The Third Review Conference of the Chemical Weapons Convention and beyond: key themes and the prospects of incremental change

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The Chemical Weapons Convention (CWC) forms the core of the chemical weapons (CW) prohibition regime. It entered into force in April 1997 and prohibits a whole class of so-called weapons of mass destruction under international verification. To oversee the CWC's implementation an international body, the Organization for the Prohibition of Chemical Weapons (OPCW), was created. Having celebrated its 15th anniversary with a high-level meeting at United Nations headquarters in New York on 1 October 2012, the organization is now preparing for the third of its quinquennial Review Conferences (RC-3), which will take place from 8 to 19 April 2013.

This conference comes at what some perceive to be a critical juncture in the CW prohibition regime's evolution, for the destruction of declared CW arsenals—although not yet complete—has reached a point where decisions need to be taken by OPCW member states about the regime's future and possible changes in the prioritization of the various regime goals. As the OPCW's director-general has recently noted, in the light of 'the transition that awaits the Organisation, the Third Review Conference obviously assumes critical importance'.[1] Similarly, the report of the advisory panel on future OPCW priorities in July 2011 called for CWC states parties and the 'OPCW collectively to begin addressing this transition'.[2]

Divergent views have come to the fore concerning the relative importance of the OPCW's traditional goals, and tasks associated with them, and of new goals and tasks. Among the traditional goals of the regime are the complete, irreversible and verified destruction of existing CW stockpiles, which still needs to be accomplished, and the continued oversight of the regime's non-proliferation dimension—or, as it is increasingly called, the prevention of the re-emergence

[1] Statement by Ambassador Ahmet Üzümcü, director-general of the Organization for the Prohibition of Chemical Weapons, at the 67th Session of the United Nations General Assembly, New York, 19 Nov. 2012, http://www.opcw.org/index.php?eID=dam_frontend_push&docID=15930, accessed 3 Dec. 2012.

[2] 'Note by the director-general: report of the Advisory Panel on Future Priorities of the Organisation for the Prohibition of Chemical Weapons', document S/951/2011 (The Hague: OPCW, 25 July 2011), http://www.opcw.org/about-opcw/subsidiary-bodies/advisory-panel-on-future-opcw-priorities/, accessed 5 Dec. 2012.

International Affairs **89**: 1 (2013) 143–158

of chemical weapons. These two areas have recently been characterized as the 'fundamental goals' of the CWC by US Acting Under Secretary of State for Arms Control and International Security, Rose Gottemoeller, during the UN high-level meeting.[3] However, interventions by Iranian and other representatives at the same meeting on behalf of the Non-Aligned Movement (NAM) have highlighted and reasserted a wider set of goals and different priorities, focusing on international cooperation, assistance and protection.[4] These competing priorities and visions for the future of the CW prohibition regime can be expected to lead to some contestation of key regime provisions, both during and beyond RC-3. Combined with the experience of the first two CWC Review Conferences in 2003 and 2008, and taking further into account an institutional culture that is consensus-based and tends to shy away from major changes of course, these competing policy priorities militate against the likelihood of massive changes in the implementation of the CW prohibition regime. Instead, the most likely outcome is a range of minor adjustments along with a confirmation of many of the decisions taken at recent OPCW conferences of states parties (CSP) and by the organization's Executive Council in the areas of demilitarization, non-proliferation of CW, assistance and protection against the threat or use of CW, and international cooperation in the peaceful uses of chemistry.

In line with the expectations of historical institutionalist scholarship that inform the writing of this article,[5] the CW prohibition regime has evolved in an incremental way since the CWC's entry into force in 1997. As highlighted by Robinson, it is often erroneously assumed that the CW problem has been solved with the establishment of the CWC.[6] Given the resulting rather limited amount of scholarship on CWC issues, this article will be based predominantly on participant observation at CWC meetings of states parties and extensive documentary analysis. Following a review of the four traditional issue areas noted at the end of the preceding paragraph, the analysis will turn to scientific and technological (S&T) developments of relevance to the CWC as well as more recent areas of concern in which the OPCW has been active, such as chemical terrorism and chemical safety and security. In addition to these substantive matters facing the Review Conference, there are relevant procedural issues related to the preparation and conduct of RC-3, such as the establishment of an open-ended working group (OEWG) of CWC states parties to prepare the meeting and the transition from the OEWG to the Review Conference itself. These are considered in the concluding section of the article.

[3] Statement by Rose E. Gottemoeller, Acting Under Secretary for Arms Control and International Security, US Department of State, at the ceremony commemorating the 15th anniversary of entry into force of the Chemical Weapons Convention, United Nations Headquarters, 1 Oct. 2012, http://www.opcw.org/opcw15/high-level-meeting/statements-from-participants/, accessed 8 Oct. 2012.

[4] Statement by H. E. Ali Akbar Salehi, Minister of Foreign Affairs of the Islamic Republic of Iran, on behalf of the Non-Aligned Movement at the high-level meeting in New York to mark 15 years of OPCW, 1 Oct. 2012, http://www.opcw.org/opcw15/high-level-meeting/statements-from-participants/, accessed 8 Oct. 2012.

[5] Orfeo Fioretos, 'Historical institutionalism in International Relations', *International Organization* 65: 2, 2011, pp. 367–99.

[6] Julian P. Perry Robinson, 'Difficulties facing the Chemical Weapons Convention', *International Affairs* 84: 2, 2008, pp. 223–39.

