



Biological and Chemical Weapons Verification Proposals for Transparency-enhancing and Confidence-building Measures

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in Cooperation with Nisreen Al Hmoud, David Friedman, Dorte Hühnert, and Iris Hunger

The Final Document of the 2010 Review Conference of the Nuclear Non-Proliferation Treaty (NPT) included a call for a conference in 2012 on the establishment of a Middle East zone free of nuclear weapons and all other weapons of mass destruction, including chemical and biological weapons (CBW) as well as their delivery vehicles (DVs).¹ The terms of reference for such a conference and the stipulation that such a zone must be effectively verifiable, were already set down in the resolution on the Middle East, adopted at the 1995 NPT Review Conference.²

Thus far it has proved politically impossible to organize the conference. Irrespective of those circumstances, the decision at the 2010 NPT Review Conference has created many conceptual and practical problems by drawing CBW and delivery vehicles into a forum that is preoccupied with nuclear weapons. In addition, if not an implicit goal, it raises the question as to whether having the missing Middle Eastern states join the Biological and Toxin Weapons Convention (BTWC) and the Chemical Weapons Convention (CWC) suffices to address the various regional security concerns. Regardless of the answer, the BTWC and CWC inject the discussions with a spectrum of experiences with transparency, addressing compliance concerns, and formal verification.

Syrian Disarmament and the New Regional Setting

On October 14, 2013 Syria became the 190th party to the CWC. Only two other states in the Middle East still need to join: Israel, which signed the convention in January 1993, but has yet to ratify it, and Egypt, which has neither signed nor ratified the convention. Equalling

the number of states parties to the NPT is a joyous occasion for multilateral disarmament, but it also reshapes the whole political debate about the regional security relationships between the various categories of non-conventional weapons. Particularly Egypt's principled position about Israel joining the NPT exists, irrespective of possible national or regional security benefits the BTWC and CWC may offer through their various transparency-enhancing, confidence-building or verification procedures. With the elimination of Syria's chemical weapon (CW) capacity under the supervision of the Organisation for the Prohibition of Chemical Weapons (OPCW), the long-standing offer for Arab states to join the CWC in exchange for Israel's adherence to the NPT has all but evaporated.

The various operations undertaken by the OPCW in Syria constitute the first case in which the organization's machinery for dismantling a CW program, investigating alleged use as well as verifying and enforcing compliance have had to be activated simultaneously. Moreover, the OPCW is executing those missions under the unprecedented circumstance of conflict and in a context of complicated diplomatic interactions relating both to the Syrian civil war and the deteriorating security relations outside the Middle East. Once completed, the success will undoubtedly have a bearing on future disarmament discussions in the region.

The BTWC, in contrast, is not equipped to address an evolving situation as the one in Syria. No international organization oversees its implementation, and consultations pertaining to matters of concern remain the sole preserve of states parties. States are also responsible for meeting their obligations under the agreed

Abstract

Reviewing the Helsinki process of discussing a Middle East WMD/DVs Free Zone, the question arises whether having the missing states join the Biological and Toxin Weapons Convention (BTWC) and the Chemical Weapons Convention (CWC) would sufficiently address the security concerns in the region. While this question remains difficult to answer, this POLICY BRIEF investigates the possible contributions by the BTWC and CWC and their respective transparency-enhancing and verification mechanisms. First it describes the different international legal instruments governing the prohibitions on chemical and biological weapons. Furthermore, it discusses the various available tools to enhance transparency, and monitor and enforce compliance. It identifies possible additional measures specific to the region and suggests a number of concrete steps to initiate multinational activities to augment trust and confidence in the validity of the ultimate goal of regional disarmament. Moreover, it takes into account Syria's unexpected accession to the CWC and acceptance of an accelerated CW destruction process under international supervision, and considers some implications for the wider Middle East. This POLICY BRIEF concludes with a set of recommendations on verification and confidence building regarding chemical and biological weapons in the region. ■

This POLICY BRIEF builds on the contributions of the participants of an ACADEMIC PEACE ORCHESTRA workshop held in Istanbul, Turkey, from May 27-29, 2013. The views represented in this POLICY BRIEF are solely those of the authors in their personal capacity and do not necessarily represent the views of entities the authors are associated with.

confidence-building measures (CBMs) and any other degree of transparency on treaty-relevant activities they may wish to take into account. Biological weapons (BW) appear to pose more of a potential rather than an acute threat in the Middle East, which may allow for a variety of bilateral and region-wide initiatives to build up confidence among states.

This POLICY BRIEF investigates the possible contributions by the BTWC and CWC as well as their respective transparency-enhancing and verification mechanisms to a WMD/DVs Free Zone in the Middle East. Thereby, it follows three issues dedicated to verification matters. POLICY BRIEF No. 16 presented a general overview of verification principles and insights derived from implementation experiences with several treaties; and POLICY BRIEF No. 17 addressed specific verification issues that might arise during the negotiation of such a zone in the Middle East. Furthermore, POLICY BRIEF No. 33 explored possible frameworks for verification of a WMD/DVs Free Zone in the Middle East.

This POLICY BRIEF first describes the different international legal instruments governing the prohibitions on CBW and their relevance to the region. It also discusses the various available tools to enhance transparency, and monitor and enforce compliance. It identifies possible additional measures specific to the region, and suggests a number of concrete steps to initiate multinational activities to augment trust and confidence in the validity of the ultimate goal of regional disarmament. Moreover, it takes into account Syria's unexpected accession to the CWC and acceptance of an accelerated CW destruction process under international supervision, and considers some implications for the wider Middle East. The POLICY BRIEF concludes with a set of recommendations on verification and confidence building regarding the CBW in the region.

The Context of CBW Arms Control and Disarmament in the Middle East: Relevant Treaties and Conventions

The Biological and Toxin Weapons Convention and the Chemical Weapons Convention govern the norm against CBW today. Both are disarmament treaties: they order the total elimination of these arsenals and the respective weapons and directly related equipment and infrastructure. They also prohibit the development, production, possession, and transfer of such weapons or their underlying technologies if the latter are intended for weapon purposes.

