

Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and their Destruction

This chapter introduces the Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction – commonly known as the Chemical Weapons Convention (CWC) – and its implementing body, the Organisation for the Prohibition of Chemical Weapons (OPCW), and examines the provisions of the Convention relevant to the international trade in chemicals. The OPCW seeks to achieve a world permanently free of chemical weapons and to contribute to international security and stability. The trade measures discussed relate to, *inter alia*: the transfer-related obligations undertaken by states parties upon acceding to the Convention; the quantitative restrictions placed on the import and export of certain toxic chemicals relevant to the object and purpose of the Convention; and the monitoring and verification by the Technical Secretariat of the OPCW of such transfers, in furtherance of its mandate of promoting non-proliferation and preventing the re-emergence of chemical weapons. The chapter further considers these Convention-based import and export obligations in relation to the WTO agreements and concludes with relevant recent developments and future considerations.

Background

The OPCW is the implementing body of the Convention.¹ The OPCW seeks to achieve a world permanently free of chemical weapons and to contribute to international security and stability. It was established by states parties to the Convention to achieve the object and purpose of general and complete chemical disarmament under strict and effective international control and promoting the use of chemistry for peaceful purposes; to ensure implementation of its provisions, including international verification of compliance with it; and to provide a forum for consultation and cooperation among states parties.²

The OPCW consists of three organs: the two policymaking organs are the Conference of the States Parties (CSP; 193 states parties) and the Executive Council (EC; 41 states parties); and the third organ is the Technical Secretariat, which is responsible for the day-to-day work of the OPCW. The Technical Secretariat verifies the destruction of chemical weapons, conducts inspections of chemical industry and military facilities, and assists states parties in the fulfilment of their CWC obligations.

Article I of the Convention identifies the general obligations that each state party undertakes upon accession to the Convention. States parties are *inter alia* required to declare and destroy their chemical weapons stockpiles and production facilities. They are further prohibited from exporting or importing chemical weapons, or from providing assistance or encouragement to other countries to develop or acquire chemical weapons.

Each state party is also required to adopt the necessary measures to ensure that toxic chemicals and their precursors are only developed, produced, otherwise acquired, retained, transferred or used within its territory or in any other place under its jurisdiction or control for purposes not prohibited under the Convention.³ In particular, states parties have specific obligations in relation to the import and export of those toxic chemicals and their precursors which are listed in the Annex on Chemicals to the Convention, as described in the section on “Trade measures” below.

States parties acceding to the CWC undertake the obligation to review existing national regulations in the field of trade in chemicals in order to render them consistent with the object and purpose of the Convention.⁴ Trade measures under the Convention, considered below, have effectively contributed to preventing the proliferation of chemical weapons and promoting universal adherence to the Convention.

Trade measures

The application of trade measures, including import and export regulations and controls, by the OPCW and the implementing states parties, is engaged primarily with respect to the transfer regime under the Convention and related decisions of the OPCW policymaking organs. This control regime concerns transfers of the “scheduled” chemicals (i.e. the toxic

chemicals and their precursors listed in Schedules 1, 2 and 3 of the Annex on Chemicals to the Convention).⁵

States parties are required to make chemical industry declarations related to the mentioned toxic chemicals and precursors, as well as to other chemical production facilities producing discrete organic chemicals. Each state party is required to submit initial and annual declarations regarding relevant chemicals and facilities in accordance with the Verification Annex to the Convention.⁶

Decisions of the CSP also provide guidance on the implementation of the transfer-related provisions of the Convention.⁷ To help further harmonize the way states parties report imports and exports, thereby reducing the number of discrepancies where the quantities declared by the importing and exporting states parties do not match, and considering the lack of agreed understanding of the terms “import” and “export”, the CSP at its Thirteenth Session, which took place in 2008, decided that:

“... solely for the purposes of submitting declarations under paragraphs 1, 8(b) and 8(c) of Part VII and paragraph 1 of Part VIII of the Verification Annex, the term ‘import’ shall be understood to mean the physical movement of scheduled chemicals into the territory or any other place under the jurisdiction or control of a State Party from the territory or any other place under the jurisdiction or control of another State, excluding transit operations; and the term ‘export’ shall be understood to mean the physical movement of scheduled chemicals out of the territory or any other place under the jurisdiction or control of a State Party into the territory or any other place under the jurisdiction or control of another State, excluding transit operations.”⁸

These definitions are relevant with respect to the interpretation of the related provisions of the Convention, as discussed below.

