical safety and security, technology foresight, and future scenarios—that are relevant to the work and the future of the Organisation.
- 4.323 The twentieth anniversary of the entry into force of the Convention and the founding of the Organisation provided another opportunity to promote the Convention and the work of the Organisation throughout 2017. Over 40 anniversary-related events were held by the Secretariat, States Parties, and other partners in each of the five regions. To support involvement by States Parties and external partners in the twentieth anniversary, a dedicated website with a range of resources was created.
- 4.324 The Secretariat has also developed a public outreach programme, introducing the OPCW to thousands of people, by hosting The Hague International Open Day and participating in the Open Days of the EU and the United Nations in Geneva, and by welcoming visiting groups of diplomats, scientists, civil society representatives, officials, researchers, and students. Continuous innovations to these programmes have yielded measurable results: during the 2017 International Open Day over 900 visitors were attracted to OPCW Headquarters and a further 140,000 people were reached online through social media.
- 4.325 For over nine years now, the Secretariat has continued to co-organise, with the TMC Asser Institute, a week-long training programme on WMD disarmament and non-proliferation geared towards early to mid-career professionals.

- 4.326 In addition to the special events and programmes organised by the Secretariat to reach out to different stakeholders, the 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.

Chemical industry

- 4.327 Since the Third Review Conference, the Secretariat has significantly increased its engagement with industry in a variety of areas. In July 2015, the OPCW and ICCA concluded an exchange of letters to formalise the relationship between the two bodies and promote greater cooperation. The letters established the OPCW-ICCA Joint Steering Committee, to identify areas of cooperation between the OPCW and ICCA, to decide upon and prioritise common initiatives and projects, and to oversee their execution. The letters also established the Chemical Industry Coordination Group (CICG) as a working-level group consisting of staff from both organisations; it reports to the Joint Steering Committee and identifies and explores other potential areas of mutual interest.
- 4.328 By the end of 2017, the CICG had met six times (November 2015, January, August, and December 2016, and June and November 2017) and the OPCW-ICCA Joint Steering Committee had met twice (April 2016 and October 2017). 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.

Verification

- 4.329 Following a decision of the Joint Steering Committee, industry associations hosted meetings and workshops in 2016 and 2017 to address the issue of transfer discrepancies in a collaborative manner with the OPCW. The meetings focused on the sources of transfer discrepancies and measures to mitigate their occurrence.
- 4.330 The Joint Steering Committee also agreed to pursue opportunities for States Parties, the chemical industry, and the Secretariat to share their experiences with declarations and inspections, with the goal of identifying best practices and areas for improvement. In this regard, chemical industry representatives participated in various meetings with National Authorities. Annual meetings of chemical industry representatives and National Authorities have been held each year since 2014, and ICCA has participated in a number of regional National Authorities meetings. The Nineteenth Annual Meeting of the National Authorities at the OPCW in November 2017 included, for the first time, a segment dedicated to industry engagement, with the participation of ICCA representatives, to facilitate discussion on issues of mutual interest.
- 4.331 Experts from 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 2017, ICCA presented its views on the future priorities of the OPCW in regard to verification to the Open-Ended Working Group on Future Priorities. To assist industry further in Article VI verification efforts, in March 2015 the Secretariat made available on the

OPCW website a suite of e-learning tools that provide guidance for the submission of declarations to National Authorities and preparations for inspections.

Capacity building

- 4.332 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,⁴² 16 chemical plant sites in 13 States Parties hosted participants of the Associate Programme for a three-week training course in 2016, while 18 sites from 15 States Parties did so in 2017. The courses allowed participants to gain exposure to modern practices in chemical industries, with a special focus on chemical safety.
- 4.333 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 2016 and 2017. Also in 2016 and 2017, chemical industry representatives made presentations during the Symposium on Women in Chemistry.

Education and outreach

- 4.334 Education and outreach is another area in which the Secretariat has increased engagement with industry. 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, the ICCA Council Secretary attended the ceremony marking the twentieth anniversary of the OPCW in April 2017, and chemical companies and industry associations actively participated in numerous national or regional events that commemorated the twentieth anniversary 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.
- 4.335 Following the establishment of The Hague Ethical Guidelines, the Director-General wrote a letter in January 2016 to the ICCA Council Secretary to request that ICCA consider publicly endorsing the Guidelines and bringing them to the attention of ICCA members. ICCA responded by mandating its Responsible Care[®] Leadership Group with following up on the dissemination of the Guidelines.
- 4.336 A representative of ICCA has been invited to attend all meetings of the ABEO since its first session in April 2016, and activities involving chemical industry have been addressed at all ABEO meetings.

Chemical safety and security

- 4.337 Chemical safety and security is another area in which cooperation between the Secretariat and chemical industry is increasing. In November 2016, following input voluntarily provided by States Parties regarding their specific needs in chemical safety and security management, as well as their respective countries' existing tools, guidance, and best practices in this area, the Secretariat issued a report on needs and

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The German Chemical Industry Association (VCI), the Italian National Chemical Industry Federation (FEDERCHEMICA), the Spanish Chemical Industry Federation (FEIQUE), the Brazilian Chemical Industry Association (ABIQUIM), and the Federation of Indonesian Chemical Industry (FIKI).

best practices in chemical safety and security management.⁴³ Following the publication of the report, the Secretariat organised a series of workshops to further discuss needs assessment and dissemination of relevant best practices, and these workshops were also attended by chemical industry representatives.

- 4.338 In September 2017 representatives of chemical manufacturers and chemical trade associations were invited to participate in the “Expert Workshop on International Chemical Security Coordination”, with the principal aim of building consensus among the OPCW’s key stakeholders (industry, think tanks, international organisations, and academics) on the need to increase international cooperation on chemical security. Chemical industry representatives participated in a total of 13 chemical safety and security management workshops organised by the Secretariat in 2016 and 2017.
- 4.339 During the “International Conference on Chemical Disarmament and Security: The OPCW’s Contributions to Global Peace and Security”, which took place in April 2017 in Doha, Qatar, chemical industry representatives were also invited to speak on ongoing and planned initiatives for the security of chemical facilities and the transport of chemicals to eliminate or reduce risks.
- 4.340 In 2017, as a follow-up to the numerous communications from chemical industry associations and chemical societies condemning the use of chlorine as a weapon, experts of the American Chemical Society, the American Chemistry Council, Euro Chlor (an affiliate of Cefic—the European Chemical Industry Council), and the Union des Industries Chimiques (a member of Cefic), offered to assist the Secretariat in its mission by sharing relevant knowledge. Expert consultations were subsequently held between the Secretariat and the aforementioned organisations.

Civil society

- 4.341 The Secretariat will continue encouraging civil society’s participation in the future sessions of the Conference, with appreciation for their important role in the promotion of public understanding of the Convention worldwide.
- 4.342 The Secretariat will also continue to be attentive to NGOs’ views and welcome their substantive contributions to the debate about the current and future challenges of the worldwide prohibition of chemical weapons.
- 4.343 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 steadily grown. Forty-six representatives of 22 NGOs were present at the Nineteenth Session of the Conference in 2014. At the Twenty-Second Session in 2017, participation doubled to nearly 100 representatives of 52 NGOs—the highest number in the past five years. These results testify to an increase in NGO interest in

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Non-paper by the Secretariat: “Needs and Best Practices on Chemical Safety and Security Management” (dated 25 November 2016). Available at: https://www.opcw.org/fileadmin/OPCW/ICA/ICB/OPCW_Report_on_Needs_and_Best_Practices_on_Chemical_Safety_and_Security_ManagementV3-2_1.2.pdf.

participating in the sessions of the Conference and in providing exhibits. The NGO statements made during the general debates have become an accepted part of the proceedings and a way for States Parties to hear from civil society. Civil society groups have organised side events and exchanged views with one another and with the representatives of the Secretariat.

- 4.344 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 EU funds provided to the OPCW for this purpose.

Education and outreach

- 4.345 Education and outreach (E&O) continued to form an integral part of the efforts to engage with external stakeholders. In pursuing its E&O activities, the Secretariat has been guided by recommendations contained in the final report of the Third Review Conference (RC-3/3*).
- 4.346 Relevant E&O activities have become more sustainable and cost effective. There has been more engagement with enthusiastic educators to help promote and amplify the Secretariat's E&O activities. Senior management of the Secretariat has also expanded its engagement with educational institutions through speeches and presentations, including by the Director-General, at universities, as well as through conversations with high school students.
- 4.347 The Secretariat continued to develop and disseminate audio-visual materials to promote the work of the OPCW. Several new videos have been produced since the Third Review Conference, notably, those that address the mission of the OPCW, Ieper, the Nobel Peace Prize, the FIRES short documentary series, and the OPCW's twentieth anniversary. EU funding was essential to support the production of the FIRES series as well as the twentieth anniversary video. Other short video projects are being piloted to reach out to the next generation to inspire them about careers in international affairs.

The Advisory Board on Education and Outreach

- 4.348 E&O was given a significant boost with the establishment of the Advisory Board on Education and Outreach (ABEO) in 2015. Following the decision to establish the ABEO, a call for nominations was issued in conformity with its terms of reference (S/1323/2015, dated 4 November 2015). Subsequently, the Director-General appointed 15 experts to serve on the Board for an initial term of three years (EC-81/DG.9 C-21/DG.2, dated 18 February 2016).
- 4.349 In its first year of operation in 2016, the Board convened for two sessions during which it concentrated on establishing its programme and practices of work and on several specific issues on which the Secretariat sought advice. In establishing its programme of work, the Board ensured a balance between the conceptual and strategic part of its mandate and its more practical aspects.
- 4.350 The ABEO held a further two sessions in 2017. Based on its work throughout the year, the ABEO submitted a report to the Director-General (ABEO-5/1, dated

12 February 2018) in which it identified the best practices and latest advances in E&O theory relevant to the Organisation's engagement activities, related this E&O theory to the OPCW's mandate and main areas of work, and outlined a portfolio of E&O projects and activities.

- 4.351 The Director-General subsequently requested the Board to focus its efforts on producing a brochure with practicable tips for States Parties on how to increase the effectiveness and efficiency of their E&O activities.

Media mentions

- 4.352 Engagement with the media, both in terms of traditional media (e.g., 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 been able to increase awareness of its mission and activities by adopting a strategic approach that focuses both on public and digital diplomacy. As part of adopting a more open approach, media briefs have been published to help the media and other experts more easily find public OPCW information. Interviews with the media, either one-on-one or through organised media round tables, have also helped.

