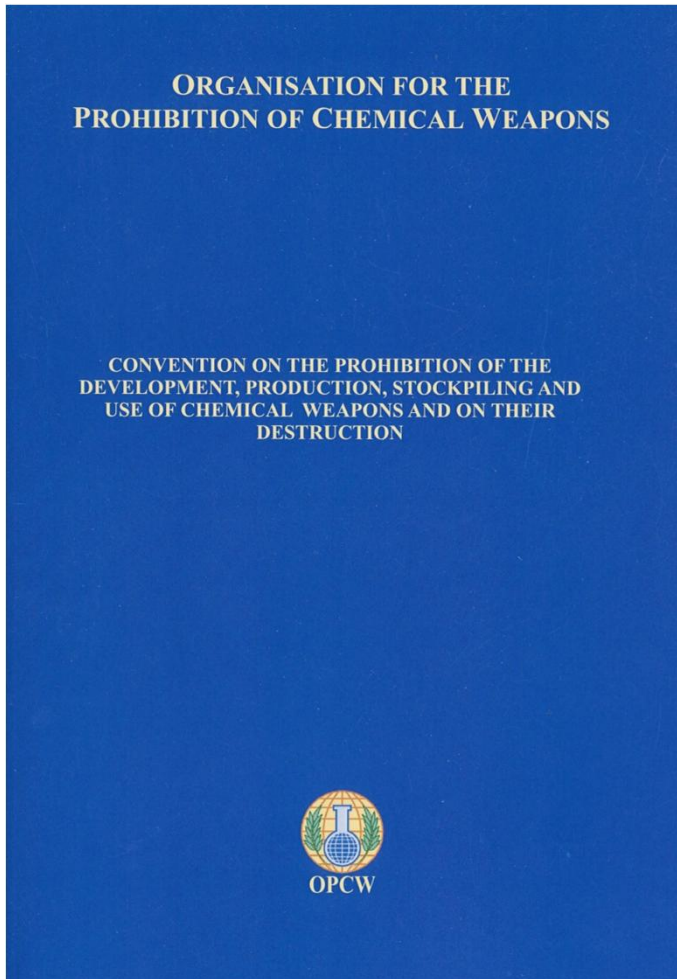


Future Challenges for the Chemical Weapons Convention

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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 CWC
 - 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)**

