

Evaluating the CWC verification system

Daniel FEAKES

When the first Review Conference of the Chemical Weapons Convention (CWC) convenes in April-May 2003, the CWC verification system will be one of the primary items on its agenda. The convention requires this first Review Conference to undertake a 'comprehensive review of the overall verification regime for the chemical industry' and to 'make recommendations so as to improve the effectiveness of the verification regime', thereby ensuring both a retrospective analysis of CWC implementation since 1997 and consideration of future possibilities. In addition, the Executive Council's open-ended working group on preparations for the Review Conference has identified 'verification in general' as one of nine substantive areas for consideration by the Conference.

The *Oxford English Dictionary* defines verification as 'the action of demonstrating or proving to be true or legitimate by means of evidence or testimony'. This definition, although focused on the function of verification as a provider of *evidence*, already hints at the complexity inherent in verification. While it is most frequently associated with proving the compliance or non-compliance of a state, verification also provides an opportunity for a state to demonstrate its compliance when suspicions are raised, thus also serving a *reassurance* function. MacEachin identifies the 'defining objective' of on-site verification as denying 'a potential treaty violator the means for concealing proscribed programmes under the cover of legitimate activities' thus highlighting a third function of verification, namely *deterrence*.¹ A Group of Qualified Governmental Experts appointed by the United Nations Secretary-General added a further element in its 1995 report, stating that 'verification can be generically defined as a process in which data are collected, collated and analysed in order to make an informed judgement as to whether a party is complying with its obligations.'² This definition introduces the concept of verification as a *process*, ideally a cooperative one.³

The CWC verification system is based on the monitoring of compliance with CWC obligations on two levels—national and international—with each supported by a number of mutually reinforcing elements. At the international level, the system rests on three such elements—declarations, routine inspections and challenge inspections. The elements at the national level are much less clearly defined in the CWC but at least three can be identified—implementing legislation, data collection and the National Authority. Integral to both levels of the verification system, as it is to the CWC itself, is the general purpose criterion (GPC). The CWC verification system incorporates a process that begins with national and international monitoring and that could feasibly end with an 'informed judgement' by states parties that one of their number is in violation of its CWC obligations. In such a situation, it will be up to the states parties to decide how to respond and how to enforce compliance.

Daniel Feakes is a research fellow with the Harvard Sussex Program on CBW Armament and Arms Limitation based at SPRU—Science and Technology Policy Research, University of Sussex. From 1997 until 2000 he was the Harvard Sussex Program researcher in the External Relations Division of the OPCW in The Hague.

A two-tiered verification system

At the international level, the CWC establishes the Organisation for the Prohibition of Chemical Weapons (OPCW) to 'ensure the implementation of its provisions, including those for *international* verification of compliance with it' [emphasis added]. The convention therefore details the requirements for states parties to collate and submit information to the Technical Secretariat on activities with certain toxic chemicals and precursors (primarily those listed in the three schedules annexed to the convention) and the procedures by which the Secretariat validates this information and reports any ambiguities. Besides submitting information on any activities involving toxic chemicals for prohibited purposes, states parties are also required to submit information on legitimate activities involving the production, processing, consumption and transfer of scheduled chemicals. As the most visible tier of the verification system, many states parties and commentators concentrate almost exclusively on this international level in their assessments.

However, considering the extremely broad objectives and detailed obligations in the CWC, the verification system extends much further than this limited conception. As Robinson writes: 'It would be an error to regard responsibility for CWC verification as lying solely with the Technical Secretariat'.⁴ While the procedures contained in the convention are very elaborate, they do not and cannot cover monitoring of all the obligations with which states parties must comply. This is in part because some obligations are negative ones—it would be almost impossible for the Secretariat to monitor compliance with these obligations. But it is also due to the limitations placed on international monitoring by the CWC. The Secretariat is required to 'carry out the verification measures provided for' in the convention but as already noted these apply mainly to the families and species of chemicals listed in the three schedules and not to the millions of other toxic chemicals and precursors. In addition, as a recent report notes, 'some States Parties have sought to restrict the applicability of the CWC to scheduled chemicals only'.⁵

