

Chemical Weapons Convention An Overview

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



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Scheme of Presentation

- ❑ Introduction
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Introduction

- ❑ Product of 20 yrs of negotiations by active involvement of
 - ❑ **NGOs**
 - ❑ **Global Chemical Industry**
 - ❑ **Statesmen**
- ❑ Non-discriminatory treaty applicable in 98% of World
- ❑ Multilateral Co-op mechanism committed to
 - ❑ **Disarmament & Non-proliferation** of chemical weapons and to the
 - ❑ Assistance of CWs victims
 - ❑ Boosting **International Cooperation** in Peaceful uses of Chemistry

Chemical Warfare Agents

A chemical agent is a substance which is intended for use in military operations to **kill**, seriously **injure** or **incapacitate** people because of its physiological effects

Types

- ❑ Nerve Agents
- ❑ Blister Agents
- ❑ Choking Agents
- ❑ Blood Agents
- ❑ Riot Control Agents

Schedules of Chemicals

- ❑ Based upon the **degree of risk** and the extent of **commercial applications**, chemical have been divided into three Schedules:
 - a. Schedule 1
 - b. Schedule 2
 - c. Schedule 3
- ❑ Schedules list **Toxic Chemicals** and their **Precursors**
- ❑ The Schedules identify chemicals for the application of verification measures (implementing) according to the provisions of the Convention **Source: CWC Text**

Discrete Organic Chemicals (DOCs)

Class of chemical compounds consisting of all compounds of carbon, except:

- ❑ Oxides
- ❑ Sulphides
- ❑ Hydrocarbons
- ❑ Not included in the three Schedules under the CWC
- ❑ CWC does not contain any list of DOCs

Declaration Limit

States Parties are required to Declare Chemicals listed under the Convention for their Systematic Verification

Chemical Group	Limit For	
	Declaration	Inspection
Schedule 1	100 g	100 g
Schedule 2A* (BZ)	1 kg	1 kg
Schedule 2A	100 kg	1 t
Schedule 2B	30 t	10 t
Schedule 3	Total: 200 t	200 t
DOC	Total: 30 t	200 t
PSF - Chemicals	Total:	200 t

DOCs Discrete Organic Chemicals

PSF Containing Phosphorus, Sulphur, Fluorine

Source: CWC Text

Nerve Agents

- ❑ Nerve agents are most toxic of the known chemical agents affect the transmission of **nerve impulses** in the nervous system
- ❑ Their liquid and vapor states exposure effects **plasma** and **tissues** and can cause death within minutes
- ❑ Major military threat agents, also used in Iran-Iran conflict

Examples

- ❑ GA – tabun
- ❑ GB – sarin
- ❑ GD – soman
- ❑ GF - cyclosarin
- ❑ VX - methylphosphonothioic acid

Blister or Vesicant Agents

- ❑ Used to produce casualties as exposure to such agents can be fatal
- ❑ Cause large and often life threatening **skin blisters** which resembles severe burns
- ❑ Blister agents can be thickened in order to contaminate terrain, ships, aircraft, vehicles or equipment with a persistent hazard

Examples

- ❑ HD - sulfur mustard
- ❑ HN - nitrogen mustard
- ❑ L - lewisite (arsenical used in mixture with HD)
- ❑ CX - phosgene

Choking Agents

- ❑ Inflict injury on the respiratory tract - irritate the nose, throat, and especially the lungs
- ❑ Victims inhale these agents, which cause the alveoli to secrete a fluid into the lungs
- ❑ Attack **lung tissue** causing pulmonary oedema
- ❑ Victim may be choked due to lack of Oxygen

Examples

- ❑ CG - phosgene
- ❑ DP - diphosgene
- ❑ Cl - chlorine
- ❑ PS - chloropicrin

Blood Agents

- ❑ Blood agents are distributed via blood and generally enter the body via inhalation
- ❑ They **inhibit** the ability of **blood cells** to utilize and transfer oxygen
- ❑ Blood Agents are poisons that effectively cause the body to suffocate

Examples

- ❑ Hydrogen Cyanide (AC)
- ❑ Cyanogen Chloride (CK)
- ❑ Arsine (SA)

Riot Control Agents (Incapacitants)

- ❑ Incapacitants are basically powerful derivatives of Chloroacetophenone
- ❑ Prohibited for warfare but allowed for law enforcement purposes
- ❑ They can rapidly produce **Sensory Irritation** or **Disabling** physical effects which usually disappear within 15 minutes

Examples

- ❑ Tear Gas — Chloroacetophenone
- ❑ Vomiting — Chloropicrin
- ❑ Character Incapacitants — Benzodiazepines