- 4.353 After the record high number of media mentions of the OPCW in 2013 and 2014, because of the mission to eliminate the Syrian chemical weapons programme and the awarding of 2013 Nobel Peace Prize to the Organisation, media mentions have steadily increased since 2015. At the end of 2017, the OPCW had received 25,843 media citations, an increase of 65% from 2015. The Organisation continues to attract high media interest, most notably with regard to developments in the Syrian Arab Republic, efforts to counter the use of chemical weapons by non-State actors, progress in eliminating chemical weapons, and the OPCW's twentieth anniversary.

OPCW digital properties

- 4.354 The official OPCW website and associated microsites continue to draw significant levels of traffic, with 651,000 unique users visiting the website in 2017. This is a 47% increase compared to 2014, when there were 442,262 unique users. Owing to the implementation of a new strategy aimed at using social media and shaping the OPCW's digital presence, this is the first time the OPCW surpassed the previous website traffic peak of 2013.
- 4.355 Plans began in late 2016 to completely overhaul the official OPCW website (i.e., new front-end user interface, back-end content management system, and hosting platform). The new website, which will launch in 2018, is designed to serve the Organisation as a centrepiece of its digital outreach initiatives for the next decade. In line with the recommendations of the Third Review Conference, investments have been made to have the core content of the website available in all the official languages of the OPCW.

Social media

- 4.356 In 2015, new analytics tools were introduced to better understand the OPCW's social media audiences, and the Secretariat's digital communications capacity continues to

increase measurably according to metrics for social media platforms. Each social media post and campaign is designed to increase awareness and enhance stakeholder understanding of the work and activities related to the Organisation and the Convention. There is an increasing reliance on social media to meet the persistent demands for information and to convey accurate information. Investment in social media platforms like Twitter, Facebook, and LinkedIn has enabled the Organisation to amplify its messages so that they are heard by more people overall and in different parts of the world. As an example of a measurably successful social media campaign, the “20 Moments” campaign was developed to highlight the OPCW’s progress over the last two decades. The campaign reached over 280,000 people across the OPCW’s social media channels. To help raise the profile of the twentieth anniversary events and initiatives that took place throughout the year and around the world, the social media hashtag campaign #OPCW20 was created, reaching nearly 853,000 people. In aggregate, social media related to the twentieth anniversary reached over 1.1 million people around the world.

OPCW–The Hague Award

- 4.357 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.
- 4.358 The Award recognises outstanding contributions by individuals or institutions in advancing the objectives of the Convention. Since its inception recipients of the award have been:
- (a) Prof. Robert Mathews of Australia;
 - (b) The Finnish Institute for Verification of the Chemical Weapons Convention (VERIFIN);
 - (c) Prof. Balali-Mood of the Islamic Republic of Iran;
 - (d) Prof. Alistair Hay of the United Kingdom of Great Britain and Northern Ireland;
 - (e) The African Centre for the Study and Research on Terrorism (ACSRT); and
 - (f) The International Master Courses in Protection Against CBRNe Events at the University of Rome Tor Vergata.
- 4.359 The Secretariat has promoted the award through both traditional and social media. The award ceremony that took place during the first day of the Conference was webcast live and attracted viewers from numerous countries. The Secretariat produced video interviews with the award recipients to highlight their contributions to the goals of the Convention. The video interviews were posted on YouTube and promoted across the OPCW’s social media channels.

Conclusions and future considerations

- 4.360 In terms of progress, States Parties have reached a consensus and accorded clear priority to the importance of external engagement to ensure the credibility of the Organisation as it continues to evolve and emphasise the other facets of its mission. The Vision Paper (S/1252/2015) calls for investments in a wider range of activities, including stakeholder engagement, to ensure that the Organisation remains relevant. External engagement is also one of the four priority areas identified by the Secretariat in the Medium-Term Plan (EC-83/S/1 C-21/S/1).
- 4.361 Since the Third Review Conference, the scope of external engagement has expanded and the intensity of engagement activities has increased, with external stakeholders able to contribute substantially into the OPCW decision-making process. There has been increasing interaction, synergy, and collaboration among external stakeholders.
- 4.362 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. Further assessment is needed to understand where investments in external engagement will yield the maximum impact. 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 importance of effective and timely communication and engagement with external stakeholders under crisis situations.
- 4.363 Currently, the OPCW is trying to engage all stakeholders. A strategic approach for external engagement 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, 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.

F. ORGANISATIONAL GOVERNANCE

Articles XII to XV and final clauses

- 4.364 The implementation of Articles XII to XV and the final clauses of the Convention have not given rise to any issues in the period since the Third Review Conference. In the view of the Secretariat, these provisions remain valid and continue to allow for effective implementation of the Convention.

Protection of confidential information

Introduction

- 4.365 The protection of confidential information pertains to the verification of both civil and military activities and facilities, as well as material obtained during authorised contingency missions, including but not limited to the FFM, the DAT, and the

RRAM. 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 the information and data that it receives from the Organisation as confidential and afford it special handling.

Developments

Strengthening the confidentiality regime

- 4.366 The importance of the role of the Director-General in ensuring the application of a stringent confidentiality regime was reiterated by the Third Review Conference. In the area of confidentiality, the Secretariat has focused its efforts on enhancing its capabilities against a solid foundation of security risk management and corporate governance. In addition, it has also continued to develop a systematic approach to providing advice on operational security and confidentiality during inspection missions. Regular targeted training and awareness programmes on security and confidentiality are delivered to all permanent and temporary OPCW staff members.

Information technology security

- 4.367 The Secretariat operates two distinct information technology (IT) networks: the Security-Critical Network (SCN) for storing and processing OPCW confidential information and the Security Non-Critical Network (SNCN) for processing only unclassified information. In this regard, several IT security efforts have been made.
- (a) In order to enhance the security measures supporting the enforcement of the confidentiality regime within the OPCW, investments in best practice technology have been made, including security incident and event management (SIEM) systems for both the SCN and SNCN. These allow logs to be monitored and correlated centrally so issues with patterns of behaviour rather than individual incidents can be identified with more confidence.
 - (b) In order to strengthen the confidentiality regime, rigid enforcement of security access profiles, ensuring that users are allocated only the privileges necessary to carry out their work, are now standard practice.
 - (c) Regular vulnerability scanning is now carried out on both networks to identify risks for consideration by the appropriate risk owners.

States Parties providing details of their handling of OPCW confidential information

- 4.368 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 (“Confidentiality Annex”). The Third Review Conference urged all States Parties to provide this information expeditiously.⁴⁴ The Secretariat maintained its annual requests by sending a note verbale to all States Parties. At the end of the first half of 2017, a total of 120 States Parties had provided such information. This is an increase of 15 since the Third

⁴⁴ Paragraph 9.136 of RC-3/3*.

Review Conference; however, 72 States Parties still must provide this information to the Secretariat, which remains ready to assist States Parties in this regard.

Long-term handling of confidential information

- 4.369 The Third Review Conference noted that no agreement had yet been reached on the issue of developing and implementing guidelines regarding the long-term handling of confidential information, and recommended that the Secretariat submit a report to the Council proposing solutions before the Fourth Review Conference.

Incidents involving confidentiality

- 4.370 On average, around 40 incidents per year involving confidentiality and security have been reported since the Third Review Conference. About half of the incidents were related to security, while the other half related to the handling of confidential information. Almost all confidentiality-related incidents resulted from States Parties delivering confidential material by non-secure means to the Secretariat in a manner that was not consistent with the OPCW Policy on Confidentiality.
- 4.371 Owing to the increase in the Secretariat's IT monitoring capabilities and the fact that confidential information is increasingly being handled electronically, the Secretariat has been able to reduce the number of incidents, although States Parties need to be made aware of the correct ways of making authorised transfers of classified information.
- 4.372 The increased importance of the Security Awareness Programme of the Office of Confidentiality and Security also seems to have had a positive effect on the confidentiality regime.
- 4.373 The amount of classified information being stored by the Secretariat remains a point of concern, because the process of re- and declassifying information by States Parties is not being applied. A stricter application of the rules on how to deliver classified information from the States Parties to the Secretariat will decrease the number of reported incidents involving confidentiality.

Conclusions and future considerations

- 4.374 Since the Third Review Conference, the Secretariat has developed the confidentiality regime to play a more evolved role based on risk ownership and risk management. 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 and awareness will be the supporting foundations of the confidentiality regime.
- 4.375 In addition, the Secretariat has implemented a system for the electronic exchange of classified information between the Secretariat and the States Parties. Meanwhile, the long-term handling of classified information, in combination with de- and reclassification, is an issue requiring a definitive solution.
- 4.376 The Secretariat will continue to decrease the physical handling of classified information as much as possible, and to explore the use of IT applications for increased monitoring capability.

General functioning of the Organisation for the Prohibition of Chemical Weapons

POLICY-MAKING ORGANS

Introduction

- 4.377 The Third Review Conference recognised the important role and function of the policy-making organs in ensuring the implementation of the Convention.⁴⁵ 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

- 4.378 The Conference, the principal organ of the OPCW, held five sessions during the period under review, with an average participation of 133 States Parties. This is a slight increase compared to the average participation of 127 States Parties during the five-year period prior to the Third Review Conference. The level of participation of States Parties was as follows: Eighteenth Session (130); Nineteenth Session (132); Twentieth Session (134); Twenty-First Session (134); and Twenty-Second Session (136). The Conference has taken 58 decisions since the Third Review Conference.
- 4.379 In accordance with the recommendations of the Third Review Conference encouraging the Secretariat to continue strengthening its relationship with regional and international chemical industry associations,⁴⁶ representatives of the global chemical industry and scientific community have been invited to address the Conference during the plenaries of its regular sessions.

⁴⁵ Paragraph 9.139 of RC-3/3*.

⁴⁶ Subparagraph 9.118 (k) of RC-3/3*.

4.380 Pursuant to the “Guidelines for Future Attendance and Participation by Non-Governmental Organisations” adopted at the Third Review Conference (Annex to RC-3/DEC.2), “[a]fter vetting by States Parties through the General Committee, and on its recommendation,, the Secretariat is to submit a list of those eligible NGOs that have not previously been approved for attendance at a review conference, for approval by the review conference and for accreditation to its future sessions.”