The negotiators of the convention never intended that its scope be limited only to scheduled chemicals, which is one reason why they incorporated a GPC that defines all toxic chemicals and precursors as chemical weapons unless 'intended for purposes not prohibited under this Convention, as long as the types and quantities are consistent with such purposes'. The definition of a chemical weapon also includes munitions, devices and specifically designed equipment. Using this extremely broad definition of a chemical weapon, it is clear that the procedures set out in the CWC are not sufficient to allow the Secretariat to monitor compliance with the Article I obligations not '(a) To develop, produce, otherwise acquire, stockpile or retain chemical weapons, or transfer, directly or indirectly, chemical weapons to anyone; (b) To use chemical weapons; (c) To engage in any military preparations to use chemical weapons; (d) To assist, encourage or induce, in any way, anyone to engage in any activity prohibited to a State Party under this Convention.' Considered as the convention's 'catch-all clause', these obligations can be interpreted as prohibiting, for example, the transfer of equipment or financial or technical assistance to a chemical weapons programme.⁶

This raises the question of how compliance with these obligations is to be monitored to the satisfaction of other states parties. Any answer to this question has at its core the GPC. One possible solution would be for states parties to give the Secretariat a greater role in the operationalization of the GPC. In some respects, this has already begun with states parties being required to declare 'other chemical production facilities' (OCPFs) using certain unscheduled chemicals, which the Secretariat can then inspect. A recent report recommends that 'States Parties should grant the [Technical Secretariat] the right in principle to collect information of relevance to the functioning of the CWC. ... Information collection will also be a cornerstone of making the [general purpose criterion] operational.'⁷ However, there are a number of obstacles to this approach, not the least of which is the states parties that seek

to limit the applicability of the CWC to scheduled chemicals. States parties, and the chemical industry, would also be reluctant to accept the degree of scrutiny necessary. For states parties, this is partly because much monitoring of the GPC is undertaken by intelligence agencies, making them reluctant to share information internationally.⁸ In addition, states parties are not required to report transfers of unscheduled chemicals and the sampling equipment used by the Secretariat is currently limited to only detect the presence or absence of scheduled chemicals.

Instead, the CWC creates a division of labour between the Secretariat and the states parties under which much of the responsibility for monitoring compliance with CWC obligations actually lies with the states parties.⁹ It has been noted that ‘the routine verification system operated by the OPCW Technical Secretariat does not monitor compliance with all the obligations that states parties have assumed under the Chemical Weapons Convention. In fact the Secretariat monitors only a small fraction.’¹⁰ Mention of this national level of the verification system is made in Article VI: ‘Each State Party shall adopt the necessary measures to ensure that toxic chemicals and their precursors are only developed, produced, otherwise acquired, retained, transferred, or used within its territory or in any other place under its jurisdiction or control for purposes not prohibited under this Convention.’ In order for national monitoring to adequately play its part in the verification system, it is necessary for states parties to have enacted comprehensive implementing legislation incorporating the GPC and to have a knowledgeable National Authority empowered to collate the data necessary to monitor national compliance with the Article I obligations. It is the role of the Secretariat to support these efforts and to validate the portions of the data that National Authorities are required to submit.

The regime of national monitoring

The national level of the verification system has been described as ‘not widely acknowledged or even appreciated.’¹¹ However, considering the monitoring tasks that fall to the national rather than the international level, effective national monitoring is essential to the future well-being of the CWC. The Review Conference should acknowledge this fact and devote much of its time to reviewing the effectiveness of the elements that make up the regime of national monitoring and recommending ways to improve them.

The Review Conference should devote much of its time to reviewing the effectiveness of the elements that make up the regime of national monitoring and recommending ways to improve them.

NATIONAL IMPLEMENTING LEGISLATION

Integral to the regime of national monitoring is effective and comprehensive implementation of the CWC in each state party. Article VII requires each state party to ‘adopt the necessary measures to implement its obligations under this Convention.’ Among these obligations are those from Articles I and VI quoted above, which require that the GPC be incorporated into national law. A state party will neglect its obligation not ‘to develop, produce, otherwise acquire, stockpile or retain chemical weapons, or transfer, directly or indirectly, chemical weapons to anyone’ if it enacts legislation that only prohibits and punishes activities with scheduled chemicals. Current concern about international terrorism and weapons of mass destruction provides another incentive for states parties to enact comprehensive legislation since terrorists cannot be expected to use only scheduled chemicals. States parties with incomplete implementing legislation risk becoming ‘safe havens’ within which individuals may not be deterred from producing and using unscheduled chemicals as weapons. These concerns have also focused attention on measures to track the domestic transfers of toxic chemicals.¹² However, it remains