General transfer regime for scheduled chemicals

Schedule 1 chemicals

The toxic chemicals and precursors listed in Schedule 1⁹ are those which have been developed, produced, stockpiled or used as chemical weapons, or otherwise pose high risk to the object and purpose of the Convention, having little or no use for purposes not prohibited under the Convention.¹⁰ Since they pose high risk to the object and purpose of the Convention, strict restrictions are therefore placed on transfers of such chemicals. In particular:

- (i) A state party may only transfer Schedule 1 chemicals outside its territory to another state party to the Convention.¹¹ Transfers to states not party to the Convention are accordingly prohibited, as further affirmed by the OPCW policymaking organs.¹²

- (ii) Schedule 1 chemicals transferred cannot be retransferred to a third state.¹³
- (iii) Purposes for which Schedule 1 chemicals can be transferred is limited to research, medical, pharmaceutical or protective purposes – in types and quantities which can be justified for such purposes, with an aggregate amount given or acquired at any given time being less than or equal to 1 tonne.¹⁴
- (iv) Procedures for the import and export of Schedule 1 chemicals under the Convention involve a notification process. Both states parties involved in the transfer are required to notify the Technical Secretariat not less than 30 days before any such transfer.¹⁵

Additionally, not later than 90 days after the end of a year, each state party is required to make a detailed annual declaration regarding transfers of Schedule 1 chemicals during that year. For each transfer, such declarations must include information on the chemical name, structural formula, any Chemical Abstracts Service registry number, quantity acquired or transferred, the recipient and the purpose of the transfer.¹⁶

Schedule 2 chemicals

The toxic chemicals and precursors listed in Schedule 2¹⁷ pose significant risk to the object and purpose of the Convention and are not produced in large commercial quantities for purposes not prohibited under the Convention.¹⁸ The transfers of such chemicals are also regulated by the Convention.

Schedule 2 chemicals may only be transferred to or received from states parties. The transfer of Schedule 2 chemicals by states parties to the Convention to states not party is accordingly prohibited.¹⁹ This obligation took effect on 29 April 2000, three years after entry into force of the Convention.²⁰

The Convention does not contain general quantitative prohibitions on transfers of Schedule 2 chemicals. These are, however, monitored through state party declarations, which are *inter alia* to include aggregate national data for the previous calendar year on quantities imported and exported of each Schedule 2 chemical, as well as a quantitative specification of import and export for each country involved.²¹ The national data to be aggregated includes activity by natural and legal persons transferring a declarable chemical between the territory of the declaring state party and the territory of other states.²²

In addition, for declared Schedule 2 plant sites, states parties are required to provide data on the quantities imported and exported of each Schedule 2 chemical produced, processed, or consumed above the declaration threshold at the plant site, as well as information regarding direct exports of each Schedule 2 chemical above the declaration threshold, with a specification of the states involved.²³

Schedule 3 chemicals

The toxic chemicals and precursors listed in Schedule 3²⁴ pose a risk to the object and purpose of the Convention, but may also be produced in large commercial quantities for purposes not prohibited under the Convention.²⁵ They are therefore subject to less stringent transfer controls than other scheduled chemicals.

Distinct from the regime governing the transfers of Schedule 1 and 2 chemicals, the transfer of Schedule 3 chemicals to states not party to the Convention is not prohibited. Each state party is, however, required to adopt the necessary measures to ensure that the transferred chemicals shall only be used for purposes not prohibited under the Convention. The transferring state party must, *inter alia*, require from the recipient state (not party) certification in relation to the transferred chemicals, stating:

- (i) that they will only be used for purposes not prohibited under the Convention;
- (ii) that they will not be re-transferred;
- (iii) their types and quantities;
- (iv) their end uses; and
- (v) the names and addresses of the end users.²⁶

The Convention does not contain general quantitative prohibitions on transfers of Schedule 3 chemicals. These are, however, monitored through state party declarations, which are to include, *inter alia*, aggregate national data for the previous calendar year on the quantities produced, imported and exported of each Schedule 3 chemical, as well as a quantitative specification of import and export for each country involved.²⁷ A summary is provided in Table 1.