Executive Council

4.381 The Council, the executive organ of the OPCW, met for 16 sessions and convened for 24 meetings since the Third Review Conference. In its efforts to improve its methodology of work,⁴⁷ the Council decided that, as from 12 May 2013, it would meet for three regular sessions during its annual cycles. Such scheduling has enabled the Council to develop an effective pattern of work and provided ample time for intersessional work. In light of the Council’s decision to make an effort to reduce the number of days from four to three, to the extent possible,⁴⁸ the Chairperson of the Council made every effort to steer the programme of work of the regular sessions. During the reporting period, the Council was able to conclude its work within three days on six different occasions.

4.382 Since the Third Review Conference, the number of observer States Parties participating in the work of the Council has also increased. Each session of the Council enjoyed high attendance and attracted an average of 47 observers, compared to 37, as reported at the Third Review Conference.⁴⁹ During the period under review, the Council took 97 decisions.

4.383 In addition to its formal sittings, the Council actively carried out its intersessional work. The Chairperson of the Council held several informal consultations. The Chairperson and the Vice-Chairpersons of the Council were also actively engaged in the work of the facilitators. Informal consultations on regular and outstanding issues on the agenda of the Council were held regularly and progress updates were provided by the respective Vice-Chairpersons and/or facilitators at each regular session of the Council.

Decision making

4.384 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 had strengthened the authority of the Convention.⁵⁰ Since the Third Review Conference, this practice continued in the Council and the Conference. There were five exceptional instances when decisions were adopted by voting—once by the Conference, once by the Council during a regular session, and three times at meetings of the Council. After the vote at the Twenty-Second Session of the Conference, the

⁴⁷ Paragraph 9.140 of RC-3/3*.

⁴⁸ Paragraph 12.1 of EC-70/5 (dated 28 September 2012).

⁴⁹ Paragraph 3.410 of RC-3/S/1(dated 12 March 2013) and Corr.1 (dated 20 March 2013).

⁵⁰ Paragraph 9.139 of RC-3/3*.

States Parties reaffirmed their commitment to the principle of decision making by consensus and agreed that voting for the election of members to the Council should not set a precedent to be followed in the future.⁵¹

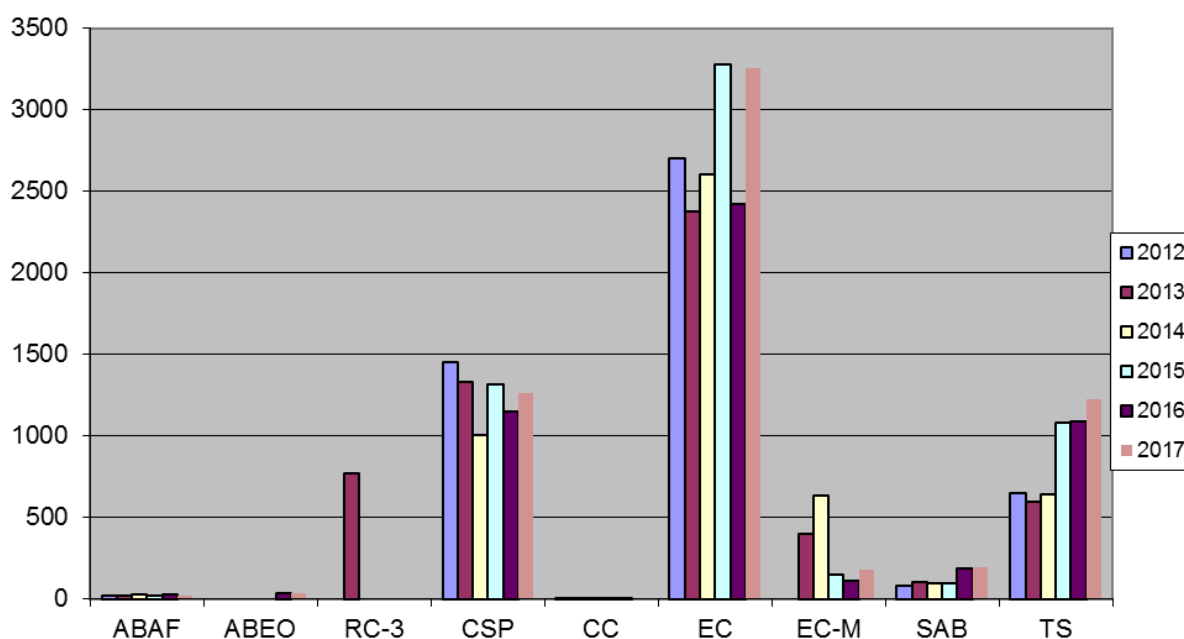
Documentation

4.385 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.⁵² The internal document forecast system, introduced in 2011, facilitates the planning and processing of official-series documents to ensure they are issued to States Parties in accordance with the deadlines for their circulation (EC-49/DG.5, dated 3 May 2007).

4.386 The Secretariat has registered an upward trend in the length of official-series documents (see Chart 12), and in the number of requests for national statements to be issued as official documents (see Charts 13 and 14), which has increased both the financial and human-resource costs of producing them. The Third Review Conference reaffirmed the importance of sustaining the high level of translation and of continuing to meet interpretation requirements,⁵³ and in this regard the Secretariat continues to strive to maintain the high quality of translation and interpretation services for the Conference and the Council.

CHART 12: LENGTH OF OFFICIAL-SERIES DOCUMENTS

Document Statistics 2012-2017 (Number of Pages)



⁵¹ Paragraph 12.2 of C-22/5* (dated 1 December 2017).

⁵² Paragraph 9.153 of RC-3/3*.

⁵³ Paragraph 9.152 of RC-3/3*.

CHART 13: NUMBER OF NATIONAL STATEMENTS ISSUED AS OFFICIAL-SERIES DOCUMENTS, 2012–2017

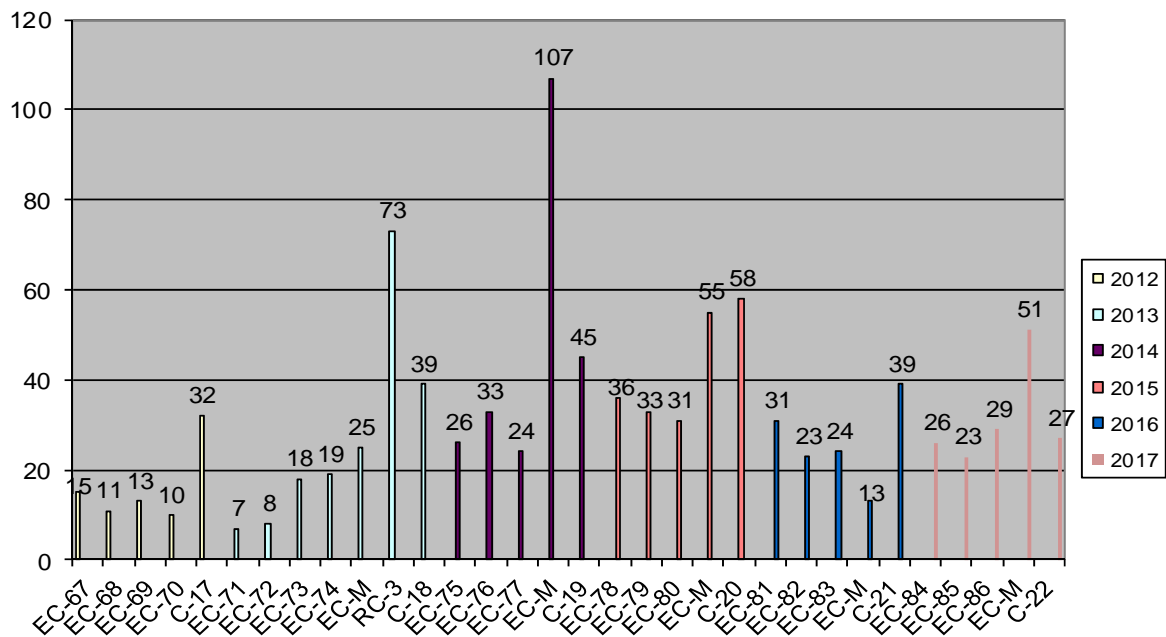
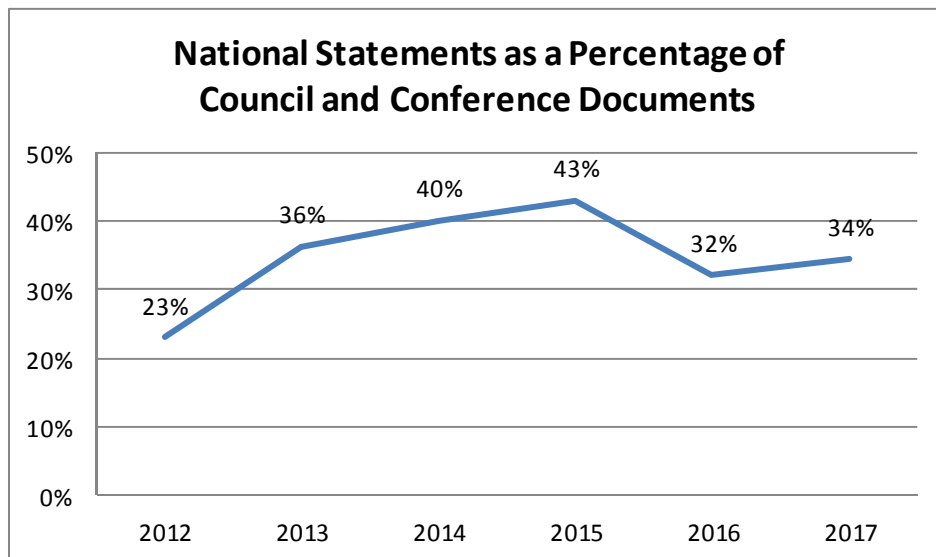


CHART 14: PERCENTAGE OF NATIONAL STATEMENTS AS A SHARE OF ALL OFFICIAL-SERIES DOCUMENTS FOR SESSIONS OF THE COUNCIL AND THE CONFERENCE



Developments since the Third Review Conference

- 4.387 Since the Third Review Conference, participation in sessions of both the Conference and the Council has increased, indicating that a larger number of States Parties show more interest in the work of the policy-making organs and participate more actively in both formal sessions and informal consultations. This is a positive sign for the Organisation, as greater involvement of States Parties in the policy-making process enhances the sense of ownership among them and makes the Organisation stronger. It is crucial for the policy-making organs to maintain a pattern of work conducive to their operation.
- 4.388 As can be seen in Chart 13, there has been a steady increase in the number of national statements issued as official-series documents. Such statements are delivered during the general debates of the Conference and Council by the delegations, which subsequently request that they be issued as official-series documents. Over the five years of the review period, the percentage of national statements as a share of the total number of official-series documents increased from 23% in 2012 to 43% in 2015, then slightly decreased to 32% in 2016 and subsequently increased to 34% in 2017. As can be seen in Chart 12, more OPCW events, such as workshops, seminars, and training courses have resulted in a steady increase in the total number of pages of the Notes issued by the Secretariat.
- 4.389 In line with the Vision Paper (S/1252/2015), the Secretariat has paid close attention to the potential of modern technologies to enhance the effectiveness of servicing intergovernmental processes. The Conference, the Council, and most of the subsidiary bodies recently developed and adopted the PaperSmart approach to promote the use of electronic media and provide participants with electronic access to meeting programmes, agendas, documents, and statements.
- 4.390 The OPCW external server has been promoted as a secure and efficient way for States Parties to receive the official-series documents, in all languages, as soon as they are available.⁵⁴ Since July 2015, an e-notification service was introduced so that users may subscribe and receive an email notification of any new document once it is issued.
- 4.391 Since 2016, the “print-on-demand” system has been consistently applied for all official-series documents considered at the sessions of the Council and the Conference. Savings were made not only with regard to paper but also with regard to personnel (workload) resources.
- 4.392 Charts 15 and 16 below show the benefit of the PaperSmart approach in terms of reducing the production and use of hard copy sets of working documents.