that many states parties have not enacted any implementing legislation, let alone legislation incorporating the GPC.¹³ Others lack regulations governing the import and export of scheduled and unscheduled chemicals. This situation has wider repercussions as 'the individual quality of national implementation has an effect on the overall quality of international implementation.'¹⁴ The Secretariat and some states parties have already devoted much time and effort to assisting other states parties in drafting implementing legislation. The Review Conference should assess the responses to the implementing legislation questionnaires issued by the Secretariat, particularly with a view to implications for the national monitoring of compliance.¹⁵ It could perhaps also recommend minimum standards to which all states parties should aspire in their legislation.

NATIONAL AUTHORITIES

In addition to enacting comprehensive implementing legislation, each state party is required to designate or establish a National Authority to which the CWC assigns two primary tasks: 'to fulfil [the state party's] obligations under this Convention' and to 'serve as the national focal point for effective liaison with the Organisation and other States Parties.' The National Authorities are therefore 'responsible for monitoring compliance with each of the obligations that their states have assumed, including those where the OPCW Secretariat has no treaty-assigned role.'¹⁶ This might surprise those National Authorities that have not yet managed to collate and submit to the Secretariat the information required by Articles III and VI. By the end of 2001 only 111 of 145 states parties had provided information on their National Authorities to the Secretariat.¹⁷ In many ways, the National Authorities are the guardians of the regime of national monitoring. If they are neglected, the resultant loopholes that will develop at the national level will undermine the overall verification system. The importance of the National Authorities has been recognized by the Secretariat, which offers a range of implementation support programmes and

The Review Conference should reiterate the importance of the National Authorities to the overall verification system and should identify implementation support as one of the priorities for the next five years.

training courses. The Secretariat also hosts an annual meeting for all National Authorities and assists in regional meetings of National Authorities. The Review Conference should reiterate the importance of the National Authorities to the overall verification system and should identify implementation support as one of the priorities for the next five years.

DATA COLLECTION

The implementing legislation adopted by each state party must also make provision for the collection of data by the National Authority, if necessary providing it with new powers whereby the data can be acquired in order to ensure there are no activities in violation of CWC obligations on its territory and so it can provide the required declarations to the Secretariat. Here again it is absolutely vital that the GPC be fully incorporated. By collecting data only on activities with scheduled chemicals a state party might fulfil its reporting requirements to the Secretariat but how would it be able to ensure that unscheduled toxic chemicals and precursors are 'only developed, produced, otherwise acquired, retained, transferred, or used within its territory or in any other place under its jurisdiction or control for purposes not prohibited under this Convention'? And how would such a state party deal with newly discovered toxic chemicals that were not listed in the CWC schedules? Another function of the GPC is to protect the CWC from obsolescence caused by scientific and technological advances. Current advances in chemistry and biology could lead to the discovery of new toxic chemicals and more efficient methods of production.¹⁸ States parties therefore need to be aware of such developments

and National Authorities need to be equipped and authorized to monitor them.¹⁹ The Review Conference should encourage states parties to be proactive in the collection of CWC-relevant data and should recommend that the Secretariat devotes more resources to providing them with technical assistance and evaluation, including 'evaluation of scheduled and unscheduled chemicals', as required by Article VIII. It will be essential that the Review Conference reaffirms the scope and applicability of the GPC as the CWC explicitly states that the Review Conference should 'take into account any relevant scientific and technological developments.'

The regime of international monitoring

While the regime of national monitoring covers a large number of CWC obligations but is barely mentioned in the convention, the regime of international monitoring covers a much smaller set of obligations but features heavily in the convention. This is not surprising; the negotiators of the convention would have been reluctant to dictate the actions states were required to take at the national level but were less hesitant in drafting international mechanisms to oversee national monitoring.

DECLARATIONS

The 'baseline' of international monitoring is the subset of the data collected by each National Authority, which is then submitted to the Secretariat in the form of initial and annual declarations. Under Article III, states parties are required to declare any possession of chemical weapons or related facilities since 1946. Under Article VI, they are required to submit information on industrial activities with scheduled chemicals, including aggregate data on transfers, and on activities with unscheduled 'discrete organic chemicals' (DOCs). The Secretariat uses the declarations to plan the inspections with which it will validate the information and, at the same time, to build up a picture of activities with scheduled chemicals and DOCs in, and between, states parties and non-states parties.