Disarmament, in other words, is not just about eliminating past capacities, but also about preventing future acquisition of CBW. In addition, the treaties are non-discriminatory as obligations and rights apply equally to all states parties. As such they avoid the psychological handicap of the NPT, which creates different sets of obligations for nuclear and non-nuclear weapon states. The comprehensiveness of the respective prohibitions and their equity suggest central roles for both conventions in a future Middle East WMD/DVs Free Zone.

The BTWC and CWC have each attracted large numbers of states parties worldwide. As of June 2014, 170 states adhere to the BW ban and 26 must still either ratify or accede to the convention, including three from the Middle East: Egypt, Israel, and Syria. Both Arab countries have signed, but not yet ratified the document; Israel has done neither. The CW prohibition has reached near-universality. With 190 states parties it now equals the NPT in membership. Egypt and Israel remain among the six non-parties, although the latter country signed it in January 1993. In consequence, of the 17 states usually considered to comprise the Middle East, 14 are already party to the BTWC and 15 to the CWC (see Table). This too points to the centrality of both conventions, as well as experiences with their implementation, to regional disarmament efforts.

Some other international instruments supplement or enhance certain implementation and verification aspects of both disarmament treaties. They include the Geneva Protocol, the UN Secretary-General's mechanism to investigate alleged use of CBW, and UN Security Council Resolution 1540 (2004).

The Biological and Toxin Weapons Convention

Negotiated between 1968 and 1971, the Biological and Toxin Weapons Convention entered into force in 1975. The BTWC³ was the first comprehensive disarmament agreement: it outlaws BW development, production, and possession. The text does not mention 'use', but following an amendment proposal by Iran at the Fourth Review Conference in 1996, parties explicated that the core prohibition in Article I covers use, too.

The Cold War did not allow for a verification machinery. The principle of on-site inspections had yet to be accepted by the United States and the Soviet Union, and then-existing remote technologies were useless to monitor the ban on pathogens and toxins. Via the

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quinquennial review conferences states have tried to address this shortcoming by adopting sets of confidence-building measures in 1986 and 1991. During the 1990s they also explored and subsequently negotiated a supplementary protocol, which would have included formal verification tools and an international implementation organization. The endeavor collapsed in 2001, after the United States formally rejected the draft text. In 2003, parties began convening in annual sessions in between review conferences consisting of an expert meeting during the summer and a gathering of states parties in December. Known as the ‘intersessional process’, the agenda has a rather limited focus – the topics for a series of meetings are decided at the Review Conference – and consists mainly of information exchanges and political consideration of the findings from the expert meeting. The process, now in its third series, has been able to draw in a variety of stakeholders apart from governments (see p.8).

The Chemical Weapons Convention

The Chemical Weapons Convention⁴ entered into force in 1997. It contains a detailed verification machinery. The OPCW oversees treaty implementation and compliance. Its Technical Secretariat includes a large international inspectorate to verify CW destruction operations and inspect declared commercial chemical production facilities. Its provisions also address investigations of alleged CW use. Verification operates on several levels:

- the state party bears responsibility for collecting treaty-required information and submitting it according to recurring deadlines to the Technical Secretariat;
- the Technical Secretariat assesses the submissions and addresses anomalies or deficiencies through consultations with the state party concerned; and
- states can consult with each other to address any compliance concern. In case of suspected breaches the CWC foresees the challenge inspection procedure.

The Geneva Protocol

The Geneva Protocol (1925)⁵ prohibits the use of chemical and biological weapons in war. During the 1980-1988 Gulf War, Iraq waged large-scale chemical warfare against Iran as well as against its own Kurdish population. As a consequence, the international community extended the Protocol’s scope to cover internal armed conflict, too. As part of international humanitarian law the document does not regulate the acquisition or possession of CBW.



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All states in the Middle East with the exception of Oman and the United Arab Emirates (UAE) are party to the Geneva Protocol. Together with the BTWC and the CWC, however, not a single Middle Eastern country can claim legitimate recourse to biological or chemical warfare in both, international or internal, armed conflicts.

UN Secretary-General’s Mechanism for the Investigation of Alleged CBW Use

In addition, the Geneva Protocol forms the foundation of the UN Secretary-General’s⁶ investigative mechanism. During the Iran-Iraq War, UN Secretary-General Javier Pérez de

Members and Non-members of the BTWC, CWC, and NPT in the Middle East

Treaty	Parties to the Treaty	Non-Parties
1925 Geneva Protocol	Algeria, Bahrain, Egypt, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Morocco, Qatar, Saudi-Arabia, Syria, Tunisia, and Yemen	Oman, United Arab Emirates
Biological and Toxin Weapons Convention	Bahrain, Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, United Arab Emirates, and Yemen	Israel, Egypt ⁱ , Syria ⁱ
Chemical Weapons Convention	Bahrain, Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syria, United Arab Emirates, and Yemen	Egypt, Israel ⁱ
Nuclear Non-Proliferation Treaty	Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syria, United Arab Emirates, and Yemen	Israel

i. Signed the convention, but has not yet ratified it.

» Today, Syria is no longer able to manufacture CW and has therefore no war-fighting capacity any more.«

Cuéllar applied his authority under the UN Charter to investigate the many allegations of CW use in the absence of Security Council action. The UN General Assembly and the Security Council formally endorsed their procedure in 1987 and 1988, respectively. The fact-finding missions are to ascertain in an objective and scientific manner facts of alleged violations of the Geneva Protocol. The investigative mechanism therefore applies to both chemical and biological weapons. While maintaining its own rosters of national experts, the UN has more recently signed bilateral memoranda of understanding with the OPCW and the World Health Organization (WHO) to be able to draw on the specific expertise and procedures available in both organizations. These memoranda were activated for the first time in March 2013 for the investigations into alleged CW use in Syria.