Chemical weapon demilitarization

The main focus of the CWC and its implementation over the past 15 years has been on the destruction of existing CW stockpiles by possessor states, which has led to approximately 75 per cent of declared CW having been destroyed under international verification by 30 June 2012.[7] The six CW possessor states—Russia, the United States, India, South Korea, Albania and Libya—have declared a total of nearly 70,000 tonnes of chemical warfare agents and about 8.6 million munitions and containers. Of these, Russia declared some 40,000 tonnes, the United States 28,575 tonnes, India around 1,000 tonnes and South Korea around 600 tonnes. Both the Albanian and the Libyan declarations—some 16 tonnes of CW agents in the case of the former and 23.62 tonnes in the case of the latter—did not substantially change the overall size of declared CW stockpiles. Late accession to the CWC of the latter two states and delays in the destruction processes of the original four CW possessor states led to extensions being granted by the OPCW CSP to both intermediate and final destruction deadlines. CWC article IV (6) stipulates a ten-year deadline (29 April 2007) for complete destruction of declared CW stockpiles, with a five-year extension option.[8]

However, by late 2006 the United States had destroyed less than 50 per cent of its CW arsenal, India around 70 per cent, South Korea more than 80 per cent, and the Russian Federation around 16 per cent. These delays resulted in the extension of the final destruction deadline for five of the CW possessor states, which was coupled with a requirement to report to the Executive Council every 90 days on the progress made in the destruction process, as well as to continue to submit annual plans of destruction and annual reports on their CW destruction activities.

Albania, which by spring 2007 had destroyed almost 40 per cent of its CW stockpiles, did not submit an extension request before the deadline stipulated in the CWC, as it expected to complete its CW destruction process during summer 2007. As a result, Albania was tasked by the Executive Council at its March 2007 session to redress the situation and report back to the Council: this was done in July 2007, when Albania became the first CWC state party to be declared as having completed the destruction of its stockpile of CW agents.[9] In July 2008 South Korea completed destruction of its CW stockpile, followed by India in March 2009. By contrast, the Libyan destruction programme encountered technical difficulties which led to further extension of the destruction deadlines, approved by the CSP in 2009. Destruction activities in Libya came to a temporary halt in 2011 when the uprising against the Gaddafi regime plunged the country into civil war, which eventually led to the overthrow of the old political order. These additional

[7] 'Review and operation of the Chemical Weapons Convention since the Second Review Conference', document WGRC-3/S/1 (The Hague: OPCW, 5 Oct. 2012), http://www.opcw.org/index.php?eID=dam_frontend_push&docID=15854, p. 25, accessed 5 Dec. 2012.

[8] According to article IV (8), this deadline also applies to states ratifying or acceding to the CWC during the first ten years after its entry into force. States joining the CWC after this point 'shall destroy chemical weapons … as soon as possible'. The text of the CWC is available at http://www.opcw.org.

[9] 'Report of the OPCW on the implementation of the Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction in 2007', document C-13/4 (The Hague: OPCW), 3 Dec. 2008.

International Affairs 89: 1, 2013

delays in CW destruction, as well as the discovery of additional CW stocks in Libya, necessitated further action on the part of the OPCW, and in November 2011 the CSP extended the final deadline for CW destruction to 29 April 2012.[10] In the event Libya was unable to comply with this final deadline, having destroyed about 51 per cent of its CW by summer 2012.[11]

According to statements by former high-ranking members of the US government, the destruction of US CW stocks may be only two-thirds accomplished by 2012 and may take several more years to be complete. In view of these assessments, and of the fact that progress on the construction of some US and Russian CW destruction facilities was not enough to enable the 2012 deadline to be met, the decision to extend the deadlines for these two biggest CW possessor states incorporated the likelihood of additional visits to future destruction sites. The 2006 decision points out that these visits are intended as an 'additional transparency and confidence building measure'.[12] The first such visit by the chairperson and representatives of the Executive Council was conducted at the Anniston Chemical Weapons Disposal Facility, Anniston, AL, in October 2007 and was followed by visits to several destruction facilities in Russia and the US.

Given the inability of three CW possessor states—the US, Russia and Libya—to meet the 29 April 2012 deadline, these visits are to continue under the political solution eventually agreed upon during the CSP session in 2011. In it, the conference acknowledged 'that the inability to fully meet the final extended deadline of 29 April 2012 would come about due to reasons that are unrelated to the commitment of these States Parties'.[13] It is noteworthy that this decision involved a departure from the OPCW's characteristic consensus-based decision-making: both the Executive Council and the CSP had to vote on the issue, with Iran alone opposing the decision in both forums. In summer 2012 the US had destroyed approximately 90 per cent and the Russian Federation 65 per cent of their respective declared CW arsenals,[14] raising the potentially thorny issue of how the Review Conference will deal with the delay in CW demilitarization.

Non-proliferation and preventing the re-emergence of chemical weapons[15]

With fewer CW destruction facilities operational, a reorientation of the OPCW's activities has already been visible in the organization's annual programme and budget. The budget agreed by the CSP in December 2012 allocates fewer resources to the inspection of CW destruction activities and foresees a higher number of inspections of so-called 'other chemical production facilities' (OCPF). Although

[10] 'Decision: extension of the final deadline for the destruction by Libya of its Category 1 chemical weapons', document C-16/DEC.3 (The Hague: OPCW, 29 Nov. 2011).
[11] 'Review and operation of the Chemical Weapons Convention', document WGRC-3/S/1.
[12] 'Decision: visits by representatives of the Executive Council', document C-11/DEC.20 (The Hague: OPCW, 8 Dec. 2006), p. 1.
[13] 'Decision: final extended destruction deadline of 29 April 2012', document C-16/DEC.11 (The Hague: OPCW, 1 Dec. 2011), p. 2.
[14] 'Review and operation of the Chemical Weapons Convention', document WGRC-3/S/1, p. 25.
[15] This section draws on Alexander Kelle, 'Non-proliferation and preventing the re-emergence of chemical weapons', in *Agent of change? The CW regime*, special issue of *Disarmament Forum*, no. 1, 2012, pp. 55–64.

there is no consensus yet among member states on exactly what the future OPCW and its portfolio of key tasks will look like, it is clear that non-proliferation or, as it is increasingly called, the prevention of the re-emergence of chemical weapons will form a central component of future OPCW activities.