⁵⁴

See <https://external.opcw.org>. A user name and password are required for access.

CHART 15: SETS OF OFFICIAL-SERIES DOCUMENTS DISTRIBUTED IN HARD COPY DURING COUNCIL SESSIONS SINCE 2016

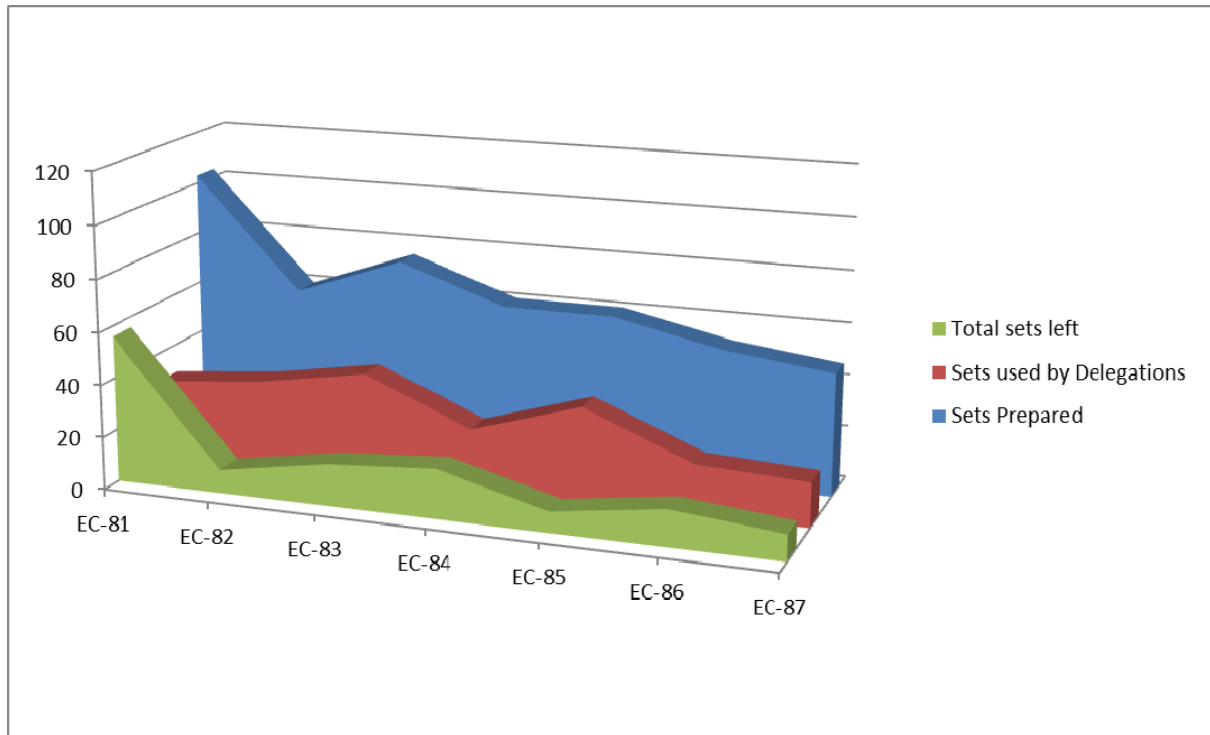
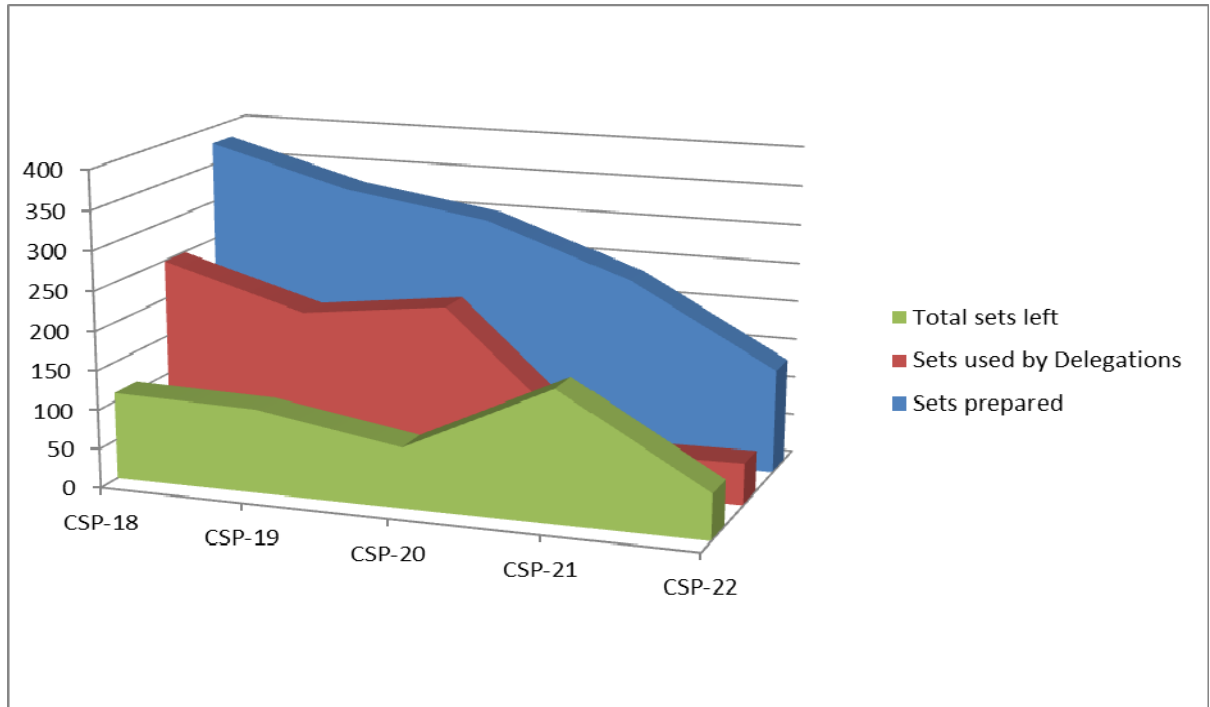


CHART 16: SETS OF OFFICIAL-SERIES DOCUMENTS DISTRIBUTED IN HARD COPY DURING SESSIONS OF THE CONFERENCE SINCE 2013



Conclusions and future considerations

- 4.393 The Secretariat has continued to make efforts to provide documents in a timely and efficient manner. To date, 153 States Parties have access to the external server, and only two States Parties ask to receive hard copy documents via mail. In this regard, the Secretariat is considering discontinuing the hard copy mail service, thus making further financial savings as well as supporting the OPCW's green initiative. The Secretariat will also look into options for environmentally friendly tools that will offer the States Parties easy access to documentation and information. With this in mind, and in furtherance of the PaperSmart initiative, the Secretariat will be approaching the policy-making organs to consider discontinuing the current practice of issuing national statements. The approach used by the United Nations Headquarters with regard to national statements may be considered as the best solution. With the agreement of the policy-making organs, the new approach will mean that once a national statement is delivered and a request is made for it to be posted on the external server or both the external server and the OPCW public website, it will be uploaded as submitted by the requesting delegation. The statement will be posted in the format and language as submitted. For the benefit of other delegations, it will be accompanied by e-files as it was interpreted into other languages of the Organisation.
- 4.394 The Secretariat has adopted a number of successful measures to reduce document waste, with appreciation by the delegations of the States Parties. The impact of such practices has been recorded and the related statistics show the benefit of the PaperSmart approach in terms of sustainability, efficiency, accessibility, and knowledge management (see Charts 15 and 16 above).
- 4.395 In light of this achievement, and in line with the United Nations PaperSmart initiative, the OPCW is currently exploring a long-term strategy to reduce production costs and waste and streamline access to information.
- 4.396 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

- 4.397 The Advisory Body on Administrative and Financial Matters (ABAF), 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

- 4.398 Information on the role of the ABEO is included in the subsection related to the engagement with external stakeholders (see paragraphs 4.348 to 4.351).

Commission for the Settlement of Disputes Related to Confidentiality

4.399 Since the Third Review Conference, an improvement in the number of elected members able to attend meetings of the Commission for the Settlement of Disputes Related to Confidentiality (hereinafter “the Confidentiality Commission”) has ensured that a quorum has been achieved every year (by contrast, two meetings of the Commission in the three years preceding the Third Review Conference were unable to constitute a quorum). This has allowed the Commission to discuss topical issues and exercise mock cases relating to hypothetical breaches or alleged breaches of confidentiality involving States Parties or a State Party and the OPCW.