The Chemical Weapons Convention contains its own detailed procedures for conducting an investigation of alleged CW use against a state party.⁷ The UN Secretary-General's investigative mechanism nevertheless retains its utility whenever states outside the convention are concerned (as was the case with Syria before its accession). The BTWC provides for bi- and multilateral consultations to resolve any problem with its implementation (Article V) and allows states parties to request the UN Security Council to investigate alleged breaches of the BTWC; it also requires them to comply with subsequent UNSC decisions (Article VI). Both provisions cover allegations of biological warfare, but, unlike the CWC, the BTWC does not have its own inspectorate or protocols. Any UN member, whether a party to the BTWC or not, can request the UN Secretary-General to investigate alleged BW use.

UN Security Council Resolution 1540 (2004)

UN Security Council Resolution 1540 (2004)⁸ addresses proliferation concerns respecting non-state actors. Adopted under Chapter VII of the UN Charter, all UN members must adapt their national legislation to criminalize and penalize terrorist or criminal acquisition of chemical, biological, radiological, or nuclear weapons and their delivery means. The resolution reiterates and reinforces Article IV of the BTWC and Article VII of the CWC so as to make the international prohibitions and obligations in the respective treaties applicable to any physical or legal person on a party's territory and any of its nationals irrespective of the location of his activities. States are required to report the status of implementation to the 1540 Committee, a body that analyzes and reports on submissions and also acts as a conduit for requests and offers for assistance.

Resolution 1540 applies to all UN members and not just the parties to the treaties. Egypt, Israel, and Syria are therefore under the obligation to have and implement legislative measures modelled after the BTWC and CWC requirements. The resolution reinforces a growing understanding of verification that focuses not just on the legitimacy of certain artefacts and activities, but also on the quality of national implementation of treaty obligations. This area of compliance monitoring and assessment offers additional opportunities for confidence building, regional and bilateral cooperation, as well as international assistance, irrespective of whether a particular Middle Eastern state is party to the BTWC or CWC.

Impact of Recent Developments on the Middle East

With the exception of the Vietnam War in the 1960s and 1970s, all major instances of chemical warfare after World War II took place in the Middle East. The incidents in Syria in 2013 and 2014 are but the latest (and hopefully last) in a long line of alleged and confirmed use in the region. On August 21, 2013 the Ghouta district of Damascus was hit with toxic substances that killed hundreds of people and left many more with clear outward symptoms of asphyxia. Military retaliation by France, the United Kingdom, and the United States was averted only at the last moment by a bilateral framework agreement reached between Russia and the United States in Geneva on September 14.⁹ Under its terms Syria not only accepted to relinquish its full chemical warfare capacity by June 30, 2014, but it also agreed to



accede to the CWC. The Executive Council of the OPCW adopted the framework agreement in a slightly modified version as its own on September 27,¹⁰ immediately followed by the UN Security Council.¹¹ Resolution 2118 (2013) created the OPCW-UN Joint Mission for the Elimination of the Chemical Weapons Program of the Syrian Arab Republic.¹² This body became operational on October 14, and coordinates disarmament activities inside Syria. The OPCW has lead responsibility for the technical dimensions, whereas the UN maintains diplomatic contacts with all belligerents in the civil war, among other responsibilities.

Meanwhile the OPCW inspectorate had begun verification of Syria's initial declaration, destruction of empty chemical munitions and CW-specific equipment in research, production, and storage facilities as well as preparations for the removal of the precursor chemicals from the country. Mustard agent and precursors to the nerve agents sarin, VX, and VM have been neutralized aboard a U.S. vessel, before being moved to commercial incinerators for final destruction. The envisaged deadline of June 30, for the neutralization of the precursor chemicals was missed as a consequence of major delays of their transportation to the Syrian port of Latakia. As of October 2014 all declared precursor chemicals and mustard agent have been evacuated from Syria. In addition, 97.6 percent of these materials have been destroyed abroad, including isopropanol, a sarin precursor, that Syria had to eliminate. Since then destruction of the 12 remaining former CW production facilities is also under way. In August Syria also submitted an amendment to its declaration to account for some 200 metric tons of mustard agents, which it reportedly destroyed in March 2013, several months before joining the CWC. Although the convention does not require their declaration, given the special circumstances of Syria's disarmament, OPCW inspectors will verify the claim and the veracity of its particulars by means of interviews, record analysis, and on-site sampling to ascertain that no CW remain in the war-torn country.¹³

In its amendment Syria also declared a former production plant for ricin. While it had the intent to weaponize the toxin, technical difficulties halted this weapon program before any volume could be manufactured. Today, Syria is no longer able to manufacture CW and has therefore no war-fighting capacity any more.

The UN investigative team, which was in Damascus at the time of the Ghouta chemical attacks, released its preliminary "Report on the Alleged Use of Chemical Weapons in the

Ghouta Area of Damascus on 21 August 2013" on September 16.¹⁴ It published its Final Report on December 12.¹⁵ Both documents confirm CW use in the Syrian civil war. Although the authors do not identify the culprits – that was never part of the mandate in order to preserve their impartiality – the number of parallel attacks, the volume and quality of sarin delivered over the target areas, the detailed description of the delivery systems, and the investigators' ability to determine the trajectory and angle of impact of several rockets tend to exonerate insurgent forces as the perpetrators of the Ghouta attacks; also their responsibility in some of the earlier incidents cannot be excluded. The assessments rest on multiple types of samples, victim interviews, investigation of munitions remnants, and laboratory analyses. The investigators established and preserved the integrity of the chain of custody from the moment of sampling until they handed over the evidence to the laboratories in accordance with formal operating procedures and protocols. Syrian government representatives were present until the handover. Syrians also observed the laboratory analyses.

On April 29, 2014 the OPCW announced its own fact-finding mission in Syria to investigate the several cases of alleged use of chlorine as a weapon during the preceding weeks. This mission the OPCW conducted under its own responsibility and in accordance with the provisions in the CWC based on Syria's membership to the organization. The second report of the Fact-Finding Mission (September 10, 2014) indicated that there was compelling evidence of CW use consistent with chlorine.¹⁶

Transparency, Confidence in Compliance, and Verification of a WMD/DVs Free Zone in the Middle East

While the BTWC and the CWC comprehensively prohibit the development, production, possession, transfer, and use of CBW, they differ significantly in the ways that they can monitor and verify compliance with the respective obligations. This section summarizes the main tools and processes for generating confidence in treaty compliance and then considers some challenges to applying both conventions to the Middle East WMD/DVs Free Zone.