Table 1. Summary of schedules

Schedule 1	Schedule 2	Schedule 3
Poses a high risk to the object and purpose of the Convention	Poses a significant risk to the object and purpose of the Convention	Poses a risk to the object and purpose of the Convention
Precursor in final stage of chemical weapon production	Precursor to Schedule 1 or Schedule 2A chemicals	Precursor to Schedule 1 or Schedule 2B chemicals
Little or no use for purposes not prohibited by the Convention	Not produced commercially in large quantities for purposes not prohibited by the Convention	May be produced commercially in large quantities for purposes not prohibited by the Convention
For example: sarin, ricin or mustard gas	For example: thiodiglycol used for textile dyeing or dimethyl methylephosphate (DMMP) as a flame retardant	For example: phosgene used for plastics, triethanolamine for cosmetics/toiletries and cement

Implementation considerations

Domestic legislation

States parties are under the obligation to enact national legislation, including penal legislation, to implement their obligations under the Convention, *inter alia* prohibiting natural and legal persons on their territory or under their jurisdiction from undertaking any activity prohibited to a state party under the Convention.²⁸ The “initial measures” envisaged under the OPCW National Implementation Framework 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,²⁹ and include a comprehensive control regime for scheduled and toxic chemicals and reporting on transfers (import and export) of scheduled chemicals, as well as penalties for violation of the law. States parties have generally implemented the restrictions, annual reporting and advance notification requirements in relation to the import and export of scheduled chemicals through the enactment of domestic legislation.³⁰

Addressing discrepancies

The implementation of transfer-related requirements by states parties, which are subject to verification by the OPCW, indicate that declarations of import and export aggregate national data and the level of discrepancies between declared imports and exports (transfer discrepancies) is a long-standing issue. Factors identified as potential causes for transfer discrepancies include:

- (i) lack of effective national legislation to allow authorities to collect the necessary data;
- (ii) lack of awareness among traders and industry and among customs officers;
- (iii) differing approaches to declarations of trade in mixtures;
- (iv) lack of harmonization in reporting due to differing understandings of the terms “import” and “export”;
- (v) trade over the year end (where export takes place at the end of one year but the import occurs early in the following year);
- (vi) simple clerical errors or confusion over units of weight.³¹

This issue is being addressed by the Technical Secretariat as part of its analysis of the aggregate national data by matching up imports and exports to identify transfer discrepancies and then writing to both states parties involved in a discrepancy to encourage them to review their data and consult together with a view to resolving the discrepancy (OPCW, 2022).

Training and capacity building with the World Customs Organization

Cognizant of the key role played by customs officials in monitoring the import and export of toxic chemicals of relevance to the CWC, the OPCW and the World Customs Organization

signed, on 13 January 2017, a memorandum of understanding to expand cooperation and tighten national and international controls on the trade in toxic chemicals. The memorandum contains an agreement on measures to combat the illicit trafficking of chemicals, transfers of which are prohibited under the CWC, and incorporates provisions for mutual consultation, exchange of information, technical and financial cooperation, and technical meetings and missions.³²

The OPCW and World Customs Organization have co-organized several joint training courses geared toward enhancing the capacities and capabilities of national customs authorities to enforce the Convention's chemical transfer regime and exercise the oversight necessary for the trade in dual-use chemicals, thereby preventing the misuse of toxic chemicals and promoting peaceful uses of chemistry. The training programme, which is set to continue in the future, is regularly updated to reflect new or emerging challenges, including illicit trafficking of chemicals through non-state actors.

Some considerations in relation to the WTO agreements

States parties to the Convention expressly outlined their desire to “promote free trade in chemicals” in the preamble, which is consistent with the spirit and purpose of the General Agreement on Tariffs and Trade. Transfer control and licensing procedures under the Convention are intended to be efficient, minimize disruptions to the normal trade of chemicals for peaceful use, and promote economic and technological development of states parties. Subject to the provisions of the Convention and without prejudice to the principles and applicable rules of international law, states parties have the general right to transfer chemicals, and are required to not maintain restrictions among themselves which would restrict or impede trade in the field of chemistry for industrial, agricultural, research, medical, pharmaceutical or other peaceful purposes.³³

Recent developments

In 2019, the CSP, at its 24th Session, approved the introduction of certain chemicals to Schedule 1 of the Annex on Chemicals to the Convention.³⁴ This marked the first time that changes had been introduced to this Annex since the Convention entered into force in 1997, demonstrating its capacity to remain fit-for-purpose in engaging with emerging threats. The changes also signified that, for states parties, the transfer regime relating to Schedule 1 chemicals was engaged for the first time with respect to these particular chemicals. The addition of new chemicals to the three schedules remains a possibility in the future as well.