Scientific Advisory Board

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

EFFECTIVE FUNCTIONING OF THE SECRETARIAT

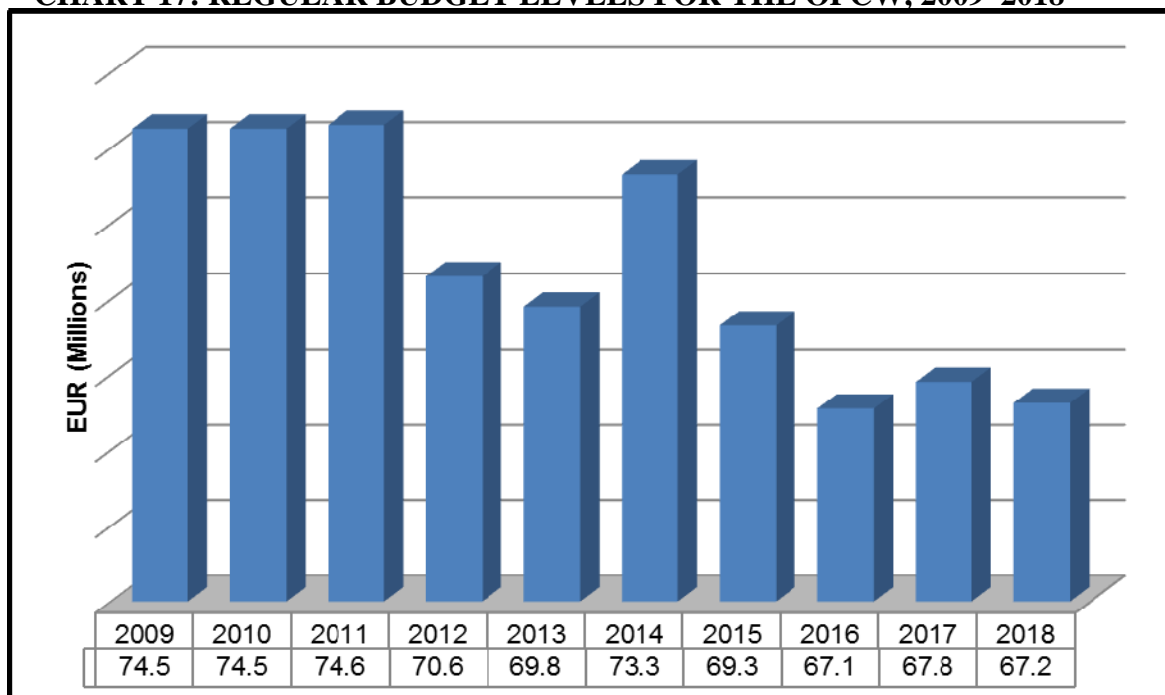
Introduction

4.401 The Secretariat is fully committed to carrying out the functions entrusted to it by 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

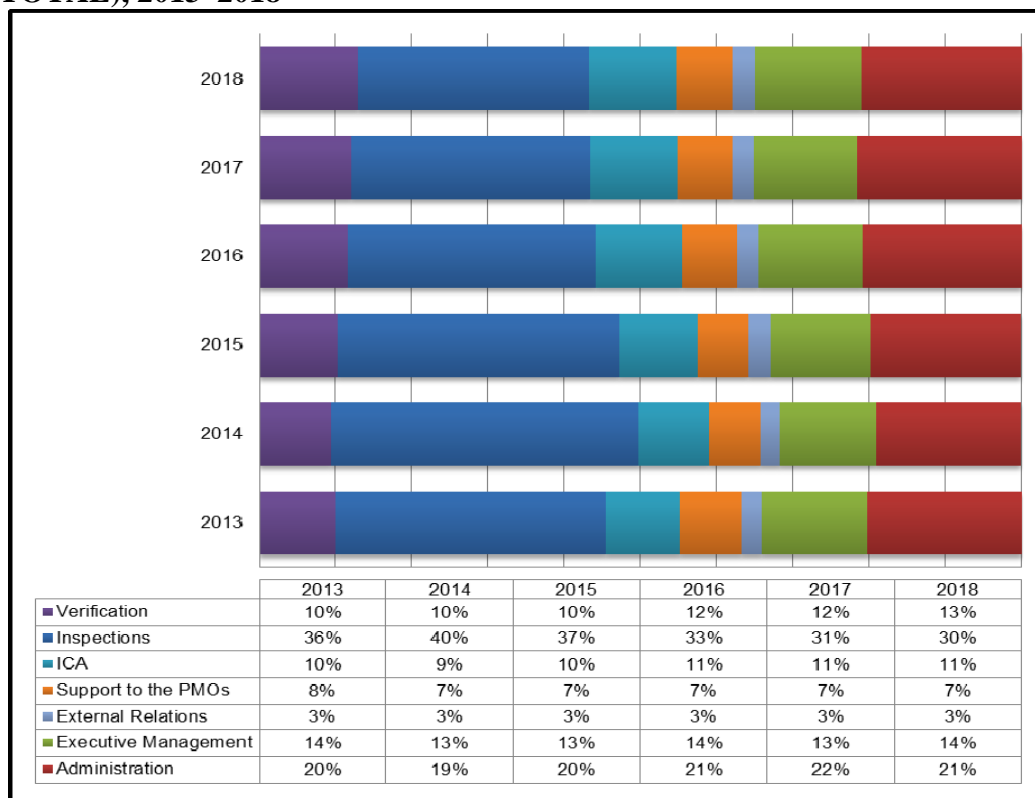
4.402 The annual Programme and Budget of the OPCW is adopted by the Conference at its regular sessions. Chart 17 below highlights OPCW budget levels since 2009.

CHART 17: REGULAR BUDGET LEVELS FOR THE OPCW, 2009–2018



4.403 Expenditure across the Secretariat is divided among seven programmes. Chart 18 below illustrates the division of the budget from 2013 to 2018.

CHART 18: REGULAR BUDGET LEVELS, BY PROGRAMME (PROPORTION OF TOTAL), 2013–2018



Management

Developments

4.404 Since 2005, the annual Programme and Budget has incorporated elements of results-based budgeting (RBB). The Third Review Conference welcomed improvements to the budgetary process of the OPCW since the Second Review Conference, including the ongoing implementation of RBM.⁵⁵

4.405 Since 2010, the Secretariat has embarked on implementing RBM 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.

4.406 Since the Third Review Conference, the Secretariat has reinvigorated its RBM training programme for heads of programmes and subprogrammes, as well as for RBM focal points in individual branches of the Secretariat. In addition, in early 2014 the Secretariat analysed, with the support of an external consultant, the progress made

⁵⁵ Paragraph 9.149 of RC 3/3*.

so far in implementing RBM. In June 2014, a briefing on RBM was provided to the ABAF at its Thirty-Sixth Session.

- 4.407 The Secretariat continues to strengthen the capacity already built on RBM with other synergies in RBM formulation between the Office of Strategy and Policy and the Budget and Finance Branch. In addition, increased training of staff in this area has been a focused effort also involving the International Cooperation and Assistance Division.
- 4.408 Consistent with the Medium-Term Plan (EC-83/S/1 C-21/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 RBM procedures, and strengthened knowledge management structures and processes.
- 4.409 A number of improvements in procedures and processes have been implemented since the Third 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.
- 4.410 Since the Third Review Conference, in order to further promote the efficiency and economy of OPCW operations, and to improve the management of the OPCW's resources, internal audits, confidentiality audits, evaluations, investigations, and advisory services have continued to be conducted. 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.

Conclusions and future considerations

- 4.411 The implementation of RBM 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

- 4.412 The percentage of assessed contributions collected⁵⁶ has seen a reduction from 96% in 2013 to 93% in 2017; 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, Georgia and Uzbekistan have completed multi-year payment plans, and Libya signed and is implementing a multi-year payment plan.
- 4.413 Voluntary contributions during the reporting period ranged from EUR 23 million in 2013 to EUR 10 million in 2017, for a total of EUR 80.5 million over the five-year period, of which EUR 73.3 million was contributed by 32 States Parties to trust funds related to the Syrian Arab Republic. As regular budgets have remained flat for several years, extrabudgetary resources are becoming an increasingly important source of funding for the Organisation, and the administrative directive on trust funds and voluntary contributions was revised in 2017 in order to streamline the administrative and financial management of voluntary contributions.
- 4.414 The Secretariat has maintained International Public Sector Accounting Standards (IPSAS) since their implementation on 1 January 2011, and all subsequent IPSAS-compliant financial statements (dated 31 December 2011 onward) have received an unqualified opinion from the external auditor.

Conclusions and future considerations

- 4.415 IPSAS are universally accepted and enhance the quality and credibility of an organisation's financial statements. The previous accounting standards, the United Nations System Accounting Standards (UNSAS), were developed by the United Nations in the 1990s and were sometimes skewed towards the unique nature of the United Nations. The most significant impact of IPSAS on the OPCW financial statements is that the Organisation reported an accumulated deficit of EUR 5.1 million as at 31 December 2016. This is mainly due to the inclusion of the liabilities for employee benefits that are required by IPSAS when a staff member has provided services in exchange for employee benefits to be paid in the future. Because the IPSAS-compliant financial statements reflect items such as employee benefits, which are not funded by current budgets, States Parties are able to assess the long-term ability of the Organisation to achieve its objectives and honour its commitments.
- 4.416 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 improved financial information that results from IPSAS compliance. A significant risk for the Organisation is the continued ability to produce IPSAS-compliant financial statements, because the current IT system does not fully support the recording of the accrual-based accounting transactions, meaning that significant manual interventions and calculations are required to produce the

⁵⁶ Based upon the assessed contribution collection rate as at 31 December of each year.