Verifying the Prohibition of Chemical Weapons

The CWC has one of the most elaborate verification regimes ever implemented. Verification serves three primary goals:

» The [OPCW] investigators established and preserved the integrity of the chain of custody from the moment of sampling until they handed over the evidence to the laboratories in accordance with formal operating procedures and protocols.«

- certification of the destruction of declared weapon stockpiles, related equipment, and infrastructure (storage sites and production facilities), or the conversion of former manufacturing plants to peaceful purposes;
- oversight of present and future non-development and non-production of CW, which covers activities in the (civilian) chemical industry, international commerce, as well as the creation and strengthening of various types of barriers to illicit activities; and
- investigation of alleged use of CW against a state party.

Verification thus serves to demonstrate state party compliance with the CWC provisions and simultaneously offers reassurance to other states parties that a particular state does not and will not acquire chemical weapons. To these ends, the CWC has established an international body: the Organisation for the Prohibition of Chemical Weapons based in The Hague. The OPCW employs a team of specialist international inspectors. The CWC verification system functions on both the international and national level. Although each level has its own sets of instruments, they are interconnected and mutually reinforcing.¹⁷

On the international level, the tools are: declarations to be submitted by the states parties to the Technical Secretariat; routine inspections conducted by inspectors of this body to validate the declarations and ascertain that no illicit activities take place; and challenge inspections. The Technical Secretariat addresses ambiguities or omissions (particularly in the area of transfers of toxic chemicals) through clarification requests. Routine inspections can also help to resolve such matters.

On the national level, the tools are: implementing legislation, data collection, and the national authority. States parties must transpose the CWC provisions into their national legislation. The treaty prohibits any activity that would assist, encourage or induce anyone to engage in any undertaking that contravenes the convention. Therefore, specific legislation must be adopted to prevent natural or legal persons from undertaking activities prohibited by the CWC on its territory or territory under its control. The CWC also requires the adoption of the principle of extraterritoriality in national legislation.

Implementation legislation must also enable the state to collect the relevant data from public and private actors in order to fulfil its reporting obligations to the Technical

Secretariat. States parties submit information on activities involving toxic chemicals for prohibited purposes (i.e. past weapon programs), as well as on legitimate activities concerning the production, processing, consumption, and transfer of scheduled chemicals.¹⁸

States parties are also obliged to designate or establish a national authority, which acts as a focal point between the Technical Secretariat and the government of the state party, and with other members. Among the national authority's principal responsibilities are escorting OPCW inspections of relevant industrial or military sites; submitting initial and annual declarations; assisting and protecting those states parties which are threatened by, or have suffered, chemical attack; and fostering the peaceful uses of chemistry.¹⁹

Challenge inspections are the ultimate recourse to check compliance. Contrary to most other inspection activities, challenge inspections (as well as investigations of alleged use) cover the entire scope of toxic chemicals and can take place in both declared and undeclared facilities. Only a state party can call for this type of inspection, which is executed by OPCW inspectors. Until today no state has requested a challenge inspection, although the Technical Secretariat of the OPCW has organized several increasingly sophisticated trial challenge inspections. Nevertheless, its non-invocation has left doubts unchallenged as to whether the procedure can uncover treaty violations, particularly ones that involve unscheduled chemicals. Most analysts, however, concur that a challenge inspection could detect indicators or patterns of questionable activities.

Enhancing Transparency with Regard to Biological Weapons

Political and strategic conditions make full achievement of BW verification elusive for the present. As noted earlier, the international community has not been able to design formal verification measures for the BTWC, and deep-seated objections to the verification idea by the United States preclude the creation of an international organization. As a consequence, a template, as offered by the CWC and the OPCW for dealing with CW in the Middle East, does not exist for BW. In addition, it appears highly unlikely that regional protagonists would be able to agree on BW verification measures that proved illusive to the global community.

In contrast, not having been used as weapons of war since World War II, BW do not carry the

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same historical baggage as CW in the Middle East. Therefore, constructive discussions on BW-relevant transparency may encounter far fewer political impediments. In fact, a greater regional consensus appears to exist on bio-related issues, including the limited military utility of BW, threats posed by non-state actor's to acquire BW, the importance of facilitating regulated peaceful applications of biotechnology, and the need for international collaboration on natural disease surveillance and prevention.

Bearing these elements in mind, the Middle East disarmament process may benefit from different types of measures that promote transparency and confidence, but fall short of formal verification. They include national declarations, national implementation measures, participation in confidence-building steps, and the promotion of international cooperation in areas such as disease surveillance as well as bio-security and -safety.

National Statements

As an initial step, states can issue formal statements that first they do not possess and will not acquire BW and second they will never use BW. Such declarations would offer a solid foundation for any other type of confidence-building measures. While not verifiable in the narrow sense of the term, they create an unambiguous baseline from which to judge any future activity or action. Both types of statement are required to avoid any unclearness that plagued the BTWC until 1996, when the Fourth Review Conference declared unequivocally that Article I also prohibited BW use.

National Legislative Measures

The BTWC requires by virtue of Article IV a state party to transpose the treaty obligations into domestic legislation so as to make the international prohibitions applicable to all its nationals wherever they may deploy their activities and all natural and legal persons in any area under its jurisdiction. These domestic measures may include laws, executive orders, and any other type of regulation. They can cover specific criminal and penal law, and are as such as domestic and international technology transfer controls, among them licensing procedures (e.g. authorization to work with specific pathogens), and laboratory bio-risk management regulations. Under UN Security Council Resolution 1540 (2004) all states in the Middle East must promulgate such national measures irrespective of whether they are a party to the BTWC or not. Again, both the BTWC and Resolution 1540 require states

to report on the implementation status and opportunities for bi- or multilateral assistance are available within both frameworks.

As a measure of regional confidence building, national reports could be exchanged within the framework of any regional setup that may result from the Middle East Conference process. However, as the intensity and nature of life sciences and bio-technological activities may differ from state to state, no single regulatory framework may fit all. The Helsinki Process may have to agree on a reporting format that allows for such variances.