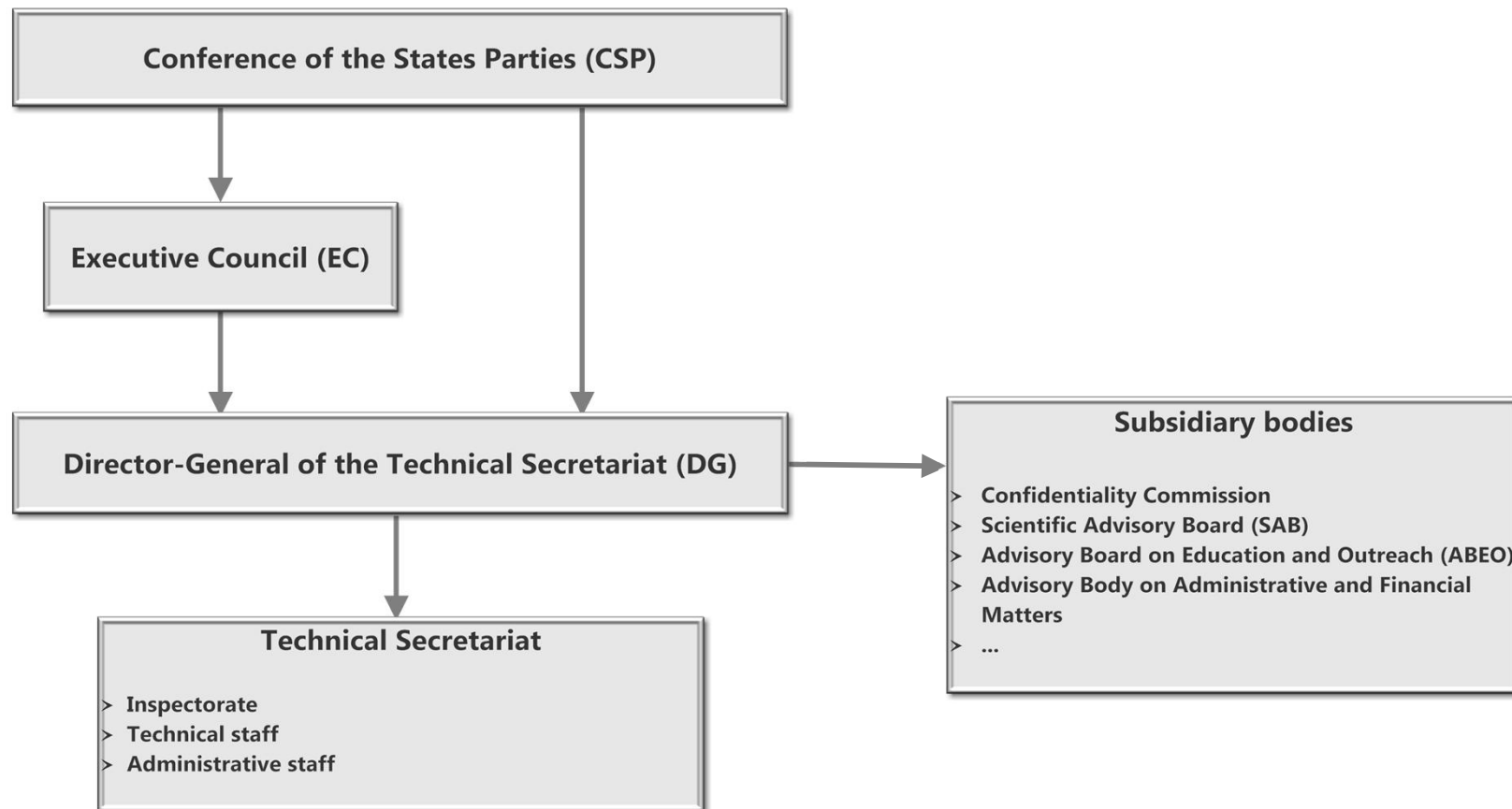
CWC: organisation of compliance

- **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



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

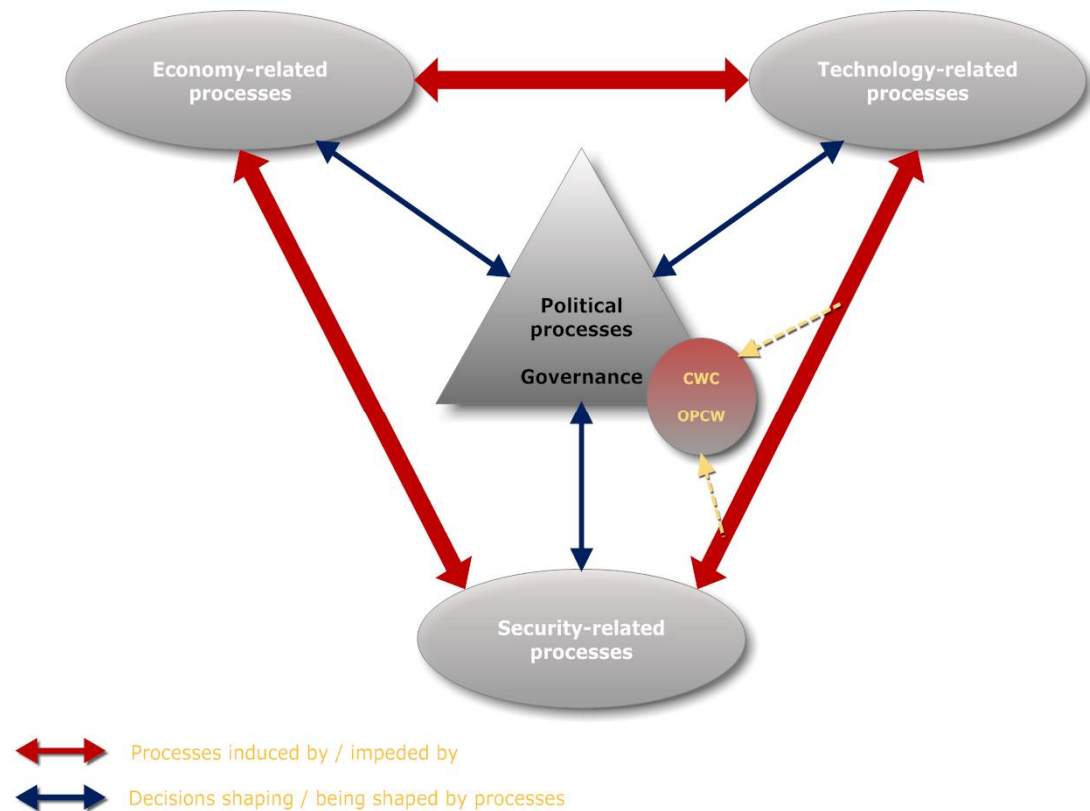
- **CWC of unlimited duration ≠ perpetual**
 - *Challenge*: How can the CWC retain its relevancy for States Parties after destruction of declared CW?
 - How can yesterday's culture be adapted to tomorrow's challenges?
 - Need for new balances between 'security' and 'peaceful cooperation'
 - Confidentiality 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.