However, experience with Article VI declarations has demonstrated that some declarations contain ambiguities and some states parties accidentally omit information. The Secretariat has requested clarification of some of the declarations submitted. During 2000, the Secretariat sent 241 clarification requests to eighty-eight states parties but by April 2001 only 46% had been answered and the Secretariat later sent out another 103 such requests.²⁰ Recently, the Secretariat has used open-source information to identify potentially declarable industrial activities. As of March 2002, the Secretariat had identified such activities in at least forty-four states parties that had not previously declared them.²¹ The results of the Secretariat's work have been described as 'modest': three states parties asserted that none of the facilities identified were declarable; three provided incomplete declarations requiring further clarification; five provided new declarations; and three indicated that they would submit declarations in the future.²² The Review Conference should urge states parties to develop the means to be able to identify declarable activities on their territory and should endorse the use of open-source information by the Secretariat to identify omitted activities.

The Review Conference should urge states parties to develop the means to be able to identify declarable activities on their territory and should endorse the use of open-source information by the Secretariat to identify omitted activities.

As part of the reassurance function of verification, information from national declarations is available, on request, to all other states parties. As of December 2000, only thirty states parties had requested information from the Secretariat on other states parties, although some were in regions of tension such as South Asia and the Balkans—perhaps demonstrating a contribution to confidence-

building in these regions.²³ The states parties requesting this information are typically larger, well-resourced states with the facilities to handle classified data and to analyse it independently alongside publicly available information and data from their own intelligence agencies. This internal transparency mechanism provides an opportunity for states parties to also raise declaration-related ambiguities with their counterparts and to request clarifications. In contrast to clarification requests from the Secretariat, Article IX stipulates that requests from states parties should be answered within ten days. The United States has publicly stated that it has used this procedure on a number of occasions, with success in several cases.²⁴ If unsatisfied with the response it receives, a state party can take its concerns to the Executive Council although the opacity of the Council's deliberations means that it is not clear whether any state party has availed itself of this opportunity. If still unsatisfied, a state party can request a challenge inspection although none has yet done so.

The aggregate data submitted by states parties on transfers of scheduled chemicals should in theory be an integral part of the regime of international monitoring, allowing the Secretariat to monitor the global movement of scheduled chemicals and to identify suspicious transfers or trends. However, in practice the system has failed to live up to expectations. Individually, many states parties simply do not have regulations in place to allow them to collate the required data, while collectively there is little harmonization of reporting criteria between states parties. As a result of these and other factors, the Secretariat has noted that the vast majority of transfers are irreconcilable, negating the use of this information as a non-proliferation tool.²⁵ Apart from some information collected during Schedule 2

The Review Conference should encourage the current efforts between the Secretariat and states parties to improve the accuracy of the aggregate data and should consider ways to increase harmonization of criteria between states parties.

inspections, the Secretariat has no way of verifying the accuracy of the data submitted. States parties are additionally prohibited from importing or exporting Schedule 1 or 2 chemicals to states not party to the convention and exports of Schedule 3 chemicals to non-states parties need an end-use certificate confirming that the chemicals will not be used for prohibited purposes or re-transferred. However, the CWC fails to provide for any international monitoring of compliance with these prohibitions or of end-use certificates. The Review

Conference should encourage the current efforts between the Secretariat and states parties to improve the accuracy of the aggregate data and should consider ways to increase harmonization of criteria between states parties. The Conference could also consider ways for the Secretariat to validate aggregate national data as it validates initial and annual declarations and for it to have a role in monitoring compliance with the provisions on transfers of scheduled chemicals.

ROUTINE INSPECTIONS

The Secretariat uses routine inspections to validate the information submitted by states parties in their initial and annual declarations. Routine inspections are also intended to act as a deterrent to any state party considering operating a covert chemical weapons programme within its civilian industry.²⁶ Inspections of chemical weapons facilities are intended to verify declarations of weapons stockpiles and the non-production of chemical weapons and to monitor destruction. Inspections of industrial plants are designed to confirm the non-production of Schedule 1 chemicals and the non-diversion of other scheduled chemicals to weapons programmes.