Confidence-building Information Exchanges

CBMs can comprise a set of unilateral, voluntary actions or, as in the case of the BTWC, comprise multilateral, politically binding obligations. However, participation in confidence-building information exchanges is not a legal or legally enforceable requirement, in which case it would be a 'declaration'. CBMs offer opportunities for states participating in the exchanges to seek clarifications in cases of perceived anomalies, omissions or contradictions on a bilateral basis. While no substitute for verification, they ought to contribute to transparency and widen states' comfort zones for interacting with each other.

The Middle East Conference may opt to craft its own sets of CBMs addressing the various security questions on its agenda. Absent a formal verification regime, parties to the BTWC adopted two sets of CBMs at the Second and Third Review Conferences in 1986 and 1991, respectively. They modified the list and required information at the Seventh Review Conference in 2011. Presently CBMs comprise:

- A: Part 1: Exchange of data on research centers and laboratories.
Part 2: Exchange of information on national biological defense research and development programs.
- B: Exchange of information on outbreaks of infectious diseases and similar occurrences caused by toxins.
- C: Encouragement of publication of results and promotion of use of knowledge.
- E: Declaration of legislation, regulations, and other measures.
- F: Declaration of past activities in offensive and/or defensive biological research and development programs.
- G: Declaration of vaccine production facilities.²⁰

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One measure was deleted in 2011, but may still prove useful in the Middle East context:

D: Active promotion of contacts between scientists, other experts and facilities engaged in biological research directly related to the Convention, including exchanges and visits for joint research on a mutually agreed basis.

Transnational Stakeholder Interaction

A different set of activities that may contribute to the development of the WMD/DVs Free Zone is the active stimulation of interactions among key stakeholders from the different Middle Eastern countries. Such transnational regional cooperation could be initiated in areas of clear common interest, such as public health security and capacity building, disease surveillance, bio-risk management, among others. International frameworks, such as the WHO's International Health Regulations, can offer a template for organizing such activities.

While none of these actions amount to verification, they do create a context in which observed activities can be interpreted. Furthermore, they can provide valuable input for the design of relevant CBMs and, eventually, verification measures. However, as noted earlier, such actions fall in the grey area between disarmament obligations by states and national responsibilities. Notwithstanding, governments do play a key role, as they would have to remove barriers to the participation by certain nationals in activities on their territory, which would signal a desire to come to a common security arrangement for the region.

Challenges to Applying the BTWC and CWC to the Middle East WMD/DVs Free Zone

Given that both weapon categories are governed by two disarmament treaties, the question arises whether the tools for monitoring and enforcing compliance in the respective two conventions should be adopted for the disarmament regime in the Middle East. While the thought's simplicity and straightforwardness is attractive at first sight, it does raise some practical problems.

First, all states in the Middle East are party to both conventions, with the exception of Egypt, Israel, and Syria. The former two still need to join the CWC, and all three remain outside the BTWC. The security calculi with regard to each other are complex, and Syria's accession to the CWC in September 2013

considerably affects some long-standing assumptions. As evidenced by Israel's decision to cease distribution of gas masks in November 2013, the OPCW's ability to swiftly eliminate Syria's chemical warfare capacity has had a profound impact on the country's threat perceptions.²¹ President Shimon Peres' statement after Syria's accession that Israel will seriously consider ratifying the CWC – this time not contradicted by Prime Minister Benjamin Netanyahu's government – opens the prospect that in a not too distant future Egypt might find itself alone outside the convention.²² In contrast, the Israeli prime minister remains profoundly skeptical of any international compromise on Iran's nuclear enrichment activities and openings to the Israel by Iran's new President, Hassan Rouhani. The prospect of Israel relinquishing its nuclear weapon capacity still appears extremely remote.

Notwithstanding recent regional developments, both Egypt and Israel remain outside the respective treaties for political or military security reasons and clearly do not see how either document can address their principal concerns. Cairo has always strongly resisted ratification of the BTWC and accession to the CWC, unless Israel relinquishes its nuclear weapon capacity by joining the NPT. Israel, in contrast, demands regional peace as a precondition for joining global weapon control treaties. In other words, their becoming a party to either convention will have to be an element or an outcome of the process towards the Middle East Conference.

Second, can the types of compliance monitoring and enforcement provisions in either treaty address the specific security concerns of Egypt, Israel, and Syria? A need may exist to design and implement measures that go above and beyond both conventions to generate the required confidence in the disarmament process. The CWC, with its international organization, verification arrangements, and tools to enforce or restore compliance, may offer a template onto which additional, region-specific measures can be latched. Both the Technical Secretariat of the OPCW and individual states parties would be in a position to assist the three countries with elucidating the supplementary requirements and designing appropriate and acceptable measures to ensure that the specter of chemical warfare is banned from the Middle East.

Such a template unfortunately does not exist for BW. The respective convention did not establish a dedicated international organization. The three-person Implementation Support

»» *The security calculi with regard to each other are complex, and Syria's accession to the CWC in September 2013 considerably affects some long-standing assumptions.*««



Unit, created at the 2006 Review Conference, facilitates states party meetings, collects and makes available the annual submissions under the confidence-building measures, and acts as a conduit between member states for offers and requests for assistance. The convention also lacks verification measures. In 2001, the United States formally rejected the verification and compliance enforcement proposals and the blueprint for an international organization then under consideration by an Ad Hoc Group of states parties. In the light of rapid advances in the life sciences and bio-technology over the past decade and a half, taking inspiration from those ideas for the Middle East WMD/DVs Free Zone may prove challenging.

Since then the states parties have agreed on intersessional work programs between review conferences that explore alternative ways to strengthen the BTWC. The most prominent themes are science and technology developments, disease surveillance, enhanced implementation via criminalization, national legislation, and the adoption of bio-security and -safety standards, international cooperation and assistance, universalization, and improving the CBM formats and states party participation in the CBM process.