Current Status

- ❑ Opened for signature: January 13, 1993
- ❑ Entry into Force: April 29, 1997
- ❑ Members: 188
- ❑ Non-members: 07
Israel, Myanmar
North Korea, Egypt, Syria, Angola, Somalia
- ❑ Possessor State: Albania, India, Libya, Russia, South Korea & US
- ❑ Industrial facilities liable to inspection -- 5,032
- ❑ Declared Stockpiles Destroyed: 39,585 or 55.60% out of 71,194 metric tonnes
- ❑ Chemical munitions and containers destroyed -- 3.93, or 45.33%, of the 8.67 million

(Source: www.opcw.org)

History of Chemical Warfare

- ❑ Earliest recorded use of Gas Warfare dates back to the 5th Century BC between Athens and Sparta during the Peloponnesian war
- ❑ Iranians Deployed Chemical Warfare against the Roman Army in 3rd Century AD
- ❑ In 17th century, European armies during sieges attempted to start fires by launching shells filled with Sulphur or Antimony
- ❑ In World War I, French were the first to use chemical weapons containing tear gas
- ❑ Germans followed the French, using shells containing Xylyl Bromide against Russians

History of Chemical Warfare

- ❑ After WW I, Chemical Weapons mostly used to Suppress Rebellions
 - ❑ **British** used these weapons to suppress revolt of the Arabs of Mesopotamia (Iraq)
 - ❑ **Japanese** intensively used these weapons against Chinese
- ❑ Nazis revolutionized Chemical Warfare with the discovery of Nerve Agents ***Tabun and Sarin***
- ❑ However, Chemical Warfare was not extensively used by either side during WW II
 - ❑ Germans perhaps assumed a similar capability on the other side and hence feared devastating retaliation (*Chemical Deterrence*)

Instruments Prior to CWC

- ❑ The Strasbourg Agreement of 1675
- ❑ Brussels Convention on Law and Customs of War, 1874
- ❑ International Peace Conferences Hague 1899 & 1907
- ❑ The Versailles Treaty 1919
- ❑ The Washington Treaty on Use of Submarines and Gases in Wartime 1922
- ❑ The Geneva Protocol of 1925

Shortcomings

Instruments prior to CWC had following Shortcomings

1. Lack of Universality

2. Prohibited use of CWs but not

- ❑ Production
- ❑ Transfer
- ❑ Retaining of Weapons

3. No Effective Verification Mechanism

Hence Violations Went Unnoticed

Negotiating the CWC

1960's saw great International Effort for Non-proliferation of WMD's

- ❑ Sweden succeeded in putting the issue of Chemical and Biological Weapons Disarmament on the Agenda of ENDC (now CD) and various drafts were tabled from time to time since then
- ❑ Two factors gave a new impetus to the negotiations in the 1980's
 1. Announcement by the UN Secretary General that Chemical Weapons were used during the Iran-Iraq war
 2. Thawing of relationship between the US and the USSR

Negotiating the CWC

- ❑ US reversed its earlier position on Verification in 1989 when President Bush announced that instead of total verifiability, the US supports a Level of Verification regime that could give them the Confidence to move forward
- ❑ In 1992, US gave up this stance and also the position that it should retain a certain security stockpile of CW for retaliation in case it comes under a CW attack
- ❑ Opposition by Arab states and other developing countries which thought that the convention carried no benefit for them and hence linked their acceptance to broader Nuclear Disarmament
- ❑ Their concerns were addressed by a relaxation in the trade of Chemicals and Cooperation in chemical industry

Article I: General Obligations

- ❑ **Each State Party undertakes not to**
 - ❑ **Develop, Produce, Acquire, Stockpile or Retain** CW or **Transfer** directly or indirectly to anyone
 - ❑ **Use** CW
 - ❑ **Engage** in any **Military Preparation** to use CW
 - ❑ **Assist, Encourage** or **Induce** anyone to engage in any activity Prohibited to a State Party under this Convention
- ❑ Destroy CW it **Owns or Possesses**, or **Abandoned** on the territory of another State party
- ❑ Destroy CW **Production Facilities**
- ❑ Not to use **Riot Control Agents** as method of Warfare

Article III: Declarations

Each state party shall submit following Declarations to the Organization 30 days after the EIF of this Convention:

- ❑ **Declare** whether it owns or possesses CWs
- ❑ **Specify** precise location, aggregate quantity, detailed inventory of CWs & Riot Control Agents
- ❑ **Report** CWs on its territory, owned and possessed by another State
- ❑ **Declare** whether it has transferred or received CWs
- ❑ **Provide** its general plan for Destruction of CWs