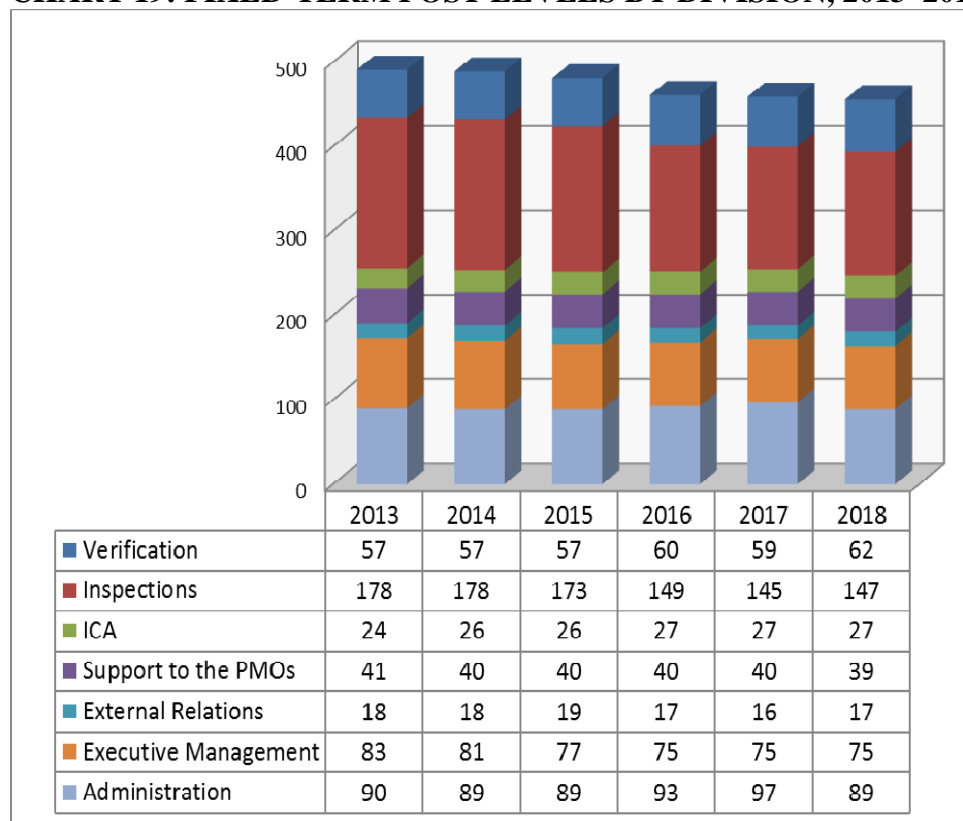
statements. It is anticipated that the implementation of the new ERP system will help to reduce this risk. In addition, in the context of strategic financing, the Open-Ended Working Group on the Future Priorities of the OPCW has been presented with a number of proposals for its consideration, including the introduction of biennial budgeting and a major capital investment fund.

Human resources

Staffing

4.417 Since the Third Review Conference, the number of fixed-term posts has steadily decreased. In 2013, there were 491 posts, decreasing to 456 in 2018. Chart 19 below provides an overview of staffing levels in terms of fixed-term budgeted posts for the period 2013 to 2018.

CHART 19: FIXED-TERM POST LEVELS BY DIVISION, 2013–2018



Implementation of the tenure policy

4.418 The OPCW is a non-career organisation, with the majority of professional and higher grade staff having a maximum tenure of seven years. On average, 49 professional and higher grade staff members subject to tenure separate from the OPCW each year. Chart 20 below provides a historical overview of the turnover of staff subject to tenure from 2013 to 2017. Chart 21 provides an overview of the average length of service of professional and higher grade staff at separation for the years 2013 to 2017.

CHART 20: NUMBER OF PROFESSIONAL AND HIGHER GRADE STAFF MEMBERS SUBJECT TO TENURE AND SEPARATED, 2013–2017

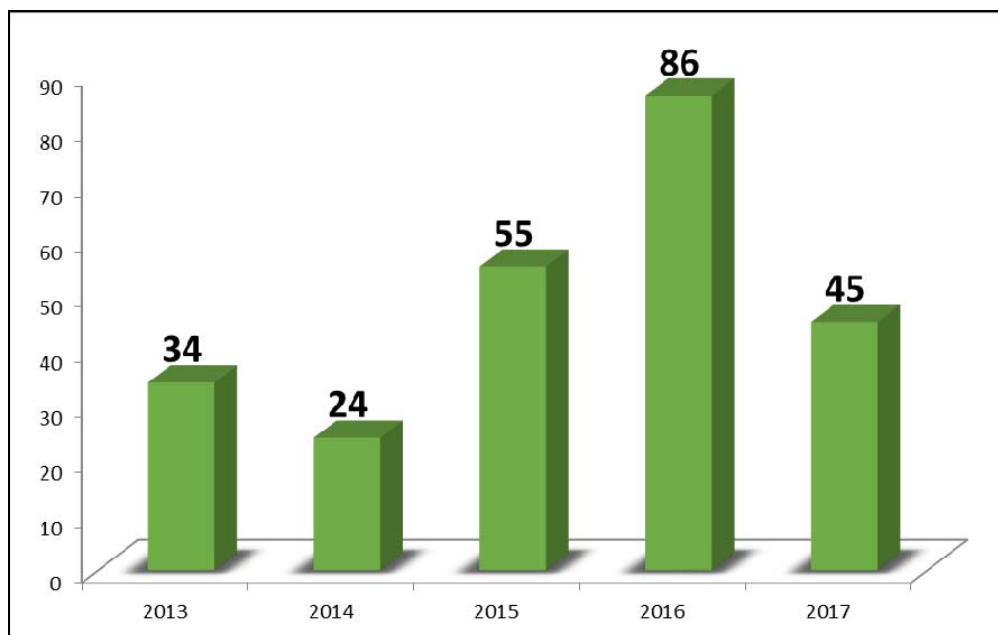
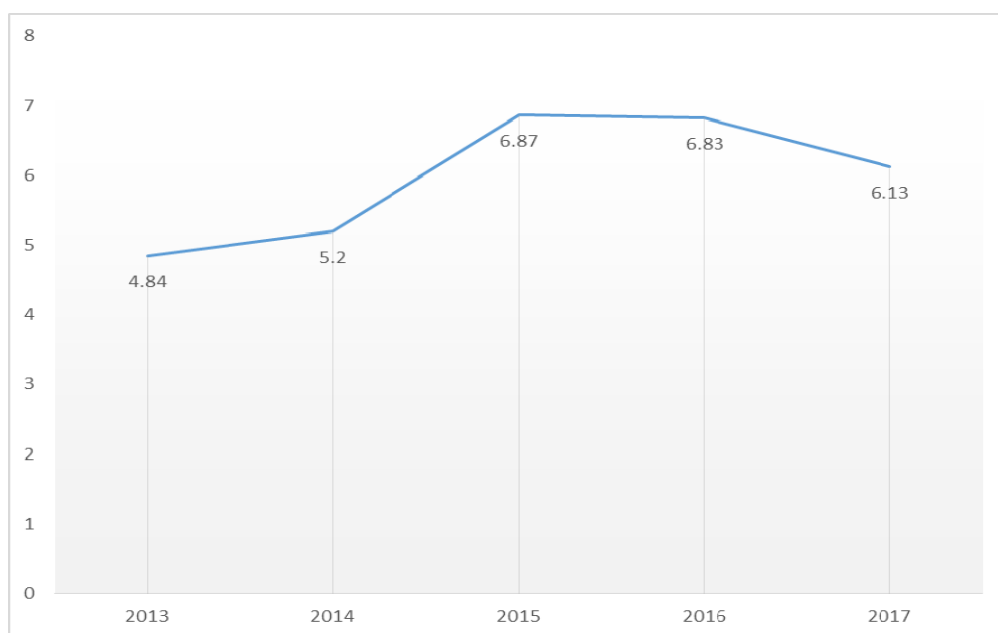


CHART 21: AVERAGE LENGTH OF SERVICE (IN YEARS) OF PROFESSIONAL AND HIGHER GRADE STAFF MEMBERS AT SEPARATION, 2013–2017



4.419 The authority afforded to the Director-General by the Conference at its Sixteenth Session to grant contract extensions or renewals beyond the seven-year length of service expired on 29 April 2016. However, at its Nineteenth Session, the Conference authorised the Director-General to rehire individuals previously designated as inspectors for a maximum of three years. This authority was further extended at the Twenty-Second Session of the Conference in November 2017.

- 4.420 This rehire authority was granted as an exceptional and interim measure only if no other qualified candidates could be found. A maximum of 20% of inspectors could be recruited as rehired staff. Pursuant to this authority, 20 inspectors have been rehired. The first group will reach the maximum permitted rehire period in August 2018 and will separate from the Organisation.
- 4.421 Work has started to reorient human resources (HR) management within the Secretariat to facilitate the further development and deployment of an agile, flexible, and engaged workforce. Recruitment in the context of a recast “talent management” function now encompasses recruitment, learning, and performance management. A more responsive HR function is supported by staff administration, managing the relationship between staff and the Organisation, and an overarching governance function concentrating on strategic and policy matters.
- 4.422 Significant work is now being undertaken to enhance the effectiveness of both the recruitment and retention of staff. Allied to the development of the knowledge management initiatives, significant resources are being invested to continue to ensure that appropriately qualified staff are recruited, engaged, and retained within the Secretariat. Given that tenure remains a significant issue, substantial effort is being directed towards ensuring staff are equipped with new skills, but more importantly, that their bespoke knowledge is captured for the future use of the Secretariat. In addition, significant emphasis is being directed towards further strengthening the OPCW’s inclusiveness and diversity.

Conclusions and future considerations

- 4.423 The integrated functioning of the full spectrum of HR activity has contributed to more predictable, smooth, and cost-effective operations in HR and related areas across the Organisation. By their nature, these contribute to the OPCW’s change-management agenda and operational effectiveness into the future. The integration of a data approach to strategic HR decision making through the creation of an HR data analytics function will further strengthen this process.
- 4.424 The focus continues to move towards maximising the use of the Secretariat’s human resources through a human resources strategy that supports the priorities of the Organisation and, in keeping with global trends in human resources management, emphasises more cost-effective ways of managing human capital. The Secretariat recognises the importance of capitalising on the significant investments made in human resources and, as such, is proceeding with the implementation of a new approach to performance management, concentrating on continuous dialogue and constructive, real-time feedback in order to increase overall performance.

Knowledge management

- 4.425 The Secretariat is systematically implementing knowledge management (KM) initiatives to support the position of the OPCW as a global repository of knowledge and expertise with regard to the disarmament and destruction of chemical weapons and the verification of non-possession and non-use.
- 4.426 The Organisation has developed a KM vision and strategy aimed at instilling a KM culture by 2021 under the motto “ask, learn, and share”.

- 4.427 In 2017, the Secretariat developed a KM road map incorporating the four elements of KM: governance, people, technology, and processes. The road map includes initiatives at the branch/division level, using SharePoint as a communication tool and a team of designated knowledge champions among the Secretariat staff who support and advocate for the implementation of knowledge management in our business processes.
- 4.428 These efforts require sustained commitment and support across the entire Secretariat. A management retreat was held in September 2017, focusing on strengthening organisational commitment to KM. It identified knowledge management practices as a key factor in the OPCW's evolution, and highlighted the importance of supporting such practices by continuously cultivating a corporate culture of knowledge sharing. To this effect, the Secretariat has undertaken a KM training programme for knowledge champions and a workshop session for middle management. The new recruitment process includes knowledge management as one of the necessary competences.
- 4.429 Different KM initiatives are progressing across the Secretariat, with full regard for the requirements of confidentiality, including: a revision of the onboarding process to ensure more efficient orientation of new staff; a knowledge retention programme for staff separating in the Verification Division, focusing on corporate knowledge capture; the identification and retention of vital knowledge related to chemical weapons destruction; an information-sharing initiative for inspectors participating in industrial inspections; and a working group revising safety practices for entry-into-force inspections at Schedule 1 facilities under Article VI.