As the meetings of member states at the end of each year are preceded by a meeting of experts during the summer, the intersessional process has been able to identify and engage many stakeholders, including representatives from the sciences, academia, and civil society. However, the process also blurs the line between security interactions among states (disarmament) and national responsibilities, which though useful do not actually advance the disarmament agenda. Addressing the Seventh Review Conference in 2011 as a signatory state, but also with the authority of Chair of the Non-Aligned Movement (NAM) (even though Cuba as previous chair spoke formally for the NAM), Egypt remarked that non-governmental actors, including non-governmental organizations, were increasingly acquiring rights (such as participation in committee meetings) that were denied to signatory states and other observers, such as international organizations. Other NAM members, notably Cuba, India, Iran, and Pakistan, concurred. The upshot is that there is no universal consensus about a governance model (i.e. the roles of stakeholders other than states in the further development of the BTWC) and that many states view matters of national implementation and bio-security and -safety as sovereign responsibilities. Furthermore, they see some of the intersessional agenda items

Statement on Last Consignment of Chemicals Leaving Syria by H.E. Amb. Ahmet Üzümcü, Director-General OPCW

“The mission was to destroy the chemical weapons programme of the Syrian Arab Republic. A major landmark in this mission has been reached today. The last of the remaining chemicals identified for removal from Syria were loaded this afternoon aboard the Danish ship Ark Futura. The ship made its last call at the port of Latakia in what has been a long and patient campaign in support of this international endeavour. Removing the stockpile of precursor and other chemicals has been a fundamental condition in the programme to eliminate Syria’s chemical weapons programme. The next stage in this mission is the completion of the maritime operations to deliver the chemicals for destruction at the assigned facility on board the U.S. vessel Cape Ray and at commercial facilities in Finland, Germany, the United Kingdom and the United States of America.”

The mission to eliminate Syria’s chemical weapons programme has been a major undertaking marked by an extraordinary international cooperation. Never before has an entire arsenal of a category of weapons of mass destruction been removed from a country experiencing a state of internal armed conflict. And this has been accomplished within very demanding and tight timeframes. The mission has seen over 30 countries and European Union committing significant financial and in-kind assistance. [...] The collaboration with Member States relating to destruction activities and the provision of equipment and industrial facilities for this purpose is unprecedented in the history of disarmament. [...] Following the Framework Agreement concluded between the Russian Federation and the United States of America, the OPCW was called upon to devise and implement an elaborate programme. Various milestones and interlocking steps for a sequenced elimination and verification were established. The Executive Council of the OPCW supported by the Secretariat remained fully engaged in its oversight of the implementation of the programme. Some eighteen meetings of the Executive Council have so far taken place at OPCW Headquarters, with numerous rounds of informal meetings and technical consultations in the background.

There were expected and unexpected challenges along the way. But the OPCW and member states have been able to overcome them – both through careful diplomacy and innovative technical solutions. Although there were delays in the process, the cooperation of the Syrian Arab Republic has been commensurate with the requirements of the decisions. And, crucially, we were able to count on the invaluable cooperation of the United Nations to provide logistical and security support for our verification effort in Syria through the OPCW-UN Joint Mission. [...] While a major chapter in our endeavours closes today, OPCW’s work in Syria will continue. We hope to conclude soon the clarification of certain aspects of the Syrian declaration and commence the destruction of certain structures that were used as chemical weapons production facilities.”

Source: OPCW (2014) Announcement to media on last consignment of chemicals leaving Syria, June 23. Online, available at <http://www.opcw.org/news/article/announcement-to-media-on-last-consignment-of-chemicals-leaving-syria/> (August 4, 2014).

as encroaching on the responsibilities of international bodies, such as the WHO, the Food and Agricultural Organisation, and the World Organisation for Animal Health with regard to disease surveillance, or the WHO’s International Health Regulations with respect to bio-safety and laboratory bio-security.

Third, given extreme suspicion and hostility, how much confidence can the countries have in the full compliance of an adversary, and if there were a major material breach, how can they respond (immediately) to the threat? In other words, security guarantees extended by the treaties and outside powers will somehow have to be in excess of what is offered by the treaties.

»Negotiators of the WMD/DVs Free Zone will therefore face the early strategic question whether having Egypt, Israel, and Syria join the respective conventions will be an immediate or a longer-term goal.«

Conclusions and Recommendations

The idea of a WMD/DVs Free Zone for the Middle East faces an important conceptual problem in the sense that no regional arrangements exist for chemical or biological weapons arms control. Both weapon categories are outlawed by global, comprehensive disarmament treaties. One major consequence is that in the minds of some key regional protagonists such agreements may not be sufficiently equipped to address acute regional security concerns as perceived by them. Certain compromises in areas such as definitions or verification procedures may have been politically acceptable on the global level, but less satisfactory to address local or regional threats. Furthermore, those compromises were satisfactory at the time of the negotiation, but this would not necessarily be the case today. Advances in science and technology and shifts in threat perceptions (e.g. terrorism) impact on the perceived utility of the verification provisions or the nature of transparency requirements. From this angle, mere universalization of the BTWC or CWC to meet the goal of regional disarmament in the Middle East may not be sufficient.

Negotiators of the WMD/DVs Free Zone will therefore face the early strategic question whether having Egypt, Israel, and Syria join the respective conventions will be an immediate or a longer-term goal. Placing ratification or accession upfront could lead to blockage of the entire regional disarmament process for the same reasons that the three countries presently prefer to remain outside the respective treaty regimes. In contrast, viewing treaty adherence as a later-stage accomplishment creates space to explore existing treaty mechanisms to enhance transparency, build confidence, or verify compliance and design, and test additional measures where they are deemed necessary. In this setup, treaty experience rather than the treaty as such is taken as the point of departure.

The Chemical Weapons Convention's Role towards a WMD/DVs Free Zone

The Chemical Weapons Convention in particular offers an advanced template for designing verification on the regional level. Both Egypt and Israel could, for example, autonomously organize and report on national inspection exercises as a measure to build confidence and transparency pending the conclusion of regional agreements. Such national verification exercises would not only familiarize officials

with the detailed CWC procedures, but also increase their confidence that such inspections can be set up in ways that eliminate the risk of divulging data unrelated to the CWC requirements.