To date, 'verification has concentrated on monitoring the destruction of existing chemical weapons stockpiles, rather than on detecting illegal new production.'²⁷ For example, inspections of chemical weapons facilities accounted for approximately 85% of the OPCW's total verification spending in 2001. This imbalance is due mainly to an interpretation of the CWC that emphasizes the physical presence of inspectors at destruction facilities rather than the use of remotely operated on-site

instruments. Also contributing to the imbalance is the artificial capping of the number of industry inspections per year at 132 since 2000 despite the fact that, since 1999, twenty-six new states parties have joined the CWC and almost 4,000 new facilities became inspectable for the first time in 2000. In addition, financial problems have resulted in the Secretariat being unable to even conduct 132 industry inspections annually; during 2001 it only carried out 57% and is expecting to carry out 60% in 2002.²⁸ Some states parties and commentators are therefore now asking whether the current resource allocation is the best way to achieve the CWC's objectives.²⁹ With declared chemical weapon stockpiles under strict monitoring and gradually being destroyed, threats in the medium to long term are more likely to emerge from the misuse of scientific and technological developments by either states or non-state actors. In addition 'there is no implication in the CWC that at any stage industry verification should be a secondary activity to CW destruction verification.'³⁰ The Review Conference should therefore adopt a two-pronged approach. On the one hand, it should urge much more use of monitoring equipment and smaller inspection teams at destruction facilities. On the other hand, it should also recommend increasing the number of industry inspections per year. As suggested elsewhere, the Review Conference could propose setting annual targets with the aim of reaching a 75:25 ratio between chemical weapon-related and industry inspections by 2006 and making further improvements thereafter.³¹

The Review Conference could propose setting annual targets with the aim of reaching a 75:25 ratio between chemical weapon-related and industry inspections by 2006 and making further improvements thereafter.

Once a decision has been made to allocate additional resources to industry inspections, the Review Conference will need to recommend upon which industrial facilities inspections should be focused. Some states parties argue that the hierarchy elaborated in the CWC means that most attention should be devoted to facilities handling Schedule 1 and 2 chemicals.³² However, others argue that the modern, flexible plants declared under the CWC as OCPFs that produce unscheduled DOCs pose more of a risk to the convention as they can switch production quickly between chemicals.³³ In the course of the inspections conducted since entry into force, the Secretariat has found that almost all Schedule 1 facilities have no break-out production capability or diversion potential, that most Schedule 2 facilities have little potential to produce Schedule 1 chemicals or to divert Schedule 2 chemicals and that none of the Schedule 3 facilities inspected so far appears able to produce Schedule 1 chemicals. However, of the tiny fraction of declared OCPFs inspected to date, some could produce Schedule 1 chemicals and up to 500 others could have similar potential. The inspection of OCPFs is also important for it reaffirms that the scope of the CWC is not limited to scheduled chemicals and thereby upholds the applicability of the GPC. This debate took place most recently during the drafting of the 2003 budget. A draft prepared by the Secretariat in May 2002 divided the 132 industry inspections 39:93 between plants handling scheduled chemicals and OCPFs. In the end, the budget adopted for 2003 uses a 72:60 ratio reflecting a degree of compromise—but also signalling a significant shift when compared with the 2002 budget, which contained a 100:32 ratio. The Review Conference should endorse the trend expressed in the 2003 budget and should recommend further increases, within an overall increase in the number of industry inspections, to provide a credible deterrent against the misuse of these OCPFs and to afford a degree of international monitoring of the GPC.

Although states parties are entitled to request the information submitted in the declarations of their peers, access to information on the results of the Secretariat's inspection activities is more limited. The final inspection reports drawn up by the Secretariat are confidential communications between it and the inspected state party and can only be transmitted more widely if processed into 'less sensitive forms'. Therefore, much of the regime of international monitoring is conducted bilaterally between the Secretariat and individual states parties without the involvement of other states parties. Most of the time, it is better for issues to be discussed at this technical level rather than being referred to the Executive Council. However, when the Secretariat feels that uncertainties have not been resolved it must inform the Council 'without delay'. In March 2002 for example, the Director-General informed

the Council of remaining uncertainties relating to six inspections.³⁴ What the Secretariat can provide routinely to other states parties are 'general reports on the results and effectiveness of verification activities', namely the biannual *Verification Implementation Report* issued as a document classified as

The Review Conference should endorse recent moves towards the provision of more inspection-related information to states parties but should discourage states parties from interfering in the bilateral clarifications conducted by the Secretariat.