Article IV: Chemical Weapons

- ❑ Convention shall apply to **all CWs** possessed by State parties
- ❑ All locations of CWs shall be subject to **Systematic** (regular or continuous) **Verification** through **OSI**

Article V: CWs Production Facilities

- ❑ All CWPFs shall be subject to **Systematic Verification** & each State Party shall cease activity at these Facilities immediately
- ❑ No state party shall **construct** any new CWPFs

Source: CWC Text

Article VIII: The Organization — OPCW

Functions/Mandate

- ❑ Implementation of Convention by International Verification of compliance
- ❑ Serve as a forum to State Parties for Consultation & Cooperation

Constituents

- ❑ The Conference of State Parties
- ❑ The Executive Council
- ❑ The Technical Secretariat

Financing

- ❑ The **cost** of activities paid by State Parties in accordance with **UN Scale of Assessment**

OPCW

Conference of
State Parties

- **Principal Organ**
- **All State Parties**
- **Oversee EC & TS**

Executive
Council

- **Executive Organ**
- **41 members**
- **Verify compliance**

Technical
Secretariat

- **Technical & administrative assistance**

Article IX: Consultation, Cooperation & Fact Finding

- ❑ Each State Party has the **Right to request** Onsite Inspection
- ❑ The preferred way shall be bilaterally through consultation and information exchange
- ❑ The inspection team **submit Report** to DG, OPCW
- ❑ **Executive Council** shall **review** the report and give a Conclusion of the On-site Inspection

Article X: Assistance & Protection Against CWs

- ❑ State Parties can **research, develop, produce and transfer** the **means of protection** against CWs
- ❑ TS shall develop **Data Bank** for information concerning various means of protection against CWs
- ❑ State parties can **request DG for assistance** and protection against use of or threat of use of CWs
(*Protective equipment, Decontaminants, Medical Antidotes & Treatments*)

Article XIV: Settlement of Disputes

Disputes shall be settled in accordance with the

- ❑ **Relevant Provisions** of this convention
- ❑ Provisions of **UN Charter**

Article XV: Amendments

- ❑ Any state party can **Propose Amendment**
- ❑ Amendments considered through “**Amendment Conference**”
 - ❑ Amendment Conference convened if 1/3rd of state parties support the amendment
- ❑ Amendments approved with **Positive Vote** of majority with **No Negative Vote**

Article XVI: Duration & Withdrawal

- ❑ The convention is of Unlimited Duration
- ❑ State parties can withdraw at a notice of 90 days if it decides that extraordinary events have Jeopardized its National Interest

Article XVII: Status of Annexes

- ❑ The Annexes form **Integral Part** of this Convention

Annexes

Annex I Schedules of chemicals

Categorizes chemicals into three schedules depending upon their potential for military use

Annex II Implementation & Verification

Sets out all of the detailed procedures for the States Parties and by OPCW inspection teams during verification activities at chemical weapons facilities or sites and industrial facilities

Annex III

Protection of Confidential Information

Guarantees the protection of sensitive, National Security related information and Confidential Business Information during Inspections and when such information is submitted by States Parties to the OPCW

CWC in South Asia

1992 Agreement on CWs

- ❑ Complete prohibition of Chemical weapons
- ❑ Commitment for not developing, possessing or using CWs
- ❑ Not to assist, encourage, induce or engage in development, production, acquisition, stockpiling, or use CWs
- ❑ Both Govts committed to join CWC

“India signed this agreement as non-possessor state in 1992 and joined CWC as possessor state in 1997”

Source: Text 1992 Agreement

Pakistan

- Signed: 13 January 1993
- Ratified: 28 October 1997
- Status: Non-Possessor

India

- Signed: 14 January 1993
- Ratified: 03 Sept 1996
- Status: Possessor of CWs

Pakistan

- ❑ Active participation in CWC negotiations
- ❑ Neither discussed in parliament nor brought before Federal cabinet
- ❑ Obligated to open all installations for OPCW inspections
- ❑ India, Russia and Afghan often raise allegations that Pakistan is pursuing clandestine CW program but its never proven

Pakistan's Chemical Production Facilities

- ❑ Less developed commercial chemical industry
- ❑ 400 Licensed Pharmaceutical companies
- ❑ Major Suppliers
- ❑ US, UK, Germany, Switzerland Japan, Holland & France
- ❑ Production facilities
 - ❑ Daud Khel Chemical Plant
 - ❑ Karachi CBW & BW Warfare R&D Laboratory
 - ❑ Hussain Ibrahim Jamal Institute of Chemistry
 - ❑ Karachi CBW Research Institute