In the light of the dual-use nature of much of the chemistry involved in offensive CW activities, the CWC contains provisions to safeguard international trade and the technological development of the international chemical industry and to preserve the right of states parties to engage in legitimate preventive and protective activities. Rules and procedures for toxic chemicals that may pose a risk to the CWC's object and purpose, but are not listed on one of the three CWC schedules—so-called discrete organic chemicals (DOC)—and related OCPFs are detailed in part IX of the verification annex. It is the verification of these OCPFs that has been a bone of contention among CWC states parties during the past decade. Since the CWC entered into force, around 4,400 inspectable DOC-producing OCPFs have been declared by states parties. In March 2012, after agreement on an increased number of OCPF inspections, the OPCW announced that the overall number of such inspections since the CWC took effect had reached 1,000, or around 23 per cent of inspectable facilities.[16] At this rate, assuming OCPF inspections continue at the rate agreed for 2014, that is, 157 per year, it will take the OPCW at least another 20 years to visit all the remaining facilities in this category just once.

This prospect is viewed with disquiet by some. Even before the First Review Conference in 2003, the OPCW Technical Secretariat concluded that early OCPF inspections undertaken had 'shown that there are . . . some [facilities] that . . . produce chemicals that are structurally related to Schedule 1 chemicals. Of particular relevance to the Convention are facilities that combine this kind of chemistry with production equipment and other hardware designed to provide flexibility and containment.'[17] Since then, recognition of these new developments in the chemical industry has led to calls for a shift in emphasis in implementing the industry verification regime. However, it has also become clear that this shift is not universally approved by states parties. As far back as the First Review Conference, Pakistan asserted that an 'increase in emphasis on verification . . . of facilities producing relatively harmless discrete organic chemicals (DOCs) should not be at the expense of higher risk Schedule 1, 2 and 3 chemicals listed in the Annex to the CWC'.[18] The Political Declaration of that conference affirmed the 'need to ensure

[16] See OPCW, 'OPCW inspects 1000th OCPF plant site', 15 March 2012, http://www.opcw.org/news/article/opcw-inspects-1000th-ocpf-plant-site, accessed 3 Dec. 2012.

[17] Note by the director-general to the First Review Conference, document RC-1/DG.1 (The Hague: OPCW, 17 April 2003), p. 12. The CWC Annex on Chemicals defines a Schedule 1 chemical as one that 'has been developed, produced, stockpiled or used as a chemical weapon' or that 'poses otherwise a high risk to the … [CWC] by virtue of its high potential for use in activities prohibited under this Convention', http://www.opcw.org/chemical-weapons-convention/annex-on-chemicals/a-guidelines-for-schedules-of-chemicals/, accessed 5 Dec. 2012.

[18] Statement to the first special session of the Conference of States Parties to review the operation of the Chemical Weapons Convention by Mr Mustafa Kamal Kazi, Ambassador and Permanent Representative of Pakistan to the OPCW, The Hague, 30 April 2003, para. 12. The CWC Annex on Chemicals defines a Schedule 2 chemical as one that either 'poses a significant risk to the object and purpose of this Convention because it possesses such lethal or incapacitating toxicity as well as other properties that could enable it to be used as a chemical weapon' or that is used as a precursor to a Schedule 1 chemical. Schedule 3 chemicals

International Affairs 89: 1, 2013

adequate inspection frequency and intensity' for each category of Article VI facilities.[19] Proponents of expanded and more focused OCPF inspections could interpret this as allowing the redirection of industry inspection towards the group of OCPFs that pose the greatest risk to the objects and purposes of the convention; at the same time, it could be claimed as a vindication of the argument by states parties such as Pakistan that regard the CWC as containing a fixed risk hierarchy, with Schedule 1 chemicals and facilities topping this list and OCPFs being of a much lower concern.

In the wake of this ambiguous statement the debates about OCPF inspections continued and resurfaced during the Second CWC Review Conference (RC-2) in 2008, when Cuba on behalf of the NAM and China reiterated its continued attachment to the interpretation of industry verification as being based on a fixed definition of risks inherent in different types of chemicals and facilities. The United States, in contrast, stressed the need to increase the number of OCPF facilities 'that are inspected annually' and to focus more on 'specific facilities that should be inspected. Some of these facilities incorporate technologies and features that are highly relevant to the Convention.'[20] This argument was developed further in a Swiss national paper submitted to RC-2 that made the case for a detailed risk assessment of OCPFs and for the introduction of a weighting mechanism to rank those facilities that pose the highest risk to the object and purpose of the CWC.[21] In order to address the diverging views on OCPF inspections, the final document of RC-2 called for the 'early resumption of consultations on the OCPF site selection methodology'.[22]

In parallel to these political debates, in accordance with the CWC the OPCW Technical Secretariat had to start implementing a verification mechanism for OCPFs beginning in May 2000. For the first seven years thereafter, site selection for inspections was carried out through a two-stage process in which first the country and then the plant site for inspection were selected. This temporary mechanism was replaced by an interim algorithm introduced by the Technical Secretariat in May 2007, which allowed for the selection of plant sites in a single step and sought to direct the process towards relevant facilities. The above-mentioned call by RC-2 for additional consultations among states parties resulted in an updated interim selection methodology which has been implemented by the Technical

are those that have either been used as a chemical weapon or are a precursor to Schedule 1 or 2 chemicals. What sets them apart from the previous two categories is their production 'in large commercial quantities for purposes not prohibited under this Convention', http://www.opcw.org/chemical-weapons-convention/annex-on-chemicals/a-guidelines-for-schedules-of-chemicals/, accessed 5 Dec 2012.

[19] Conference of the States Parties, 'Political declaration of the first special session of the Conference of the States Parties to review the operation of the Chemical Weapons Convention (First Review Conference)', document RC-1/3 (The Hague: OPCW, 9 May 2003), p. 3. Article VI facilities are related to Schedule 2 and 3 chemicals and the so-called 'Other Chemical Production Facilities' or OCPFs.