Highly Protected. A debate on the content and format of these general reports in 1999 saw some states parties arguing for the provision of more information to the Council and others insisting that the information already provided was adequate.³⁵ The Review Conference should endorse recent moves towards the provision of more inspection-related information to states parties but should discourage states parties from interfering in the bilateral clarifications conducted by the Secretariat. States parties need a

degree of access to inspection-related information so as to be able to verify compliance with CWC obligations. While it is the job of the Secretariat to monitor compliance and 'carry out the verification measures' of the CWC, it is the role of the OPCW as a whole, primarily the states parties, 'to ensure the implementation of its provisions, including those for international verification of compliance'.

CHALLENGE INSPECTIONS

The third element of the regime of international monitoring brings together both the national and international levels. Challenge inspections are conducted by the Secretariat, and unlike routine inspections they can only be initiated at the request of a state party. Challenge inspections have been described as a 'safety net' underneath the regime of international monitoring,³⁶ filling three potential gaps: deterring prohibited activities at undeclared facilities; deterring the abuse of declared facilities; and enabling states parties to demonstrate they have not abused particular facilities.³⁷ However, the lack of a challenge inspection since the convention's entry into force means that 'it is no longer possible to argue that challenge inspections are a "normal" component of the CWC verification regime.'³⁸

Challenge inspections are an essential link between the international and national levels of the CWC verification system. While the regime of international monitoring deals principally with the obligations relating to scheduled chemicals, challenge inspections apply to the full scope of CWC obligations in that 'any facility or location' under the jurisdiction or control of a state party can be inspected to clarify and resolve 'any questions concerning possible non-compliance with the provisions of this Convention'. While the hope is that all states parties will take the necessary measures to monitor compliance at the national level, in practice this is probably not feasible. Instead, it is likely there will always be some states parties without effective and comprehensive legislation or a well-informed National Authority equipped to monitor and enforce national compliance. In this situation, a challenge inspection could be the ultimate form of support from the Secretariat. For example, a challenge inspection, either requested or offered, might be the only way to resolve concerns about a particular facility in a state party that had become a 'safe haven' in which to conduct prohibited activities due to a lack of implementing legislation or a breakdown in the authority of the state. Of course, there could also be states parties that have both effective legislation and a well-informed National Authority but which have decided to operate a covert programme. Particularly if the prohibited activities were being carried out at an undeclared location or using unscheduled chemicals, a challenge inspection might be the only way to ascertain compliance. It is with regard to cases involving unscheduled chemicals that it will be necessary for the Secretariat to be fully aware of the GPC and equipped to detect unscheduled chemicals. Whether a challenge inspection, particularly one in a non-cooperative environment, will detect a 'smoking gun' is debatable but it might 'reveal a pattern of anomalies or discrepancies strongly

indicative of a treaty violation.³⁹ When reiterating the importance of challenge inspections, the Review Conference should also highlight their value in demonstrating compliance. It should also emphasize the relevance of the GPC to challenge inspections.

The Secretariat has not yet been called upon to perform a challenge inspection so the Review Conference will not be able to base its assessment on prior experience. Indeed, some states parties and observers have expressed concern at this situation, given the role of challenge inspections in filling gaps in the CWC verification system. As one report states, 'the framers of the CWC anticipated that the routine and challenge inspection mechanisms would interact synergistically, creating a verification system that was stronger than the sum of its parts.'⁴⁰ However, the longer challenge inspections remain unused, the weaker this interaction becomes. In addition, as more time goes by without a challenge inspection, the political threshold for requesting one will increase.

Also undermining challenge inspections are public accusations of non-compliance without any subsequent use of one of the three mechanisms provided in the CWC: bilateral consultations, the involvement of the Executive Council or a challenge inspection request. For example, the United States has frequently, outside of CWC structures, accused Iran of operating a clandestine chemical weapons programme.⁴¹ However, despite certain hints of future action, the United States has not requested a challenge inspection in Iran.⁴² If the concerns are serious enough to be revealed publicly, surely all possible measures should be taken to resolve them, particularly in the light of the current state of heightened awareness about weapons of mass destruction. Perhaps the biggest concern is the effect that the weakening of the challenge inspection mechanism will have on the other elements of the CWC verification system, since 'the utility of one type of regime is severely reduced—arguably marginalized—if it is not complemented by the other.'⁴³ To avoid this outcome, the Review Conference should encourage states parties to utilize all the CWC provisions for consultations, cooperation and fact-finding, including challenge inspections, and should recommend that the OPCW conducts at least one realistic practice challenge inspection in a different region every year.