In organizing the verified elimination of Syria's CW capacity, the OPCW has demonstrated constructive flexibility in the interpretation of its operational procedures, implying that the organization could offer maximal support to proposed or agreed measures designed to achieve a WMD/DVs Free Zone in the Middle East. Such support could consist of facilitation of discussions aimed at removing the spectre of chemical warfare from the region, assistance with the implementation or preparation of this process of the CWC requirements (e.g. the reporting and inspection processes), facilitation of bilateral consultations between Egypt and Israel, or mediation regarding international assistance towards achieving the regional prohibition on chemical weapons.

Once negotiations on the WMD/DVs Free Zone take off, the OPCW could conceivably play a significant supportive role towards both the negotiators and the individual countries concerned with regard to technical and legal matters under consideration. The OPCW Director-General could appoint a special or personal representative to liaise with the facilitator of the negotiations to a WMD/DVs Free Zone and engage directly with Egypt and Israel with the prospect of them becoming parties to the CWC. Using an arrangement similar to the OPCW-UN Joint Mission in Syria could allow the body in The Hague to play a constructive role even if negotiations were to lead to regional agreements on disarmament or arms control affecting the status of CW in the region that precede both countries joining the Convention. Adaptability and flexibility may imply the design of provisional obligations, and verification and compliance enforcement measures (as has been the case for Syria) that satisfy the security demands of Egypt and Israel until they can become full parties to the CWC.

Transparency-enhancing and Confidence-building Measures

Issuing a formal declaration up front of the regional negotiations that no country in the Middle East will attack another regional state or part of its population with chemical or biological weapons would be a significant confidence- and security-building measure. To enhance its impact even further, all participants



in the Middle East Conference could declare to allow any request for an investigation of alleged use of CBW under the UN Secretary-General's investigative mechanism on their territory. While the investigation as such will not necessarily apportion responsibility, the use of different methodologies and advanced chemical and biological forensics would result in confirmation or rejection of the allegation. This has an important deterrent effect against the use of CBW. The Syrian case has also demonstrated how the international community can coalesce to effectively address threats and allegations of use of both types of weapons.

Addressing concerns over BW requires a different route, because the BTWC lacks a formal verification machinery and an international implementation institution. CBMs do not have a clear track record of success, and dissatisfaction over participation levels in the BTWC is widespread. Therefore, in the process of developing the WMD/DVs Free Zone the question

arises as to whether CBMs should not be primarily viewed as sets of activities aiming at laying the groundwork for draft agreements, achieving region-wide common standards for governing and regulating legitimate activities in the life sciences and biotechnology industries, developing core principles and standards (including codes of conduct) regarding such activities, and the framing of major legal and organizational elements to make the WMD/DVs Free Zone operational.

Thus, CBMs may offer an intermediate stage activity in the process of developing a fully functional WMD/DVs Free Zone with a view of elucidating requirements for transparency and confidence and designing specific measures to meet the standards set by those requirements. Operating confidence-building measures as part of the development of the WMD/DVs Free Zone would benefit significantly from national statements on the non-possession and non-use of biological weapons.

Endnotes

1. 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, Final Document, NPT/CONF.2010/50, Volume I, Part I, Section IV, para. 7(a), May 28, 2010.
2. Resolution on the Middle East, 1995 Review and Extension Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, NPT/CONF.1995/32 (Part I), Annex, May 12, 1995.
3. The United Nations Office at Geneva (2014). The Biological Weapons Convention. Online, available at <http://www.unog.ch/80256EE600585943/%28httpPages%29/04FBBDD6315AC720C1257180004B1B2F?OpenDocument> (August 30, 2014).
4. The Organisation for the Prohibition of Chemical Weapons (2014). Chemical Weapons Convention. Online, available at <http://www.opcw.org/chemical-weapons-convention/> (August 15, 2014).
5. United Nations Office of Disarmament Affairs (2014). The 1925 Geneva Protocol. Online, available at <http://www.un.org/disarmament/WMD/Bio/1925GenevaProtocol.shtml> (August 15, 2014).
6. UN Office for Disarmament Affairs, 'Secretary-General's Mechanism for investigation of alleged use of chemical and biological weapons'. Online, available at http://www.un.org/disarmament/WMD/Secretary-General_Mechanism/ (June 30, 2014).
7. Chemical Weapons Convention, Verification Annex, Part XI 'Investigations in Cases of Alleged Use of Chemical Weapons'. Online, available at <http://www.opcw.org/chemical-weapons-convention/verification-annex/part-xi/> (June 15, 2014).
8. United Nations Security Council Resolution 1540 (2004) (typescript).
9. U.S. Department of State (2013) 'Framework for Elimination of Syrian Chemical Weapons', September 14. Online, available at <http://www.state.gov/r/prs/ps/2013/09/214247.htm> (May 27, 2014).
10. OPCW Executive Council (2013) 'Destruction of Syrian Chemical Weapons', EC-M-33/DEC.1, September 27. Online, available at http://www.opcw.org/fileadmin/OPCW/EC/M-33/ecm33dec01_e_.pdf (May 30, 2014).
11. UN Security Council (2013) Security Council Resolution 2118 (S/RES/2118), September 27. Online, available at http://www.securitycouncilreport.org/atf/cf/%7B65BFCF9B-6D27-4E9C-8CD3-CF6E4FF96FF9%7D/s_res_2118.pdf (June 13, 2014).
12. OPCW-UN Joint Mission (2013) Online, available at <http://opcw.unmissions.org/Default.aspx?tabid=6576&language=en-US> (April 24, 2014).
13. Jean Pascal Zanders (2014) 'Syria: Disarmament in animated suspense', The Trench blog, May 26. Online, available at <http://www.the-trench.org/syria-disarmament-delays/> (June 30, 2014).
14. UN Mission to Investigate Allegations of the Use of Chemical Weapons in the Syrian Arab Republic (2013) Report on the Alleged Use of Chemical Weapons in the Ghouta Area of Damascus on 21 August 2013 (typescript).
15. UN Mission to Investigate Allegations of the Use of Chemical Weapons in the Syrian Arab Republic (2013) Final Report (typescript).
16. Twelfth monthly report to the United Nations Security Council (2014)[A/C/F/E/R/S]. Online, available at http://www.un.org/en/ga/search/view_doc.asp?symbol=S/2014/706 (September 26, 2014).
17. Daniel Feakes (2002) 'Evaluating the CWC Verification System', Disarmament Forum 4: 11, pp. 11-21.
18. Certain warfare agents and their precursors are grouped in three schedules based on an assessment of their risk to the objectives and purpose of the CWC and their commercial value. Schedule 1 chemicals have been determined to serve CW purposes only and therefore not to have any commercial value.
19. OPCW (2014) 'National Authorities'. Online available at <http://www.opcw.org/about-opcw/member-states/national-authorities> (June 30, 2014).
20. BTWC Implementation Support Unit (2014) 'Participating in the CBMs'. Online, available at <http://www.unog.ch/unog/website/disarmament.nsf/%28httpPages%29/77183233218DDCC4C12571AB0030C6F5?OpenDocument&unid=26BA69147DC74D3BC12571860036935C> (June 30, 2014).
21. 'Israel halts distribution of gas masks in light of Syrian chemical disarmament' (2013) Voice of Russia, November 12. Online, available online http://voiceof-russia.com/news/2013_11_12/Israel-halts-distribution-of-gas-masks-6630/ (June 30, 2014).
22. 'Peres: Israel will consider joining chemical weapons ban treaty' (2013) al Arabiya, September 30. Online, available at <http://english.alarabiya.net/en/News/middle-east/2013/09/30/Peres-Israel-will-consider-joining-chemical-weapons-ban-treaty.html> (May 26, 2014).
23. Jean Pascal Zanders (2014) 'Talking disarmament for the Middle East', The Trench blog, 20 April. Online, available at <http://www.the-trench.org/me-disarmament/> (June 30, 2014).