Pakistan's National Authority

- ❑ To implement provisions of CWC Pakistan established its National Authority of CWC under Ministry of Foreign Affairs
- ❑ It ensures effective implementation of CWC presidential ordinance 2000
- ❑ Undertakes all national obligations for effective implementation of the convention

CWC Ordinance 2000

- ❑ Prohibits
 - ❑ development, production, acquisition, stockpiling, retention, use or transfer of chemical weapons
 - ❑ use of riot control agents as a method of warfare
 - ❑ construction of any premises or equipment intended to be used for production of CWs
- ❑ Allows verification activities
- ❑ Prescribes punishments for violations of the Ordinance
- ❑ Empowers NA to formulate rules to implement the Ordinance

Source: Text CWC Ordinance 2000

Pakistan's Efforts

- ❑ All domestic industry provides details of chemicals they use and produce
- ❑ Establishment of Wide Area Network (WAN) in 2008
 - ❑ Mandated for collection of import/export data from Pakistan's chemical industries
 - ❑ preparation of declarations for submission to OPCW
- ❑ CWC familiarization through seminars, meetings, visits, correspondence and training events.
 - ❑ Annual seminar for the domestic chemical industry
 - ❑ Annual training module at the Foreign Services Academy
- ❑ Regular submissions to OPCW
 - ❑ Annual Declaration for Past Activities
 - ❑ Declaration on National Programme for Protection against CWs

India

- ❑ Offensive Chemical Weapon Program
- ❑ Extensive civilian chemical and pharmaceutical industry
- ❑ Annually exports of Schedule 2 and 3 chemicals to UK, US and Taiwan
- ❑ The Indian government has set up NBC warfare directorates in the
 - ❑ Army
 - Located in Pune, Maharashtra
 - ❑ Navy
 - At INS Shivaji, in Lonavla, Maharashtra
 - ❑ Air Force
 - In Chandigarh

Indian Chemical Production Facilities

- ❑ Indian Chemical Industry is oldest domestic industry contributing to Industrial & economic growth of country
- ❑ It makes 13% of total exports being 2nd largest producer of agrochemicals in Asia
- ❑ Major organizations
 - ❑ Defense Research & Development Organization
 - ❑ Department of Chemicals & Petrochemicals
- ❑ Defence Research & Development Establishment (DRDE), in **Gwalior, Madhya Pradesh**
- ❑ Defence Materials & Stores Research & Development Establishment (DMSRDE), in **Kanpur, Uttar Pradesh**

Indian CWC Declarations

Under CWC India has declared

- ❑ Two CW Production Facilities
- ❑ Two CW Storage Facilities
- ❑ Two CW destruction Facilities
- ❑ One Schedule I Facility
- ❑ Four Schedule II Facilities
- ❑ Thirty Schedule III Facilities
- ❑ Nineteen DOCs Facilities

Source: www.nti.org

Indian National Authority

- ❑ Indian NA for CWC under the administrative control of the Cabinet Secretariat was set up by a resolution of Cabinet Secretariat dated 5th May 1997
- ❑ Headed by a Chairperson, members of NA include
 - ❑ Secretary (Chemical and Petrochemicals)
 - ❑ Foreign Secretary
 - ❑ Defence Secretary Secretary Defence Research & Development
- ❑ NA is mandated
 - ❑ To fulfill the obligations enunciated in the CWC
 - ❑ To liaison with OPCW and other State parties

India: CWC Act 2000

❑ Prohibits

- ❑ Development, production, stockpiling, retention, and use of any chemical weapon by unauthorized persons
- ❑ Unlawful acquisition and direct or indirect transfers of CWs
- ❑ Export from, or import into, India of toxic chemicals or precursors listed in the Schedules I, II & III
- ❑ In case of contravention punishment with imprisonment for a term not less than one year which may extend to life imprisonment and financial liability

Source: Text CWC Act 2000

Destruction of Declared CWs

- March 2006 – 53% of its stockpiles destroyed
- Dec. 2006 – 75% of its stockpiles destroyed

India asked for and was granted a 2 yr extension for destroying all its CWs

- April 2009 -- Completed 100 % Destruction

Source: www.opcw.org

Conclusion

- ❑ Ambiguities exist in CWC text

Terms like law enforcement & Methods of warfare are not defined

- ❑ Increased emphasis on confidentiality prevents public from getting complete information of implementation of CWC
- ❑ Concerns of non-compliance are raised but not addressed by OPCW
- ❑ New invention especially RCA, no scrutiny by convention

Hence its recommended that

- ❑ Promote good practices in reporting
- ❑ Become more transparent
- ❑ Address issue of new discoveries