Conclusion

The CWC verification system is the most ambitious of any multilateral disarmament treaty in force today and in many respects its first six years have been a success story. At the international level, the Secretariat has carried out over 1,000 routine inspections accepted by militaries and chemical industries around the world. It has also processed a huge amount of national security and confidential business information, apparently with no significant breaches of its strict classification procedures. At the national level, many states parties have enacted legislation to implement the CWC and enforce its prohibitions. Many National Authorities have a much clearer picture, not just of activities involving scheduled chemicals on their territory, but of activities involving all toxic chemicals and precursors.

The significance of these achievements cannot be understated. Yet there is still more to do and the forthcoming Review Conference provides an opportunity to assess progress and to plan for the future. States parties need to become much more proactive in their monitoring of national compliance with the CWC, in particular with regard to the GPC but also in terms of identifying all activities that need to be declared to the Secretariat. For its part, the Secretariat should strive to find economies in its monitoring of destruction so that it can focus more resources on industry inspections, especially to OCPFs. It is the regime of national monitoring however that could prove to be the verification system's weakest link, so it should be upon issues of national implementation, implementation support, advances in science and technology and the application of the GPC that the Review Conference focuses.

Notes

1. Douglas MacEachin, 1998, Routine and challenge: two pillars of verification, *The CBW Conventions Bulletin*, no. 39 (March), pp. 1–3, available at < <http://www.fas.harvard.edu/~hsp/bulletin/cbwcb55.pdf> > .
2. United Nations document A/50/377 dated 22 September 1995.
3. Allan Krass, 1985, *Verification—How Much Is Enough?*, London, Taylor and Francis; Julian Perry Robinson, 1985, *Chemical Warfare Arms Control: A Framework for Considering Policy Alternatives*, London, Taylor and Francis (SIPRI Chemical and Biological Warfare Studies No. 2).
4. Julian Perry Robinson, 1995, The verification system for the Chemical Weapons Convention, in Hague Academy of International Law, *The Convention on the Prohibition and Elimination of Chemical Weapons: A Breakthrough in Multilateral Disarmament*, Dordrecht, Martinus Nijhoff, p. 490.
5. Stockholm International Peace Research Institute, 2002, *Maintaining the Effectiveness of the Chemical Weapons Convention*, Stockholm, SIPRI.
6. Urs Cipolat, 2000, The new Chemical Weapons Convention and export controls: towards greater multilateralism?, *Michigan Journal of International Law*, vol. 21, no. 3 (Spring), pp. 393–444.
7. SIPRI, *ibid.*
8. Julian Perry Robinson, *Should the First CWC Review address state-party non-compliance with the national implementation provisions?*, paper presented at the 17th workshop of the Pugwash Study Group on the Implementation of the CBW Conventions, The Impending First CWC Review, Oegstgeest, the Netherlands, 15–16 June 2002.
9. Julian Perry Robinson, 1996, Implementing the Chemical Weapons Convention, *International Affairs*, vol. 72, no. 1, p. 80.
10. Daniel Feakes and Julian Perry Robinson, *National implementation measures: role of the OPCW Secretariat*, paper presented at the 15th workshop of the Pugwash Study Group on the Implementation of the CBW Conventions, Approaching the First CWC Review Conference, Oegstgeest, the Netherlands, 23–24 June 2001.
11. *Ibid.*
12. For example, provisions in new British legislation controlling access to dangerous pathogens (the 2001 *Anti-Terrorism, Crime and Security Act*) may soon be extended to cover toxic chemicals.
13. More than half of the OPCW member states have not informed the Secretariat of their implementing legislation. Fiona Tregonning, 2002, Progress in The Hague: 39th quarterly review, *The CBW Conventions Bulletin*, no. 57 (September), p. 19, available at < <http://www.fas.harvard.edu/~hsp/bulletin/cbwcb57.pdf> > .
14. SIPRI, *op. cit.*, p. 10.
15. OPCW document S/194/2000 dated 8 June 2000 and S/308/2002 dated 6 June 2002.
16. Feakes and Robinson, *op. cit.*, p. 2.
17. OPCW document C-VII/3 dated 10 October 2002, p. 8.
18. Mark Wheelis, 2002, Biotechnology and biochemical weapons, *The Nonproliferation Review*, vol. 9, no. 1 (Spring), pp. 48–53; George W. Parshall, 2001, Scientific and technical developments and the CWC, in Jonathan Tucker (ed.), *The Chemical Weapons Convention: Implementation Challenges and Solutions*, Monterey Institute of International Studies (April), pp. 53–58.
19. For example, the European Commission proposes that by 2012 all new and existing chemicals will undergo a comprehensive risk assessment. Such information would prove invaluable to National Authorities monitoring compliance with CWC obligations. European Commission, *White Paper: Strategy for a Future Chemicals Policy*, COM(2001) 88 final, dated 27 February 2001.
20. OPCW documents EC-XXIV/DG.10 dated 3 April 2001 and EC-XXVII/DG.10 dated 4 December 2001.
21. OPCW document EC-XXVIII/DG.10 dated 19 March 2002.
22. Tregonning, 2002, *op. cit.*, p. 18.
23. OPCW document C-VI/5 dated 17 May 2001.
24. OPCW document C-V/NAT.2 dated 18 May 2000.
25. Daniel Feakes, 2002, Challenges in the implementation of export controls under the Chemical Weapons Convention, in Rodrigo Yepes-Enriquez and Lisa Tabassi (eds.), *Treaty Enforcement and International Cooperation in Criminal Matters*, The Hague, TMC Asser Press, p. 338.
26. MacEachin, *op. cit.*, p. 1.
27. OPCW Director-General Rogelio Pflinter in OPCW document C-VII/DG.4 dated 7 October 2002.
28. OPCW document C-VII/3 dated 10 October 2002.
29. Ian Kenyon, 2002, The Chemical Weapons Convention and OPCW: The challenges of the 21st century, *The CBW Conventions Bulletin*, no. 56 (June), pp. 1–2, available at < <http://www.fas.harvard.edu/~hsp/bulletin/cbwcb56.pdf> > .