[20] Statement by Ambassador Eric M. Javits, United States delegation to the Second Review Conference of the Chemical Weapons Convention, The Hague, 7 April 2008, pp. 5–6.

[21] Switzerland, 'Risk assessment of the different types of plant sites/facilities under article VI of the Chemical Weapons Convention (CWC)', document RC-2/NAT.11 (The Hague: OPCW, 9 April 2008), p. 15.

[22] 'Report of the second special session of the Conference of the States Parties to review the operation of the Chemical Weapons Convention (Second Review Conference)', document RC-2/4 (The Hague: OPCW, 18 April 2008), p. 16.

International Affairs 89: 1, 2013

Secretariat since the beginning of 2012. Although the improved algorithm allows the Technical Secretariat to focus on facilities of greater relevance, it still leaves out the third weighting factor specified in part IX of the verification annex, namely 'proposals by states parties'. A mechanism for how such proposals could be integrated into the OCPF site selection methodology still needs to be agreed—more than a decade after OCPF inspections were begun.

Protection and assistance

The fact that peaceful uses of chemistry cannot be taken for granted has led the drafters of the CWC to acknowledge the need for CW defences. According to article X (2), protection against the threat or use of CW is a legitimate undertaking. Such protection can be realized through research, development, production and use of protective measures against CW. In order to increase transparency in this area, article X (4) requests all states parties to make an annual declaration of information on their national CW protection programmes. Article X (1) provides for emergency assistance in the event of an accidental or deliberate use or release of chemical weapons to those states parties whose CW defence capabilities are overwhelmed by such use, or threat of use. More specifically, according to article X (8) assistance can be requested by a state party if it is of the opinion that CW have been used against it, that riot control agents have been used against it as a method of warfare, or that it is threatened by any action prohibited under article I of the CWC.

So far, no CWC state party has formally requested assistance under these provisions. However, numerous exercises and training courses have been conducted to increase and maintain readiness should the use or threat of use of CW occur. The first major OPCW exercise on the delivery of assistance—named ASSISTEX I—took place in September 2002 in Zadar, Croatia. Its aim was to assess the preparedness of both states parties and Technical Secretariat for processing and responding to a request for assistance. The underlying scenario involved a fictitious state party discovering a terrorist group first producing and then using CW in an attack on a major airport. Over 900 individuals from eight states parties participated in the exercise.[23] A few years later another major assistance exercise, Joint Assistance 2005, was conducted in Lviv, Ukraine.[24] The scenario this time envisaged simultaneous terrorist attacks involving CW in different parts of one country. The detailed evaluation of the exercise concluded that most defensive procedures and capabilities had been employed as planned, but identified several areas for further improvements in the organizational and administrative capabilities of the Technical Secretariat.[25]

[23] 'The first OPCW exercise on the delivery of assistance: ASSISTEX 1', *Chemical Disarmament Quarterly*, vol. 1, 2003 (The Hague: OPCW), p. 13.

[24] 'Report of the OPCW on the implementation of the Convention on the Prohibition of the Development, Production, Stockpiling, and Use of Chemical Weapons and on their Destruction in the year 2005', document C-11/4 (The Hague: OPCW, 6 Dec. 2006).

[25] 'Note by the director-general: report on Joint Assistance 2005, Lviv, Ukraine, 9–13 October 2005', document S/554/2006 (The Hague: OPCW, 8 March 2006), p. 5.

International Affairs 89: 1, 2013

During RC-2 Switzerland, which has consistently been one of the strongest supporters of article X implementation measures and has offered numerous assistance and protection training courses to other OPCW member states, submitted a national paper on article X measures, which elaborated the continuing rationale for protection and assistance and pointed out that in the 'absence of any possibility of retaliation in kind, it is of paramount importance that States Parties continue to be equipped and trained to defend themselves against chemical weapon attacks . . . Furthermore, the threat of terrorist attacks with toxic chemicals has not decreased in the current security context.'[26] Accordingly, it encouraged states parties to step up their article X activities in areas where gaps still existed, such as contributions to the voluntary fund for assistance, the annual provision of information on their protective programmes, and the notification of what assistance measures they have actually implemented. The third major OPCW field exercise on assistance and protection (ASSISTEX 3) was conducted in Tunisia from 11 to 15 October 2010: in this, over 30 secretariat staff members were deployed to investigate the alleged use of a chemical agent.

In sum, the implementation of CWC provisions on protection and assistance has seen a multitude of activities by both the OPCW's Technical Secretariat and a small number of dedicated states parties, which have funded, conducted and provided logistical support for a large number of assistance- and protection-related courses. According to the OPCW's own count, since entry into force of the convention over 2,200 participants from member states have participated in these events.[27] While this has clearly improved capabilities—on the part of both the secretariat and individual OPCW member states—to conduct an investigation of alleged use and provide assistance if the national capabilities of a CWC state party are unable to cope, full realization of the CWC's provisions in this area are still hampered by limited transparency in relation to protective programmes (in 2010 only 46, or 24 per cent, of states parties had submitted a declaration according to article X (4)[28]) and by a lack of firm commitments to assistance measures that states parties are willing to provide.

International cooperation in the peaceful uses of chemistry

In order to attract those states that have never produced CW or do not feel threatened by them, the CWC contains provisions (in article XI) for fostering international cooperation in the peaceful uses of chemistry. Such international cooperation activities have traditionally been regarded as an essential pillar of the CW prohibition regime by many developing states. While the OPCW's Technical Secretariat has developed and implemented a range of activities in this

[26] Switzerland, 'Assistance and cooperation against chemical weapons', document RC-2/NAT.10 (The Hague: OPCW, 9 April 2008), p. 1.