The verified destruction of currently declared chemical weapons stockpiles is expected to be completed in 2023. The approaching completion of global chemical weapons disarmament as well as developments in science and technology and the expansion of global chemical

industry have been key drivers of the OPCW's adaptation to changing strategic circumstances, which include an increased focus on preventing the re-emergence of chemical weapons. This mandate of the OPCW received greater impetus with the inauguration of the new OPCW Centre for Chemistry and Technology in May 2023, which, among other activities, will allow for capacity development activities relating to the control of trade in chemicals using state-of-the-art facilities. Also of particular importance for the process of the OPCW adaptation are the special sessions of the CSP, generally convened every five years, to undertake reviews of the operation of the Convention, taking into account relevant scientific and technological developments.³⁵

Finally, continuing to address proliferation risks by monitoring the international transfer of certain toxic chemicals remains an essential component in the realization of the object and purpose of the Convention. Ensuring the enactment of Convention-based obligations within domestic legislation in all states parties, elimination of discrepancies in reported transfer data, capacity-building of national authorities, and promoting chemical safety and security by providing tools and knowledge to mitigate risks arising from potential misuse of toxic chemicals are important goals of the OPCW in the context of export controls, as is the achievement of universality of OPCW membership. Sustained global effort, including further international cooperation in the field of trade in chemicals and improved understanding of the interlinked international obligations in this regard, is of benefit for the fulfilment of the OPCW's mandate of eliminating an entire category of weapons of mass destruction under international verification and preventing their re-emergence.

Endnotes

- 1 The Convention opened for signature in Paris on 13 January 1993 and entered into force on 29 April 1997.
- 2 Article VIII, para. 1.
- 3 Article VI, para. 2.
- 4 Article XI, para. 2(e).
- 5 The three schedules to the Annex on Chemicals list toxic chemicals and their precursors for the purpose of implementation of verification measures under the Convention; however, they do not constitute a definition of “chemical weapon”, which is defined under Article II, para. 1.
- 6 Pursuant to Article VI, paras 7 and 8.
- 7 See: *Guidelines Regarding Declarations of Aggregate National Data for Schedule 2 Chemical Production, Processing, Consumption, Import and Export and Schedule 3 Import and Export*, OPCW document C-7/DEC.14, 10 October 2002; *Guidelines Regarding Declaration of Import and Export Data for Schedule 2 and 3 Chemicals*, OPCW document C-13/DEC.4, 3 December 2008; and *Implementation of Restrictions on Transfers of Schedule 2 and Schedule 3 Chemicals to and from States not Party to the Convention*, OPCW document C-V/DEC.16, 17 May 2000). The guidelines do not dictate how and on what basis states parties should collect data, but rather how the data collected should be reported.
- 8 OPCW document C-13/DEC.4, para. 1.
- 9 These include chemicals such as sarin, VX and saxitoxin.
- 10 Annex on Chemicals, “Guidelines for Schedule 1”.
- 11 Verification Annex, Part VI, para. 1.
- 12 See *Report of the Third Special Session of the Conference of the States Parties to Review the Operation of the Chemical Weapons Convention*, OPCW document RC-3/3*, 19 April 2013, para. 9.91, recalling, in relation to transfers of scheduled chemicals to or from states not party, “the prohibitions on any such transfers of Schedule 1 and Schedule 2 chemicals.”
- 13 Verification Annex, Part VI, para. 4.
- 14 Verification Annex, Part VI, paras 2 and 3.
- 15 An exception to the same is contained in the CWC: for quantities of 5 mg or less, the Schedule 1 chemical saxitoxin is not subject to the notification period if the transfer is for medical/diagnostic purposes. In such cases, the notification is to be made by the time of transfer (Verification Annex, Part VI, paras 5 and 5*bis*).
- 16 Verification Annex, Part VI, para. 6.
- 17 These include chemicals such as amiton, PFIB and BZ.
- 18 Annex on Chemicals, “Guidelines for Schedule 2”.
- 19 Verification Annex, Part VII, para. 31. This provision is inapplicable to certain products containing Schedule 2 chemicals below established thresholds as well to products identified as consumer goods packaged for retail sale for personal use or packaged for individual use (see OPCW document C-V/DEC.16, para. 1).
- 20 Verification Annex, Part VII, para. 31 and 32. During the interim three-year period, each state party was to require an end-use certificate for transfers of Schedule 2 chemicals to states not party to the Convention. Each state party was also obligated to adopt the necessary measures to ensure that the transferred chemicals would only be used for purposes not prohibited under the Convention.
- 21 Verification Annex, Part VII, paras 1 and 2. Initial declarations are to be submitted not later than 30 days after the entry into force of the Convention for a state party and, thereafter, annual declarations not later than 90 days after the end of the previous calendar year.
- 22 OPCW document C-7/DEC.14, para. 1.