30. VERTIC, 2002, *Getting Verification Right: Proposals for Enhancing Implementation of the Chemical Weapons Convention*, London, VERTIC (October), p. 5.
31. *Ibid*, p. 10.
32. At the recent seventh session of the Conference of the States Parties, the Indian representative said that shifting resources to OCPF inspections would be 'not merely a major policy shift but a reinterpretation of the Convention.'
33. Also at the seventh session, the European Union stated its preference for 'an approach to Article VI inspections based upon the capabilities of facilities'. The European Union representative said the current situation did not 'represent a credible means to achieve this aspect of the object and purpose of the Convention.'
34. OPCW document EC-XXVIII/DG.10 dated 19 March 2002.
35. Daniel Feakes, 1999, Progress in The Hague: 25th quarterly review, *The CBW Conventions Bulletin*, no. 43 (March), p. 4, available at < <http://www.fas.harvard.edu/~hsp/bulletin/cbwcb43.pdf>> .
36. Jonathan Tucker (ed.), 2002, *The Conduct of Challenge Inspections Under the Chemical Weapons Convention: Proceedings of an Expert Workshop Held on May 29-31, 2002, in Washington, DC*, Monterey, Monterey Institute of International Studies (August), p. 1.
37. Robinson, 1995, *op. cit.*, p. 499.
38. Tucker, 2002, *op. cit.*, p. 21.
39. *Ibid*, p. 1.
40. *Ibid*, p. 1.
41. For example, the United States Central Intelligence Agency, 'Unclassified report to Congress on the acquisition of technology relating to weapons of mass destruction and advanced conventional munitions, 1 January through 30 June 2001', 30 January 2002, Carl Ford [US Assistant Secretary of State for Intelligence and Research], testimony before Senate Foreign Relations Committee, 19 March 2002.
42. John Bolton [US Under Secretary for Arms Control and International Security], *Statement to the Conference on Disarmament*, CD/PV.890 of 24 January 2002.
43. MacEachin, *op. cit.*, p. 3.