[27] OPCW, 'Assistance and protection against chemical weapons' (The Hague), http://www.opcw.org/our-work/assistance-and-protection/, accessed 3 Dec. 2012.

[28] 'Note by the director-general: report to the Conference of the States Parties at its sixteenth session on the status of implementation of Article VII of the Chemical Weapons Convention as at 29 July 2011. Further obligations pursuant to article VII', document C-16/DG.11 (The Hague: OPCW), 29 Aug. 2011, p. 3.

International Affairs 89: 1, 2013

area,[29] annual sessions of the CSP and the first two review conferences have seen members of the NAM criticizing the export controls of states participating in the Australia Group (AG), which they regard as contravening the CWC cooperation provisions. The AG was created in the mid-1980s in response to the realization by western states that their exports of dual-use chemicals and related equipment had directly contributed to the Iraqi CW programme. During the end-game of CWC negotiations in 1991,[30] Australia emphasized the temporary nature of the group and suggested it would cease operation once the CWC was fully operational. The number of states participating in the AG has grown and the scope of its export controls has widened since then, while criticisms have recently become restricted to a few NAM states.[31]

In the early phase of the CWC's operation three of the more outspoken NAM members—Iran, Cuba and Pakistan—expressed their dissatisfaction with the continuation of AG export controls in a draft resolution which they submitted to the third session of the CSP.[32] Although no formal decision of the conference ensued, owing to the resistance of AG participants, it can be assumed that this initiative was at least partially responsible for a number of national papers submitted to the following session of the conference describing national implementation mechanisms for article XI, including the review of national export control regulations.

This did not stop NAM members calling for the immediate cessation of what they viewed as discriminatory transfer control regimes during the First CWC Review Conference in 2003, when Iran, for example, proposed that a 'multilateral mechanism under the auspices of the OPCW within the domain of the Convention be established to replace Australia Group interim arrangements'.[33] Members of the Western European and Others Group (WEOG), by contrast, defended the need for the Australia Group's continued existence. A detailed British paper in support of both national and harmonized export controls concluded that 'a blanket relaxation or abandoning of national export monitoring and control arrangements between States Parties would undermine the fundamental object and purpose of the Convention, would be contrary to the obligations of Article I, and would prevent States Parties from meeting their specific Convention obligations in relation to transfers of scheduled chemicals'.[34]

[29] For an overview of activities since 2008, see the Technical Secretariat's note, 'Review and operation of the Chemical Weapons Convention since the Second Review Conference, document WGRC-3/S/1'.

[30] Negotiations were concluded in 1992 and the CWC was opened for signature in January 1993, but it only entered into force in April 1997 once the 65 ratifications required for entry into force had been gathered.

[31] Julian P. Perry Robinson, 'The Australia Group: a description and assessment', in H. G. Brauch, H. J. van der Graaf, J. Grin and W. A. Smit, eds, *Controlling the development and spread of military technology* (Amsterdam: VU University Press, 1992), pp. 157–76; James I. Seevaratnam, 'The Australia Group: origins, accomplishments, and challenges', *Nonproliferation Review* 13: 2, 2006, pp. 401–15. See also the Australia Group website at http://www.australiagroup.net, accessed 3 Dec. 2012.

[32] Iran, Cuba and Pakistan, 'Draft resolution submitted by Islamic Republic of Iran, Cuba and Pakistan: fostering of international cooperation for peaceful purposes in the field of chemical activities', document C-III/NAT.4 (The Hague: OPCW, 19 Nov. 1998), p. 2.

[33] Iran, 'Statement by H. E. Dr G. Ali Khoshro, Deputy Foreign Minister of Legal and International Affairs, to the First Review Conference of the states parties of the Chemical Weapons Convention', The Hague, 30 April 2003, p. 5.

[34] United Kingdom, 'The role of export controls in the implementation of the Chemical Weapons Convention', document RC-1/NAT.12 (The Hague: OPCW, 29 April 2003), p. 6.

International Affairs 89: 1, 2013

Given the entrenched positions of participants in this debate, it is not surprising that much of the Review Conference report simply reproduced text contained in the CWC or agreed upon during earlier conferences of the states parties. The Review Conference also 'urged the Council to continue its facilitation efforts to reach early agreement on the issue of the full implementation of Article XI'.[35] The tenth session of the conference of states parties in 2005 tasked the OPCW's Technical Secretariat with maintaining lists of voluntary cooperation offers, enhancing international cooperation with the chemical industry, creating internship programmes, supporting capacity-building, and further developing the OPCW's international cooperation programmes.[36] Despite recognition that the secretariat was making progress with many of these activities, the ritualistic exchange of well-known positions on international cooperation and AG export controls resurfaced during RC-2 in 2008. On a more practical level, a background document prepared by the OPCW Technical Secretariat on the implementation of the CWC since the First Review Conference noted in relation to economic and technological developments under CWC article XI that 'all the principles and criteria outlined in the decision of the Conference . . . are being addressed through current international-cooperation programmes'.[37] Following RC-2 it took CWC states parties until the 16th session of the CSP in 2011 to adopt an 'agreed framework' to guide the secretariat in the future implementation of CWC article XI, highlighting four priority areas of activity: national capacity-building for purposes not prohibited under the CWC; fostering networks among a variety of stakeholders; increasing effectiveness of already existing cooperation programmes of the organization; and activities by the OPCW and its member states to enable the 'fullest possible exchange of chemicals, equipment, and scientific and technical information relating to the development and application of chemistry, in accordance with the provisions of the Convention'.[38]

While this may make room for a few additional measures, established practice in this area suggests that international cooperation activities undertaken by the OPCW and supported by a number of its member states currently cover most areas in which there exists a demand for such cooperation. Rhetoric on discriminatory export control practices seems to be largely restricted to two NAM states, Cuba and Iran, whose positions can be assumed to be influenced by political conflicts that go well beyond the issue area of CW prohibition. Indeed, Cuba itself made reference to this wider context in a statement in 2008 in which it described itself as having 'been blockaded and besieged for almost 50 years by the biggest power

[35] 'Report of the first special session of the Conference of the States Parties to review the operation of the Chemical Weapons Convention (First Review Conference), 28 April–9 May 2003', document RC-I/5 (The Hague: OPCW, 9 May 2003), p. 26.

