Future Challenges for the Chemical Weapons Convention

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The Trench
Lecture in the cycle ‘Arms Control and Proliferation’
University of Antwerp, 11 May 2017
Chemical Weapons Convention

- Completion of negotiations: September 1992
- Opening for signature: January 1993
- Entry into force (EIF): 29 April 1997
- Established the Organisation for the Prohibition of Chemical Weapons (OPCW)
Chemical Weapons Convention

- **A disarmament treaty**
  - Bans development, production, possession and use of chemical weapons (CW)
  - Orders the destruction of
    - All existing CW (agents, delivery systems and special equipment)
    - Facilities associated with past CW programmes (conversion authorised in limited cases)
  - Establishes an international body: Organisation for the Prohibition of Chemical Weapons (OPCW)
  - Establishes an elaborate verification regime
  - Endeavours to prevent future armament or re-armament with CW

- **A multilateral treaty**
  - Global: any state may join the CW
  - Equal rights and obligations for all states parties

- **Status**
  - 192 states parties
  - Four states must still join:
    - Egypt, Israel, North-Korea, South-Sudan
    - State of Palestine? (Joined the NPT in February 2015)
Some CWC achievements

- **CW destruction (October 2016)**
  - Global declared stockpile: 72,304 metric tonnes of agent
  - Verified destruction: 67,098 metric tonnes (= 92.8%)
  - Global declared stockpile of chemical munitions and containers: 8.67 million pieces
  - Verified destruction: 4.97 million (= 57.3%)

- **Inspections (1997 - 2016)**
  - Declared CW facilities and sites: 8,612
  - Industry inspections: 3,322

- **Global coverage**
  - 98% of the world’s population
  - 98% of the world’s chemical industry

- **2013 Nobel Peace Prize**
  - Awarded for disarmament activities between 1997 and 2012
Core components of the CWC

- **Prohibitions on**
  - Possession, acquisition, and use
  - Proliferation (= technology transfers for illicit purposes)
  - Based on ‘General Purpose Criterion’ (GPC) to deal with dual-use technology

- **Verification tools**
  - (National technical means)
  - Confidence-building measures
  - International organisation / National authorities
  - Reporting
  - On-site inspections and monitoring

- **Conflict resolution mechanisms**
  - Emergency assistance in case of use or threat of use of CW
  - Investigation of alleged use and emergency assistance
    - Today applied with respect to chlorine, mustard and sarin use allegations in Syria
  - ‘Non-security’ clauses (cooperation for peaceful purposes)
CWC: organisation of compliance

- **Functions on the basis of the GPC**
  - Covers all toxic chemicals (past, present and future)
  - CWC contains 3 Schedules in annex
    - Schedules do not replace GPC
    - Tools to organise declarations and help with organisation of industry verification

- **Mechanisms to:**
  - Generate transparency → declarations
    - States parties must declare:
      - All past and present CW-related activities within treaty-specified parameters
      - Relevant chemical production facilities and that produce or consume certain scheduled chemicals or discrete organic chemicals; production volumes, and transfers of certain scheduled chemicals
      - Any unreported or erroneously reported activity is violation of CWC (but not necessarily a deliberate one)
  - Address anomalies
    - Consultations
    - Clarification requests
    - Challenge inspections
    - Investigation of alleged use of CW
Basic operation of verification

- **CWC has an elaborate verification machinery**
  - OPCW as oversight and implementation organisation
    - The OPCW = collective of states parties
    - Comprises the Technical Secretariat for implementation of state party decisions and policy preparation

- **A division of labour between a state party and the OPCW**
  - Verification regime is a declaration-based system
    - The national collection of relevant data and their submission to the OPCW is an obligation
  - Specific state party responsibilities (obligations):
    - State Party - via National Authority - submits declarations
  - Technical Secretariat
    - Analyses national declarations and addresses anomalies
    - Conducts inspections (CW destruction, industry, government facilities)
    - Investigates compliance concerns if so requested
    - Investigates allegations of use
Structure of the OPCW

Conference of the States Parties (CSP)

Executive Council (EC)

Director-General of the Technical Secretariat (DG)

Technical Secretariat
  > Inspectorate
  > Technical staff
  > Administrative staff

Subsidiary bodies
  > Confidentiality Commission
  > Scientific Advisory Board (SAB)
  > Advisory Board on Education and Outreach (ABEO)
  > Advisory Body on Administrative and Financial Matters
  > ...