Further Reading

- Jean Pascal Zanders (ed.) (2013) *The future of the CWC in the post-destruction phase*, Institute for Security Studies, Report No.15.
- UNIDIR and VERTIC (2003) *Coming to Terms with Security: A Handbook on Verification and Compliance*, Geneva: UNIDIR.
- Iris Hunger and Nicolas Isla (2006) 'Confidence-Building Needs Transparency: An Analysis of the BTWC's Confidence-Building Measures', *Disarmament Forum* (3): 26-36.
- Amy Smithson and Jean Pascal Zanders (eds) (2011) 'Special Issue: Global Perspectives on Re-envisioning the Biological Weapons Convention', *The Non-Proliferation Review* 18(3).
- David Cliff, Russel Moul, and Ariane Jugieux (2013) 'Chemical weapons detection: inspecting Syria', *Vertic Brief* 22.

In addition, the international community could practically endorse the Middle East in its assistance programs. This would be support for UN Security Council Resolution 1540 so that the required legal instruments and procedures to implement both the BTWC and the CWC are in place or under development by the time ratification or accession become the next stepping stone in the disarmament process. Having those measures in place helps build further confidence.

Prospects for Disarmament and Verification

Disarmament verification is a process, both during the design and testing of particular measures and during its implementation. Building working relationships on the professional and academic levels through exchanges and joint projects contributes significantly to trust building with the respective epistemic communities. In addition, technical non-governmental experts from within and outside the region could conceivably meet to focus on specific verification challenges and test proposals in practice. Such focus on attainable and conceivable outcomes avoids mental, emotional, and political gridlock. The avoidance of pre-set end goals allows for the plotting of a more general course,

whereby the dialogue may uncover enabling platforms, i.e. intermediate achievements that create options not previously thought of, or previously considered impossible.²³

Setting up a verification or transparency-enhancing system is a long and complex process, during which technical feasibility and political ambitions need to be reconciled with each other. During the negotiation process people will test ideas in the field. Evaluation reports will influence proposals at the negotiating table, and the outcomes of the discussions need to get tested again in practice. States with antagonistic relationships against one another have to get involved in a joint process. Thereby, they will have to determine what can be verified. They also calibrate the need of intrusiveness of the process in order to achieve a relevant level of deterrence against cheating. Furthermore, a layered system of procedures to address compliance concerns at the lowest possible level of confrontation should be established, but with the necessary teeth to establish the facts of non-compliance and to compel the transgressor to restore the integrity of the regional disarmament treaty. The whole exercise is one of building confidence, not just among nations or their diplomats and technical experts, but also in the system they are trying to set up. ■

About the ACADEMIC PEACE ORCHESTRA MIDDLE EAST (APOME)

The ORCHESTRA is the follow-up project of the "Multilateral Study Group on the Establishment of a Missile Free Zone in the Middle East". The ACADEMIC PEACE ORCHESTRA MIDDLE EAST is a classical Track II initiative: it consists of some 100 experts – mainly from the Middle East/Gulf, one of the most conflict-ridden areas of the world. The ORCHESTRA is meeting regularly in working groups (CHAMBER ORCHESTRA UNITS) on specific topics in the context of a workshop cycle from 2011-2014. The main goal of this initiative is to shape the prospective Middle East Conference on the establishment of a zone free of weapons of mass destruction and their delivery vehicles agreed upon by the international community in May 2010. For this reason, these experts develop ideas, concepts, and background information in a series of POLICY BRIEFS which are the results of intense discussions within the CHAMBER ORCHESTRA UNITS. In this framework, the broader normative Cooperative Security Concept will be further developed, embedded, and institutionalized in the region. At the same time, the ORCHESTRA meetings serve as venues for confidence building among the experts. The networking activities of PRIF's Project Group are documented by the ATLAS on Track II research activities in or about the Middle East/Gulf region.

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The views presented by the authors do not necessarily represent those of the project coordinator, editors, sponsors, or PRIF.
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Layout: Anke Maria Meyer

The Academic Peace Orchestra Middle East wishes to thank its generous sponsors, the Foreign Ministry of Norway, the Swiss Federal Department of Foreign Affairs, the Friedrich Ebert Foundation, and the Protestant Church of Hesse and Nassau.