[36] 'Decision: full implementation of article XI', document C-10/DEC.14 (The Hague: OPCW, 11 Nov. 2005), p. 2.

[37] Note by the Technical Secretariat, 'Review of the operation of the Chemical Weapons Convention since the First Review Conference', document RC-2/S/1 (The Hague: OPCW, 31 March 2008), p. 70.

[38] 'Decision: components of an agreed framework for the full implementation of article XI', document C-16/DEC.10 (The Hague: OPCW, 1 Dec. 2011), p. 4.

in the world'.[39] Similarly, it is safe to assume that the Iranian policy towards the AG is at least partially determined by the nuclear weapons-related sanctions the country faces. For both these states, geopolitical issues or conflicts in related issue areas frame their political rhetoric within the OPCW on international cooperation under the CWC.

Review of scientific and technological developments

The four substantive core areas of CWC implementation discussed so far are often treated in a rather compartmentalized way. However, developments in all these areas are co-determined by scientific and technological (S&T) developments of relevance to the CWC. The normative guidance for OPCW member states in reviewing and adapting to such S&T advances is contained in CWC article VIII (22). On the procedural level, it requires CWC review conferences to address S&T developments. In addition, the CWC also establishes a Scientific Advisory Board (SAB) to enable the director-general of the OPCW's Technical Secretariat to advise the policy-making organs of the OPCW, that is, the CSP and the Executive Council. As one of the very few studies on the SAB has correctly pointed out, the 'ambiguity of science … makes the independence of a scientific advisory body, acting at arm's length from governments and the political organs of international institutions, all the more critical'.[40] Since the CWC entered into force the activities of the SAB have been mostly low-key events, with annual meetings and additional meetings of some temporary SAB working groups to discuss specific technical matters of relevance to implementing the CWC. Such temporary working groups have been addressing questions relating to inspection equipment and verification methodologies, chemical weapons destruction technologies,[41] and, more recently, issues related to the convergence of chemistry and biology, and education and awareness-raising among chemists.[42]

Activities of the SAB have so far received political attention at a high level only in the run-up to the CWC review conferences. Reflecting the provisions of CWC article VIII, it has been only during these events, not at the regular meetings of the CSP, that member states have addressed S&T developments of relevance to the CWC. In the preparatory phase of the First Review Conference the SAB liaised with the International Union of Pure and Applied Chemistry (IUPAC), which held a workshop and produced a technical report on S&T issues

[39] Cuba, 'Statement by the head of delegation of Cuba to the thirteenth session of the Conference of the States Parties (item 17 of the agenda in relation to the implementation of article XI of the Chemical Weapons Convention)', document C-13/NAT.9, 5 Dec. 2008 (The Hague: OPCW, 12 Dec. 2008), p. 2.

[40] Kathleen Lawand, 'The Scientific Advisory Board of the Organization for the Prohibition of Chemical Weapons: the role of science in treaty implementation', *CBW Conventions Bulletin*, no. 40, June 1998, pp. 1–5 at p. 1.

[41] 'Report of the first session of the Scientific Advisory Board', document C-III/DG.6 (The Hague: OPCW, 6 Oct. 1998).

[42] 'Report of the nineteenth session of the Scientific Advisory Board', document SAB-19/1 (The Hague: OPCW, 12 Sept. 2012).

of relevance to the CWC.[43] This report was then used by the SAB in drawing up its own report, which in turn was submitted to the Review Conference by the OPCW's director-general.[44] During the course of the First Review Conference, the S&T issues identified by IUPAC and the SAB were inserted into deliberations on various aspects of reviewing the CWC's operation, instead of being treated as a set of issues in their own right.[45] The conference's final document 'requested the Council, assisted by the Secretariat and members of the SAB, as appropriate, to study these recommendations and observations with a view to preparing recommendations to the Conference on them'.[46]

The above pattern of interaction between the SAB and IUPAC repeated itself before the Second CWC Review Conference in 2008, with IUPAC holding a discussion meeting and producing another technical report.[47] This report in turn informed the SAB's own report which was submitted to the Review Conference.[48] As remarked in the SAB report on its tenth session, the IUPAC workshop reached 'two high-level conclusions': 'that, with respect to advances in science, there was an increasing convergence between chemistry and biology; and that, with respect to technological advances, there was an increasing shift of chemical production towards what are known as non-traditional chemical-producing countries'.[49]

Statements on S&T issues were inserted into the final document of RC-2 in several areas, including the recognition that the scope of the CWC's prohibitions extends to recent S&T developments, that such developments have an impact on the industry verification regime and that staff on the OPCW's Technical Secretariat need to keep abreast of S&T developments of relevance to the treaty's implementation. RC-2 also agreed to support the work of the SAB with increased funds, so that two annual meetings plus two meetings of temporary working groups could be funded from the regular OPCW budget. Furthermore, the Review Conference took note of the SAB report as submitted by the director-general and 'requested the [Executive] Council to consider these issues'.[50] To this end a meeting of governmental experts was convened in February 2009 to consider the SAB report and its recommendations, as well as to report back to the Executive Council.

Given the diverging political assessments among CWC states parties on how best to address S&T developments—such as the issue of OCPF inspections mentioned

[43] George W. Parshall, Graham S. Pearson, Thomas D. Inch and Edwin D. Becker, 'Impact of scientific developments on the Chemical Weapons Convention', *Pure and Applied Chemistry* 74: 12, 2002, pp. 2323–52.

[44] 'Note by the director-general: report of the Scientific Advisory Board on developments in science and technology', document RC-1/DG.2 (The Hague: OPCW, 23 April 2003).