Enhancing laboratory capacity at the OPCW and in States Parties

- 4.430 The OPCW Laboratory is an embodiment of the OPCW's commitment to science and technology. It is central to the effectiveness and integrity of the verification regime. Furthermore, it contributes to the development and maintenance of capabilities in States Parties through the network of designated laboratories and beyond.
- 4.431 Since the OPCW Laboratory moved into the current Rijswijk facility more than 20 years ago, no major renovations have been undertaken. With the change in the nature and intensity of work in the OPCW Laboratory and the Equipment Store since the Third Review Conference, the OPCW Laboratory has outgrown its current facility.
- 4.432 In this context, the Secretariat has proposed upgrading the OPCW chemical laboratory to a Centre for Chemistry and Technology.⁵⁷ The project aims to upgrade the OPCW Laboratory and Equipment Store to keep pace with current threats and scientific and technological developments, as well as to support capacity building in States Parties. Training and research will be an important area of focus.

⁵⁷ Note by the Secretariat: "Needs Statement for Upgrading the OPCW Chemical Laboratory to a Centre for Chemistry and Technology" (S/1564/2017, dated 22 December 2017 and Corr.1, dated 3 January 2018).

Goods and services

Developments

- 4.433 The administrative directive on procurement (AD/FIN/1) was revised to provide a more strategic focus in driving the procurement function to be on par with public procurement standards by adoption of the best practices from the United Nations and other relevant international organisations.
- 4.434 The revised administrative directive on procurement (AD/FIN/1/Rev.4) enforces an organisational culture of acquisition planning, and has introduced an organisation-wide procurement strategy identifying and recognising the risk profiles of each category of purchases. It then deploys appropriate strategies to achieve best value for money. The directive further emphasises the importance of contract management and vendor performance management to ensure quality supply of goods and services and best value for money during contract implementation

Conclusions and future considerations

- 4.435 The new ERP system will include a contract management module to enhance system support for contract management and vendor performance management. This module and other procurement-related functionality in the ERP is expected to reduce the administrative burden on procurement services and enable more proactive involvement in contract and vendor performance management.
- 4.436 The ERP system's contract, travel, and asset management modules are expected to provide important support to the management of the life cycle of physical and infrastructure assets, contract delivery and vendor performance, monitoring of expenditure over time, and efficiency of services provided.

Information services

Developments

- 4.437 The Secretariat has undertaken several innovations in the use of IT, either identified by the SAB or through market research of emerging technologies. This is encapsulated in the recent IT strategy for the Secretariat which seeks to adopt technologies across the Organisation in a sustainable and outcome-focused manner.
- 4.438 The implementation of new or enhanced information systems applications and workflows in some areas of administration has reduced paperwork and the manual process of administrative tasks, reducing the risk of errors, streamlining activities, and speeding up processes. Moreover, the ERP project commissioned in 2015 is expected to replace a significant portion of the legacy applications in the administrative support domain in 2018.
- 4.439 The VIS and EDNA are being augmented with additional capabilities, such as secured communications, advanced reporting, and analytics. Aligned to the recently adopted IT strategy, specialised teams are dedicated to the development and upkeep of these important applications to ensure their ongoing currency and effectiveness.

- 4.440 The Information Services Branch has continuously maintained the infrastructure and support of the SCN and SNCN, adopting new technologies as appropriate and in full cooperation with the Office of Confidentiality and Security to ensure the ongoing viability and integrity of the networks.
- 4.441 In cooperation with the Information Services Branch, the Inspectorate Division has enhanced field mission capabilities using new telecommunications and monitoring technologies. The Verification Division has implemented secure communication capabilities to support the declarations cycle, and the Administration Division has implemented e-learning capabilities for internal and external stakeholders. Similarly, the External Relations Division has undertaken the renewal of the OPCW's digital presence in the public domain. Planning is under way for an overhaul of the current extranet portal with a view to expanding its functionality and improving its user interface, as well as for the overhaul of the new public website of the OPCW.

Conclusions and future considerations

- 4.442 The IT strategy emphasises the use 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 in accordance with the tenure policy.
- 4.443 The implementation and enhancement of the VIS and EDNA have made it possible to move from hand-typed to electronically imported declarations, decreasing the risk of errors, improving the confidentiality of classified information, and providing new reporting and analytical functions.
- 4.444 The development path for the VIS and EDNA applications includes regular planned improvements, now undertaken directly within the Verification Division after the transfer of capacity to a specialised unit. The aim is to capture and process additional verification-related data in the VIS. The Secretariat plans to develop a completely new version of the EDNA that will provide modern, up-to-date, and distributed means for electronic declarations for the States Parties, providing more capabilities than currently possible.
- 4.445 In the years ahead, in addition to the proactive maintenance, support, and expansion of the IT infrastructure and information systems applications on the SCN and SNCN, the flagship systems that were implemented in the late 1990s will need to be thoroughly reassessed to determine whether they are still capable of meeting organisational requirements in a cost-effective manner.

PRIVILEGES AND IMMUNITIES OF THE OPCW

Introduction

- 4.446 As reflected in paragraphs 48 and 49 of Article VIII of the Convention, the enjoyment of the necessary privileges and immunities is essential for the Organisation, the delegates of States Parties, and the Secretariat to exercise their functions.
- 4.447 The privileges and immunities of the Director-General and staff members of the Secretariat during verification activities are detailed in Part II, Section B of the

Verification Annex. However, the Organisation and its Secretariat are engaged in a wide variety of activities that extend beyond verification activities, and for which privileges and immunities are to be defined in separate agreements between the Organisation and States Parties, to be considered and approved by the Council in accordance with paragraph 50 of Article VIII of the Convention.⁵⁸

- 4.448 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

- 4.449 On behalf of the Organisation, the Secretariat has negotiated individual agreements on privileges and immunities with States Parties. Most of the States Parties that have concluded an agreement have accepted, in large part, the elements of the model agreement proposed by the Secretariat, which closely follow those applied to similar agreements concluded by the United Nations and other international organisations. Modifications are usually limited to addressing processes of domestic approval and legal considerations unique to the relevant State Party.
- 4.450 As at 31 December 2017, 57 agreements with individual States Parties on the privileges and immunities of the OPCW had been approved by the Council, an increase of eight since the Third Review Conference. Since 1 January 2013, seven States Parties have signed an agreement on privileges and immunities. Since the Third Review Conference, nine agreements have entered into force. The Secretariat notes that out of the 57 agreements approved by the Council, 38 have entered into force, thus giving full legal effect to the provisions contained therein. One hundred and thirty-five States Parties have yet to conclude an agreement with the OPCW.
- 4.451 One State Party informed the Secretariat that in 2016 it had enacted domestic legislation granting the Organisation, certain officers of the Organisation, representatives to the Organisation, and persons serving on committees certain privileges and immunities in the exercise of their functions.

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In accordance with paragraph 50 of Article VIII, agreements with States Parties defining the legal capacity of the OPCW and the additional privileges and immunities of the Organisation as referred to in Article VIII of the Convention are to be considered and approved by the Conference. However, the Conference subsequently delegated the authority to conclude such agreements to the Council (see decision on “Privileges and Immunities Agreements between the Organisation for the Prohibition of Chemical Weapons and States Parties” (C-8/DEC.12, dated 23 October 2003)).

Conclusions and future considerations

- 4.452 The Secretariat is of the opinion that efforts to raise the awareness of States Parties on the importance of entering into agreements on privileges and immunities with the OPCW have contributed to the steady progress in the implementation of paragraph 50 of Article VIII. The Secretariat continues its efforts to facilitate the conclusion of agreements on privileges and immunities. Progress in this area will further facilitate the full implementation of the Convention and increase the geographical scope of available locations for programmes and eligible suppliers of goods and services for the Organisation.

HEADQUARTERS AGREEMENT⁵⁹

Implementation of the Headquarters Agreement and cooperation with the Host Country

Introduction

- 4.453 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 amicable cooperation with the Host Country and the relevant local authorities. The Conference and the Host Country have both instituted mechanisms to ensure the operational and subsistence requirements of the OPCW Headquarters in the Netherlands.

Developments

- 4.454 Through the Committee on Relations with the Host Country (hereinafter “the Host Country Committee”), which was established in accordance with a decision of the Conference (C-11/DEC.9, dated 7 December 2006), the Conference has regularly addressed issues arising between the Secretariat and Permanent Representatives of the States Parties on the one hand, and the Host Country authorities on the other. Proceedings and results of relevant discussions within the Host Country Committee have been presented regularly to the Council and the Conference. The issues raised have mainly concerned the issuance of visas and residency cards from the Ministry of Foreign Affairs of the Netherlands (MFA), refunds of value-added tax, and the facilitation of transit of members of Permanent Representations and/or delegations of States Parties at Amsterdam Schiphol Airport.
- 4.455 The Host Country authorities have made efforts to seek solutions to these issues in light of the implementation of the Headquarters Agreement, or have provided explanations in cases where the Host Country is constrained by its own domestic rules and regulations or by other physical limitations. For the purpose of better supporting the international organisations based in the Netherlands (and in The Hague in particular), the MFA and the Municipality of The Hague have made various

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The OPCW Headquarters Agreement was approved by the Conference in decision C-I/DEC.59 (dated 14 May 1997). It was signed on 22 May 1997 and entered into force on 7 June 1997.

contributions throughout the years, by means of facilitating participation in or coordinating a full range of OPCW activities.

- 4.456 For the implementation of the Headquarters Agreement, the Host Country Committee has proven to be a useful platform for the exchange of information, discussion of issues, explanation of situations, and transmission of proposals. During the review period, the Committee held a number of meetings and presented its reports to the Council. Through this Committee, communication and mutual understanding between the OPCW and the Host Country and between the Permanent Missions and the Host Country have been improved.

Future considerations

- 4.457 The Secretariat is of the view that sustained exchanges with the Host Country through the Host Country Committee as well as through bilateral communications between the Secretariat and the MFA promote understanding and cooperation that facilitate the full implementation of the Headquarters Agreement.