- 23 Verification Annex, Part VII, paras 8(b), 8(c) and 8(e)(iii). See also OPCW document C-13/DEC.4, preambular para. 3. Part VII, para. 3 of the Verification Annex provides the following declaration thresholds for plant sites producing, processing or consuming Schedule 2 chemicals: more than 1 kg of a chemical designated “*” in Schedule 2, part A; 100 kg of any other chemical listed in Schedule 2, part A; or 1 tonne of a chemical listed in Schedule 2, part B.
- 24 These include chemicals such as phosgene, cyanogen chloride and hydrogen cyanide.
- 25 Annex on Chemicals, “Guidelines for Schedule 3”.
- 26 Verification Annex, Part VIII, para. 26. End-use certificates are not required for products containing Schedule 3 chemicals below an established threshold nor for products identified as consumer goods packaged for retail sale for personal use or packaged for individual use (see *Provisions on Transfers of Schedule 3 Chemicals to States not Party to the Convention*, OPCW document C-VI/DEC.10, 17 May 2001, para. 2).
- 27 Verification Annex, Part VIII, paras 1 and 2. Part VIII, para. 3 of the Verification Annex provides the following declaration thresholds for plant sites producing Schedule 3 chemicals: more than 30 tonnes.
- 28 Pursuant to Article VII, para. 1.
- 29 This indicates that these are measures that states parties would have to take irrespective of any chemical weapon destruction obligations or the state of their chemical industry.
- 30 According to the latest reported data of 31 July 2022, out of the 193 states parties to the Convention, 158 had adopted national implementing legislation, of which 122 had legislation covering all the initial measures and 36 had legislation covering some of the initial measures. Thirty-five states parties had yet to report on the adoption of any relevant legislation (see *Report by the Director-General: Overview of the Status of Implementation of Article VII of the Chemical Weapons Convention as at 31 July 2022*, OPCW document EC-101/DG.13* C-27/DG.9, 9 September 2022, paras 7 and 16).
- 31 See also: OPCW document EC-XXIII/S.1, 12 January 2001; and OPCW document EC-67/S/1, 16 January 2012.
- 32 The capacity development activities relevant to the control of trade in chemicals primarily target customs administrations as the authorities which provide data on the import and export of scheduled chemicals. The trainings at times also involve national authorities due to their role in receiving the customs data and making annual declarations.
- 33 Pursuant to Article XI, para. 2, in particular para. 2(c).
- 34 In accordance with Article XV, paras 4 and 5. See also: *Technical Change to Schedule 1(A) of the Annex on Chemicals to the Chemical Weapons Convention*, OPCW document C-24/DEC.4, 27 November 2019; and *Changes to Schedule 1 of the Annex on Chemicals to the Chemical Weapons Convention*, OPCW document C-24/DEC.5, 27 November 2019; and *Consolidated Text of Adopted Changes to Schedule 1 of the Annex on Chemicals to the Chemical Weapons Convention*, OPCW document S/1820/2019, 23 December 2019.
- 35 Article VIII, para. 22. The Fifth Review Conference took place on 15-19 May 2023.