The CWC as a product of its time

- Negotiated in the final stages of the Cold War
- Completion of negotiations just after end of Cold War (September 1992)
  - Geopolitical dominance of the West in global security following dissolution of Warsaw Pact (March 1991) and USSR (December 1991)
  - Western paradigm shift from disarmament to non-proliferation
    - Australia Group: from a stop-gap solution pending the CWC to a permanent fixture
- Preparation for EIF immediately after end of the Cold War (1993-97)
  - Renewed assertiveness by Non-Aligned Movement (NAM)
    - Emphasis on equal importance of development and international cooperation, including technology transfers
    - Posed a direct challenge to the West’s quasi-exclusive focus on security (CW destruction; CW programme dismantlement; and non-proliferation)
- Take off:
  - Hungary triggered 180-day countdown to EIF by depositing 65th instrument of ratification on 31 October 1996
  - Some key players missed their ratification deadline by EIF date so as to be an original state party (Russia, Iran, India, Pakistan, ...)
  - First Conference of the States Parties (May 1996): Key decisions for the future implementation of the CWC taken by original states parties
Drawing the future

- **CWC of unlimited duration ≠ perpetual**
  - **Challenge** How can the CWC retain its relevancy for States Parties after destruction of declared CW?
  - How can yesterday’s culture be adapted to tomorrow’s challenges?
    - Need for new balances between ‘security’ and ‘peaceful cooperation’
    - Confidentiality vs need to reach out & interact with stakeholder communities
    - Decision-making processes (consensus vs majority voting)
    - Budgetary imperatives by states vs need for OPCW to maintain key capacities

- **Disarmament**
  - Backward-looking dimension
    - Destruction of existing stockpiles and weapon-related equipment
    - Destruction or conversion of production installations and other infrastructure
  - Forward-looking dimension
    - Prevention of future armament or re-armament
    - Governance of relevant dual-use technologies
New confluences in science and technology

- **Convergence of several scientific and technological domains:**
  - Biology and chemistry
    - Development of new generation of incapacitating agents
    - Manipulation of biochemical processes on sub-cellular levels
  - Nanotechnology (= convergence between chemistry and physics)
    - Construction of artefacts on the level of individual molecules or atoms
    - May also be useful for new CBW defence technologies, protection or detection
  - Informatics
    - Computer-assisted creation of new compounds and study of their properties
    - Increasingly fast design of new molecules / gene sequences: 250,000 new genes sequenced/ day; 15,000 new chemicals registered (CAS)/ day
    - Simulation of processes
  - Engineering and process designs

- **Evolution of production processes:**
  - Modular production processes → may pose challenges for verification thresholds
  - Computer-steered production processes: consistent quality, reduced need for cleaning or interruptions for feeding (e.g., incubation or fermentation processes)
Future governance challenges

- No unified model for governance of weapon control anymore
- States do not drive the processes anymore; they can steer in a limited way
- New stakeholders and security actors
- Increased role of non-state national & transnational actors
- Declining role of states in shaping developments
- Shifting relative balances of powers (economy, politics, military) and multiple power centres
- Geographical decentralisation of business and industry activities
- South-south trade patterns and impact on technology diffusion
- Etc.
After CW destruction – 1

- **Centrality of industry activities: production, consumption & trade**
  - **Article XI**: technology transfers, scientific exchanges, & other development cooperation
  - **Article VI**: transfers of toxic chemicals and their verification
  - **Article VIII**: CSP tasked with ‘international cooperation for peaceful purposes in the field of chemical activities’ → enables deployment of future activities by OPCW
  - **Article X**: assistance in case of use or threat of use of CW → opportunities for chemical security and safety activities (which involve industry)
After CW destruction – 2

- **Prevention of armament: a challenge**

  - **Verification:**
    - Post-destruction: reduction of inspectors envisaged but capacity for industry verification needs to be enhanced
    - Increased emphasis on transfer monitoring (Art. VI):
      - Is the current monitoring system adequate to capture the volumes of transfers of toxic chemicals?
      - Quid the General Purpose Criterion (vs. scheduled chemicals subject of reporting)?
      - Who verifies State Party reports?