5. CONCLUDING REMARKS BY THE DIRECTOR-GENERAL

- 5.1 The experience gained over more than 20 years of successful implementation of the Convention demonstrates the maturity of the Organisation, which has transformed a newly agreed international treaty into a widely respected multilateral regime with almost global reach. States Parties should use this successful experience as one of the key assets of the Organisation as it prepares to meet the significant challenges that lie ahead. As the past five years have demonstrated, these challenges flow not only from the stringent requirements of the Convention but also from the constantly evolving environment within which the OPCW operates. At this juncture it is clear that we need to adapt to new challenges and realities emanating from the security, scientific, technological, economic, and political environments.

Challenges ahead

Complete elimination of chemical weapons

- 5.2 Clearly, the complete elimination of chemical weapons at the earliest possible date remains the primary task. Over 96% of the declared stockpiles of chemical weapons have been destroyed successfully. The requirement to carry out destruction activities under the strict monitoring of the Secretariat in accordance with the decision on the final extended deadline of 29 April 2012 (C-16/DEC.11) should continue to guide our efforts in this respect.
- 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 In this regard, the OPCW and the Secretariat must retain the competence and resources needed to provide the necessary verification of the destruction of chemical weapons, as well as to render technical advice to States Parties when so requested. The Secretariat has embarked on the expansion of the OPCW Laboratory with a view to strengthen its training and research capacity. This, as well as broader knowledge

management efforts on part of the Organisation, will be essential for ensuring continuity in the OPCW's knowledge base and expertise with regard to chemical weapons disarmament and for creating a repository of knowledge on their destruction.

Preventing the re-emergence of chemical weapons

- 5.5 In the foreseeable future, as the destruction of chemical weapons nears completion, we will face a critical moment when the OPCW will need to shift its focus increasingly from the destruction of chemical weapons to the prevention of their re-emergence.
- 5.6 The obligations to prevent the re-emergence of chemical weapons and to ensure that toxic chemicals are used only for peaceful purposes constitute an enduring commitment that has no end point.
- 5.7 Despite continuing progress in treaty implementation, the status of implementation of the Convention indicates that there is still room for improvement in many areas. These include the effectiveness and efficiency of verification mechanisms through the adoption of new tools and methods, the timely submission of full and accurate declarations, national implementation, enhanced capacity to respond to chemical attacks or accidents, the promotion of peaceful uses of chemicals, and chemical security, among others.

More effective and efficient verification to strengthen confidence in compliance

- 5.8 First and foremost, we need to reaffirm and explore a more effective and efficient verification mechanism within the parameters of the Convention in order to ensure continued confidence in the compliance with its provisions. Given the dual-use nature of many toxic chemicals, the well-established verification system should continue to play an important role in preventing the re-emergence of chemical weapons, in particular the use of chemical weapons by non-State actors, including terrorists, as well as the misuse of toxic chemicals by those who deal with them. At the same time, we must remain cognizant that many toxic chemicals that may be of interest to non-State actors are not scheduled chemicals, and are thus not subject to OPCW verification.
- 5.9 In light of the large number of industrial facilities that have been declared to the OPCW and the rapid evolution of the global chemical industry, the foremost challenge in this area will be to ensure the continued refinement and adequacy of the industry verification regime by complementing it with additional risk-based elements. Such a risk-based system could take into account capacities in the areas of chemical production, the degree to which Convention implementing legislation has been promulgated and is implemented, the scope and coverage of voluntary measures by relevant stakeholders, as well as scientific and technological advances.
- 5.10 While declarations will continue to form the basis of inspections, the Organisation will need to enhance its analytical capabilities, putting in place transparent and reliable processes to gather, validate, and evaluate information, thus allowing for a more holistic assessment of how the Convention is implemented. Developing and maintaining such an analytical capability within the Secretariat will contribute to the goal of maintaining confidence in compliance.

- 5.11 The monitoring of imports and exports of all relevant chemicals under the Convention forms an essential aspect of the Convention's objective of preventing the re-emergence of chemical weapons. The Convention requires States Parties to control all exports and imports of scheduled chemicals, and to report annually to the OPCW the export and import of such chemicals above certain thresholds. The information received from States Parties enables the OPCW to implement an effective monitoring regime over the global export and import of scheduled chemicals.
- 5.12 The significant progress already registered in the destruction of chemical weapons entails a progressive phasing out of this activity, despite the fact that new discoveries of chemical weapons continue to be made (especially of OCW and ACW). Additionally, any new States Parties that join the Convention could conceivably possess chemical weapons that would need to be destroyed under systematic verification. Unlike the previous five-year period, the past five years have witnessed the beginning of a reduction in the amount of the Secretariat's resources that have been dedicated to verifying the destruction of chemical weapons.
- 5.13 This reduction will have an impact on the Secretariat's knowledge management requirements. The task ahead is to ensure that routine verification measures, both those related to industry and to chemical weapons, continue to be conducted with a high degree of operational effectiveness, while at the same time retaining knowledge and skills required to respond to contingencies and to conduct non-routine missions. These include the responsibility to conduct challenge inspections and investigations of alleged use of chemical weapons upon request.
- 5.14 In conducting regular assessments of its verification activities, the Secretariat will continue to count on the crucial cooperation and support of the States Parties with a view to improving their effectiveness and efficiency, while maintaining the required degree of confidence, credibility, and transparency.

Advancing chemical safety and security

- 5.15 Bearing in mind the need to prevent the re-emergence of chemical weapons and the misuse of toxic chemicals, it is expected that chemical safety and security will be an important area of OPCW activity in the coming years. Articles VI, VII, X, and XI of the Convention together provide the rationale for the OPCW to engage in activities around chemical safety and security.
- 5.16 The Secretariat has provided technical assistance in the area of chemical security with a view to strengthening States Parties' capabilities. Future activities should continue to be based on continuous engagement with States Parties and relevant stakeholders, to enhance understanding of the challenges they face and to obtain feedback on their needs and requirements.
- 5.17 The OPCW is well placed to be one of the lead international organisations in chemical security. In order to succeed in this area, the Organisation should augment its own capabilities to facilitate the exchange of best practices, explore the science and technology dimensions of chemical security, catalyse international partnerships, and strengthen national capabilities by providing advice in cooperation with international players. Based on greater cooperation with the United Nations and international organisations and mechanisms, including those that have a counterterrorism mandate

such as the Counter-Terrorism Implementation Task Force (CTITF), such efforts should be pursued with a view to taking a lead role in the field of security risks associated with toxic chemicals.

Capacity development to prevent the hostile use of toxic chemicals and to foster international cooperation

- 5.18 We should also attach more importance to OPCW activities in international cooperation and assistance, which aim at strengthening national capacities not only to implement the provisions of the Convention, but also to prevent, detect, and respond to events involving the deliberate or accidental release of toxic chemicals in the broader context discussed above.
- 5.19 With a view to increasing the effectiveness of capacity-building programmes delivered by the Secretariat and to supporting the prevention of the re-emergence of chemical weapons, the Organisation may consider:
- (a) pursuing a more holistic and interconnected approach towards programming, programme implementation and results evaluation across different international cooperation and assistance programme areas;
 - (b) continuing to shift from an activities-based approach to one that places more emphasis on the achievement of results, further embedding principles and best practices of results-based management into its approach to capacity development;
 - (c) expending greater efforts to find the appropriate balance between the regional (including subregional) and national projects directed at individual States Parties in order to achieve meaningful and sustainable outcomes in capacity development; and
 - (d) encouraging States Parties to increase their ownership of the Convention by making greater efforts to embed the Convention, its objectives and requirements, as well as capacity programmes in their national regulatory and administrative systems.
- 5.20 In light of the current and emerging threats related to the possible misuse of toxic chemicals, the role of national implementation will become even more critical. The adoption by all States Parties of national implementing legislation, as well as the effective functioning of National Authorities and their cooperation with relevant stakeholders at the national and regional levels, should therefore remain the focus of the Organisation's capacity-building support. Outreach activities should be intensified to approach the States Parties that have yet to complete the process of drafting comprehensive national legislation. In this regard, the Organisation should enhance its efforts to help States Parties create and maintain regulatory frameworks that fully implement the Convention, thereby promoting conditions for economic development and international exchange.
- 5.21 Assistance and protection, as envisioned by Article X, has growing significance in the context of a changing security environment. The Organisation should therefore enhance the provision of expert advice on establishing or further developing States Parties' emergency response capacity to deal with the use of chemical weapons or the

misuse of toxic chemicals. It should also continue to maintain a state of readiness to provide assistance in case of a request from a State Party that has been attacked or threatened by chemical weapons, and to strengthen the response mechanisms and tools available to the Secretariat to assist States Parties.

- 5.22 Fostering international cooperation in the field of the peaceful uses of chemistry will remain an important goal of the Convention. Government policies are important in creating and maintaining a regulatory context that invites and accommodates scientific, technological, and economic development and exchanges. The Organisation should complement States Parties' actions by continuing to focus on its three strategic programme areas: integrated chemicals management, enhancement of laboratory capabilities, and chemical knowledge promotion and exchange. The Secretariat's programme objectives and content will be based on risk and needs assessments, with an approach to ensure national ownership.

Enhancing engagement with the widest possible range of stakeholders

- 5.23 Last but not least, we need to aim at more regular and effective engagement with the widest range of stakeholders. This will also pertain to further universalisation efforts, which will remain focused on tailored approaches to the remaining States not Party, as well as working through States Parties' bilateral channels, international forums and regional organisations, as well as think tanks that could provide a platform for consultation and cooperation in support of universalisation.
- 5.24 In recent years, the scope of external engagement has expanded and the intensity of engagement activities has led to increasing interaction, synergies, and collaboration with and among external stakeholders. In order to achieve the object and purpose of the Convention, the Organisation will continue to require strong cooperation with other international and regional organisations, as well as the full and continuing support of the chemical industry and the wider interested public, as represented by relevant civil society organisations.
- 5.25 To ensure the continued relevance of the OPCW, sustained investments in the Secretariat's external relations infrastructure are required. This is the only way to ensure a widening range of activities in the area of stakeholder engagement. The Organisation's external engagement will also continue to benefit from the advice provided by the Advisory Board on Education and Outreach. The Board should therefore be accorded the necessary resources to continue performing its important role.

Future direction of the Organisation

- 5.26 The Fourth Review Conference takes place at a critical moment, as the Organisation transitions from a focus on the verified destruction of declared chemical weapons stockpiles to one on preventing the re-emergence of chemical weapons. The outcomes of the Fourth Review Conference will determine the shape of this transition and the future direction of the Organisation more broadly. The time to adapt to the changing environment is now, so that we can continue **working together for a world permanently free of chemical weapons**.