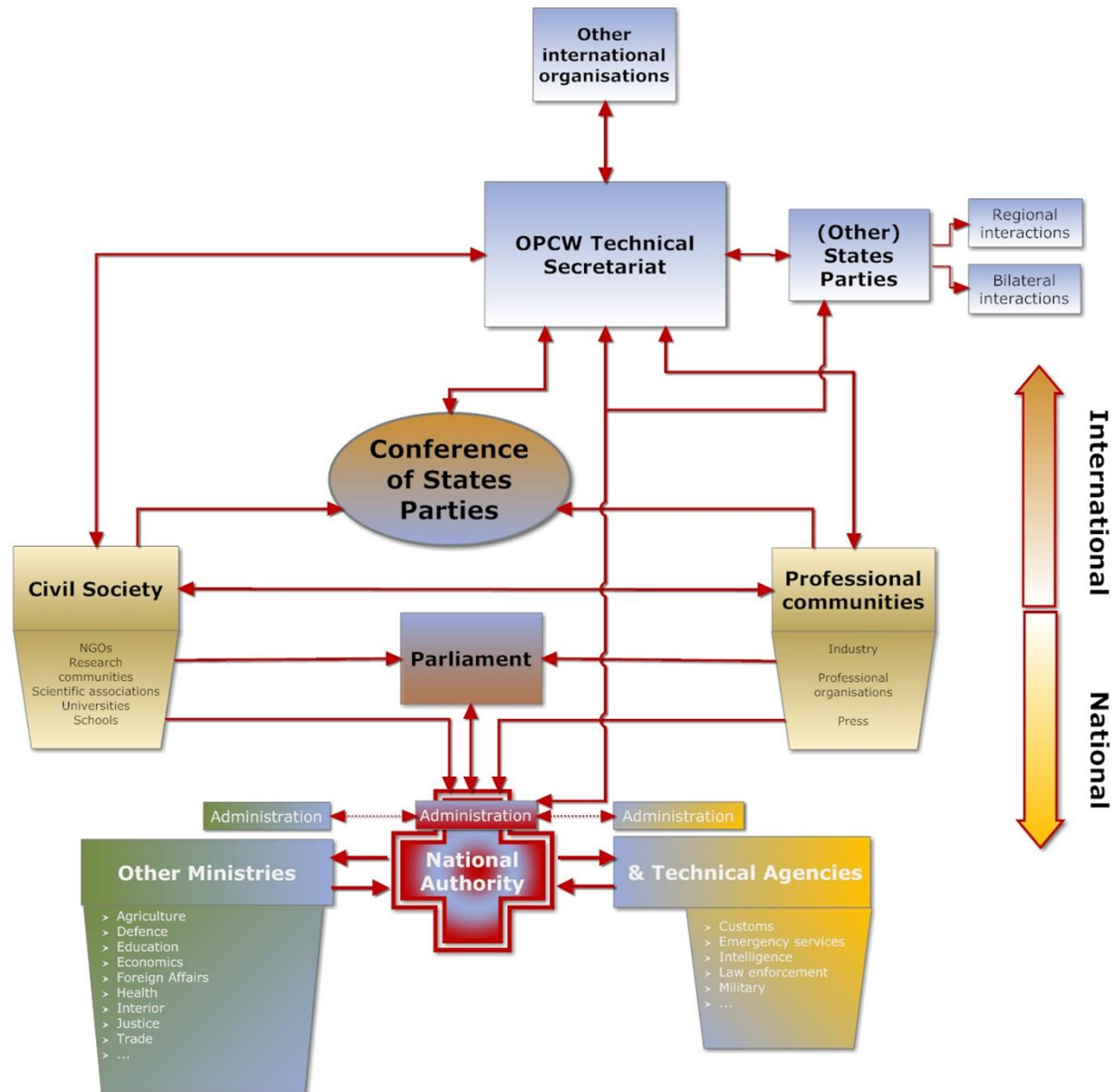
After CW destruction – 1

- 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



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
 - UNSC Resolution 2235 (2015): Established OPCW – UN Joint Investigative Mission (JIM)
 - 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
 - \pm 20 tonnes of mustard agent
 - Some undeclared weapon holdings?
- Libya
 - \pm 26 tonnes of mustard agent
 - Precursor chemicals
- Terrorism
 - A few kilogrammes
 - Opportunistic use of industrial toxic chemicals



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