  - **Options:**
    - Modification of reporting requirements and upgrading of monitoring system
    - Recruitment of more inspectors with proficiency in chemical industry?
    - Rebalancing functional division between OPCW and States Party responsibilities?
      - Enhanced verification responsibilities for States Parties
      - Greater lateral interaction among National Authorities relating to transfer monitoring
      - Reporting to OPCW + auditing process of national reports
Stakeholder communities

- Stakeholder communities include:
  - Other international organisations
  - OPCW Technical Secretariat
  - Conference of States Parties
  - Civil Society (NGOs, Research communities, Scientific associations, Universities, Schools)
  - Parliament
  - Professional communities (Industry, Professional organisations, Press)
  - Other Ministries
    - Agriculture
    - Defence
    - Education
    - Economics
    - Foreign Affairs
    - Health
    - Interior
    - Justice
    - Trade
  - National Authority
  - Technical Agencies
    - Customs
    - Emergency services
    - Intelligence
    - Law enforcement
    - Military
    - ...
CW attacks in Syria

- **CW allegations mounting during 1st half of 2013**
  - 21 March: UNSG accepts Assad’s request for an investigation of alleged use
  - August: UN team (OPCW + WHO) finally arrives in Damascus after much haggling
  - Team uses OPCW operational procedures for CW investigation and OPCW-certified reference laboratories

- **CW attacks against Ghouta (Damascus), 21 August 2013**
  - Change mandate UN investigative team
  - Preliminary report, 16 September (Ghouta only)
  - Final report, 12 December (also includes originally mandated investigations of allegations and some post-Ghouta allegations)
  - Outcomes:
    - Reports do not apportion blame
    - Ghouta: strong suggestion responsibility Syrian government
    - Earlier attacks: confirmation of sarin use in some of them; other evidence very limited
    - Still some open questions

- **Chlorine and sarin attacks (spring - summer 2014; 2015 - 2017)**
  - Confirmed by OPCW investigations
  - As good as certain that Syrian government forces are responsible
  - Some unconfirmed claims of ISIL use of chlorine and mustard agent (also in Iraq)
    - One as good as confirmed by OPCW investigation
Opportunistic use of toxic chemicals

- **Syrian use of barrel bombs with chlorine**
  - OPCW investigated & confirmed allegations
  - February 2015: OPCW EC decision condemning chemical warfare in Syria (1st in a CWC state party)
  - March 2015: unanimous UNSC condemnation
    - Determine criminal responsibility (so far 3 x Syrian government; 1 x ISIL)
    - Role for International Criminal Court?
    - How to proceed?

- **ISIL allegations of CW use**
  - AQI bombing campaign with chlorine (October 2006 – June 2007)
  - Syria: skin irritant report from Kobane area (August 2014)
  - Several chlorine reports from Iraq (September – October 2014)
  - Today: reports of chlorine and mustard agent (confirmed by OPCW)
  - Trend towards technology development for delivery systems?

- **Challenges**
  - How to investigate? Who requests investigation?
    - CWC: territory not under government control → UNSG’s investigative mechanism
    - Kobane scenario: non-state actor against non-state actor on territory of CWC state party, but not under control of that state party
  - OPCW: strategies for chemical safety/security in conflict zones?
    - Preventive infrastructure protection strategies?
Syria as a challenge to the CWC

- **OPCW verification of Syria’s declarations**
  - Major gaps in the Syrian declarations: lack of documentary support
  - Unwillingness to resolve outstanding issues
    - Volumes of agent in storage
    - Material accounting of precursor/agent production, consumption or loss
    - Discovery of ricin factory; nerve agent traces at sites not declared by Syrian authorities; mustard agent destruction
  - Technical Secretariat cannot close dossiers

- **OPCW investigations into alleged use**
  - Establishment of a Fact-Finding Mission (FFM) for Syria
  - Limits investigations to whether or not an incident has taken place: recovery of forensic evidence; corroboration of allegations via various techniques; scientific analysis of recovered samples in OPCW designated laboratories → submission of factual report to states parties
  - Determination of criminal responsibility:
    - Investigation by OPCW – UN Joint Investigative Mechanism (JIM)
    - Reports to the UN Security Council

- **Geopolitical priorities by states parties**
  - Denial by some parties that the incidents of CW use attributed to the Syrian government took place
  - Challenges to the integrity of OPCW methodologies, even though they were unanimously approved by states parties
  - Support for the Syrian regime versus calls for regime change
  - Outside support for the various belligerent parties: no consensus of direction to be taken or, more urgently, on how to terminate the war
Still, a receding chemical threat

- **Cold War**
  - USA (1990): 30,000 agent tonnes
  - USSR (1990): 40,000 agent tonnes

- **Iraq (Gulf War) / North Korea**
  - Multiple thousands of agent tonnes

- **Syria**
  - 1,300 tonnes of precursor chemicals
  - ± 20 tonnes of mustard agent
  - Some undeclared weapon holdings?

- **Libya**
  - ± 26 tonnes of mustard agent
  - Precursor chemicals

- **Terrorism**
  - A few kilogrammes
  - Opportunistic use of industrial toxic chemicals