[45] Alexander Kelle, 'Assessing the effectiveness of security regimes: the chemical weapons control regime's first six years of operation', *International Politics* 41: 2, 2004, pp. 221–42.

[46] 'Report of the first special session of the Conference of the States Parties to review the operation of the Chemical Weapons Convention (First Review Conference), 28 April–9 May 2003', document RC-I/5, p. 9.

[47] Mahdi Balali-Mood, Pieter S. Steyn, Leiv K. Sydnes and Ralf Trapp, 'Impact of scientific developments on the Chemical Weapons Convention', *Pure and Applied Chemistry* 80: 1, 2008, pp. 175–200.

[48] 'Note by the director general: report of the Scientific Advisory Board on developments in science and technology', document RC-2/DG.1 (The Hague: OPCW, 28 Feb. 2008).

[49] 'Report of the tenth session of the Scientific Advisory Board', document SAB-10/1 (The Hague: OPCW, 23 May 2007), p. 3.

[50] 'Report of the second special session of the Conference of the States Parties to review the operation of the Chemical Weapons Convention (Second Review Conference), 7–18 April 2008', document RC-2/4, p. 15.

above—it was unlikely that this meeting of governmental experts would lead to a breakthrough in relation to any of the issues discussed in the SAB report submitted to RC-2. The appointment of this group of experts highlights the need for care to be taken that the independence of the scientific advice rendered by the SAB is not compromised by its recommendations being filtered through such an ad hoc body, whose members are selected on the basis not of their scientific expertise but of their government affiliation. As there is no clear-cut division of labour and competences between the SAB and an additional group of government-nominated experts, the setting up of such a group and especially its attempts to direct the SAB's future work have the potential to undermine the latter's depoliticized position, which it derives from being appointed by and answerable to the director-general of the OPCW's Technical Secretariat.

In the preparation of the Third CWC Review Conference the process outlined above, involving reviews of relevant S&T developments first by IUPAC and then by the SAB, has been replicated, with IUPAC holding a meeting at the Swiss national NBC defence laboratory in early 2012 and the SAB producing its own report in October 2012.[51] It remains to be seen to what extent S&T issues will be dealt with in a similar fashion during the Review Conference itself and whether it will be followed by the appointment of another group of governmental experts to address the review of S&T issues by the SAB. In this context it will also be interesting to follow how the newly created position of a science adviser in the Technical Secretariat will be integrated into already existing structures and processes for S&T review by the OPCW.

Chemical terrorism and chemical safety and security

Concerns about chemical terrorism have not only featured in the discussions of assistance and protection activities outlined above, but have triggered a wider set of deliberations and activities under the CWC. This is noteworthy as the convention does not contain a single mention of chemical terrorism—or, indeed, of the concepts of chemical safety and security that have emerged in this context. Despite this absence, the Advisory Panel on Future OPCW Priorities pointed out with reference to the broadened threat spectrum that 'the deliberate release of toxic industrial chemicals as well as the ad hoc synthesis of chemical agents using readily-available chemicals, including simple household goods, cannot be ignored'.[52] OPCW activities in this area have been embedded in a wider set of global counterterrorism efforts at the UN level, such as the UN Security Council 1540 Committee, which focuses on the implementation of Resolution 1540 (2004), and the UN Counter-Terrorism Implementation Task Force (CTITF), in which the OPCW is a participant. In this latter role the OPCW Technical Secretariat

[51] 'Report of the Scientific Advisory Board on developments in science and technology for the third special session of the Conference of the States Parties to review the operation of the Chemical Weapons Convention', document RC-3/DG.1 (The Hague: OPCW, 29 Oct. 2012).

[52] 'Report of the Advisory Panel on Future Priorities', http://www.opcw.org/about-opcw/subsidiary-bodies/advisory-panel-on-future-opcw-priorities/, accessed 5 Dec. 2012, p. 21.

International Affairs 89: 1, 2013

contributed to a 2011 report on 'Interagency coordination in the event of a terrorist attack using chemical or biological weapons or materials'.[53] Acknowledging that the CWC does not specifically deal with the fight against terrorism, the report nonetheless 'contains a number of recommendations and considerations that are relevant for the OPCW and its work', including 'the need to work towards a culture of chemical security and safety'. It also 'encourages the OPCW to continue its work in this area, in close cooperation with relevant partners'.[54] Such cooperative efforts have seen the OPCW recently organize two international conferences on chemical safety and security. The first of these took place in September 2011 as a contribution by the OPCW to the international year of chemistry.[55] This was followed up by a meeting co-organized by the OPCW and the Polish government in November 2012 in Tarnow, Poland.[56] One of the presentations at this meeting seems to indicate that at least one CWC state party, Iran, seeks to develop further a suggestion made by the advisory panel on future OPCW priorities, when it advocated an 'all-risks approach' that 'could, for example, include OPCW support for the establishment, in regions or sub-regions where such capabilities are lacking, of regional centres to prepare for and respond to threats related to releases of toxic chemicals'.[57] The secretary of the Iranian National Authority for the CWC proposed setting up exactly such a regional assistance and protection centre to address chemical safety and security concerns.[58] Given the trend of recent developments, it is safe to assume that the threat of chemical terrorism and corresponding notions of chemical safety and security will continue to form an expanding part of the OPCW's future activities.

Conclusions

As the outcome of any large multilateral conference depends not only on substance, but also on matters of procedure, it is important to be aware of the potential procedural stumbling blocks on the way to and during the Third CWC Review Conference, which go well beyond the procedure to review S&T advances discussed above. In taking such a wider view, the Second Review Conference in 2008 can offer some guidance as to the pitfalls to avoid. This meeting (like the Third Review Conference) was preceded by a preparatory process based on an open ended working group (OEWG) that held regular consultations in the 18 months

[53] Counter-Terrorism Implementation Task Force, 'Report of the Working Group on Preventing and Responding to Weapons of Mass Destruction Attacks: interagency coordination in the event of a terrorist attack using chemical or biological weapons or materials (New York: United Nations, 2011), http://www.un.org/en/terrorism/ctitf, accessed 3 Dec. 2012.

[54] 'Note by the director-general: status of the OPCW's contribution to global anti-terrorism efforts', document EC-67/DG.9 (The Hague: OPCW, 7 Feb. 2012), p. 8.

[55] OPCW conference on 'International cooperation and chemical safety and security: outcome document' (The Hague: OPCW, 2011).

[56] International Meeting on Chemical Safety and Security, Tarnow, Poland, 8–9 Nov. 2012: for detailed information, see http://www.opcw.org/imcss/.

[57] 'Report of the Advisory Panel on Future Priorities', p. 21.

[58] Hadi Farajvand, secretariat of the National Authority for CWC, Ministry of Foreign Affairs, Iran, 'CWC regional assistance and protection centres (safety and security centres) (RAPC)', presentation at International Meeting on Chemical Safety and Security, http://www.opcw.org/imcss/, accessed 3 Dec. 2012.

prior to the conference and resulted in a substantial preparatory document.[59] However, despite this extended period of activity, the OEWG process was not perceived as being inclusive enough by NAM states parties to the CWC, resulting in a competing annotated version of the OEWG chair's text being introduced by the NAM into the proceedings of RC-2. The rather slow process adopted by RC-2 to reconcile the numerous differences between the two documents led to a situation towards the end of the conference in which a subset of CWC states parties—around 15 to 20—were engaged in separate negotiations in order to agree a final document. This was presented—in a take-it-or-leave-it fashion—to the remaining states parties only during the early morning hours of the Saturday after the conference had officially ended.[60] Not surprisingly, the parallel negotiations led to many frustrations among states parties who were not involved in the small group negotiations. Clearly, the repetition of such a scenario needs to be avoided in order to obtain as wide a commitment to the conference outcomes as possible.

Preparations for RC-3 started only in summer 2012, leaving about half the preparation time that was available for RC-2. This late start was caused by the need to agree a solution for delays in CW destruction resulting from the inability of three CW possessor states to meet the final extended destruction deadline of 29 April 2012. The resulting much shorter period within which the OEWG had to prepare a document for the conference was first used to conduct an article-by-article review of the operation of the treaty. On this basis the chair of the OEWG will circulate a document for consultation among CWC states parties in early 2013. Adding further complexity to the work of the OEWG is an additional forward-looking process initiated by the OPCW director-general that resulted in a report by an advisory panel on the future priorities of the OPCW.[61] How, and at what point, the recommendations of the panel and subsequent discussions at ambassadorial level will be merged with the regular quinquennial review conference process is unclear.

In substantive terms, CWC implementation over the past 15 years has seen the destruction of three-quarters of declared CW stockpiles, which represents a huge step towards a world free of chemical weapons. According to Russian and US estimates, destruction of the remaining stockpiles will take until the end of 2015 for the former and September 2023 for the latter. While the US forecast tends to err on the side of caution, the Russian prediction appears overly optimistic. It is against this background that discussions about the future of the treaty and its implementing organization, the OPCW, are taking place. So far the preparatory process for RC-3 has focused on discussion of individual CWC articles, not the future relative weighting of the different core objectives of the OPCW or newly emerging areas of concern such as those discussed in the preceding sections of this article.

[59] Working Group for the Preparation of the Second Review Conference, 'Chairperson's provisional text', document RC-2/CRP.1 (The Hague: OPCW), 31 March 2008.

[60] Richard Guthrie, 'The final day (and a half): closure of the conference', *CWC Conference Report*, no. 11, 21 April 2008, http://www.cbw-events.org.uk/cwcrc11.pdf, accessed 5 Dec. 2012.

[61] 'Report of the Advisory Panel on Future Priorities'.

International Affairs 89: 1, 2013

While debates relating to the disarmament dimension of the CWC are focused on the remaining arsenals in the two large CW possessor states, the United States and Russia, there are still eight states outside the regime, one of which, Syria, acknowledged CW possession in August 2012. If and when efforts to bring these states into the regime are successful, this will probably lead to a situation where the verification of CW destruction will be a feature of OPCW activities for longer than many anticipated. Yet the question of how to reflect these uncertainties in the organizational structure of the OPCW Technical Secretariat has so far not been answered.

Similarly, the non-proliferation dimension of the CWC has seen numerous activities and detailed discussions of how to reorient inspections of the so-called OCPFs so that the most relevant ones, with the highest misuse potential, are inspected more regularly. Again, it is unclear whether CWC states parties will be able to muster the political will to agree on a major revision of this inspection system or whether—which seems more likely—RC-3 will sanction the continuation of established practice.

In addition, if the Review Conference is to set a forward-looking agenda for the next five years of CWC implementation, a balance will need to be agreed by states parties between these two core objectives and the other objectives that some members, especially developing states in the NAM, argue need to be realized more fully—mainly international cooperation and assistance. While states clearly have different interests, the traditional boundaries between developed and developing states are increasingly difficult to maintain, as some states traditionally subsumed under the latter heading, such as India and Brazil, today have some of the world's largest chemical industries. In setting the future course of the CWC, states parties will have to find a balance not only among these core objectives, some of which clearly require continued attention, but also between them and new areas of OPCW activities that have begun to attract more attention recently, such as international cooperation in the fight against chemical terrorism and related issues of chemical safety and security. Given the experience of the two past review conferences, the OEWG to prepare RC-3 has a formidable challenge on its hands to move from its first phase of operation, which has focused on an article-by-article review, to a more strategic approach that can then inform the conduct of the Review Conference itself. If history is any guide, a more traditional, review-focused conference is the more likely outcome.

International Affairs 89: 1, 2013