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ISRAEL, THE CWC AND THE UNIVERSALITY OBJECTIVE: THE VIEW FROM JERUSALEM

Eitan Barak¹

At the end of April 2005, the Chemical Weapons Convention (CWC) marked eight years since its entry into force (EIF). No doubt, its outstanding growth from 87 to 168 members by late May 2005, with another 16 states yet to ratify the convention, indicates its unique success. For the sake of comparison, the number of BWC members currently stands at 154 despite 30 years since its EIF. Although praise of the universality of the Non-Proliferation Treaty (NPT) with its 189 members is widespread, a quick review reveals that eight years after its EIF in March 1978, the NPT had no more than 104 members.

In the interim, the Middle East has shown itself to be the major obstacle to the CWC achievement of universality. Notwithstanding the importance of Libya's accession and Iraq's known intention to accede to the treaty,² those steps have yet to affect the behavior of the three other states in the region suspected of possessing chemical weapons (CW): Egypt, Israel and Syria.

In principle, the main obstacle to promoting CWC universality in the Middle East is the so-called Arab "linkage policy". This policy, which formally originated in the January 1989 Paris Conference on the Prohibition of CW, called for the Arab states to boycott the CWC until Israel joined the NPT or at least committed itself to do so.³ Judging from the large number of Arab League members having chosen to join the CWC, this policy has failed. Yet, despite Syrian and Egyptian awareness of this failure, no major change has been detected in their positions so far.⁴

Notwithstanding this recalcitrance, the Organization for the Prohibition of Chemical Weapons (OPCW) has recently increased its efforts to enlist the remaining Middle Eastern states. Those efforts were given expression by the June 2005 Workshop in Cyprus, organized for member and non-member states alike, specifically: "to promote the universality of the Convention and to contribute to its full and uniform implementation" in the Middle East and neighboring regions.⁵ Inasmuch as it is not feasible to fully address Arab demands that Israel renounce its ascribed nuclear option, we should review what the international community might perceive as a straightforward solution to the deadlock. That is, the solution where Israel, which has signed but not ratified the CWC,

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"NEVER UNDER ANY CIRCUMSTANCES": THE CWC THREE YEARS AFTER ITS FIRST REVIEW CONFERENCE

Walter Krutzsch¹

The First Review Conference (RevCon) of the Organization for the Prohibition of Chemical Weapons (OPCW) had the task and opportunity to assess, further develop and restate the nearly universal international consensus to ban and totally eliminate chemical weapons. For this consensus to prevail, its principles must be upheld when challenged by political tensions, war and terrorism, and must be adapted to fundamental economic, scientific and technological changes. An overall mobilization of governmental and public effort is required to achieve this objective. In the light of these circumstances the RevCon was successful in that it did not end in disarray. A Political Declaration² and a comprehensive report³ were agreed upon. They can serve as a roadmap for further action. At the same time it must not be overlooked that those documents have also served to paper over serious shortcomings in the implementation of the Chemical Weapons Convention (CWC).⁴ Whether their potential value will crystallize and promote a total chemical weapons ban must be measured against reality.

BASIC TENETS

Universality

The Convention enjoys broad international recognition but not universal acceptance. When the RevCon convened in April 2003, the number of states parties was 151. As of 3 July 2005 the number stood at 169. There are 15 states that have signed the Convention but not yet ratified it, and around a dozen states that have neither signed nor acceded. These include some states that believe their security interests would

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becomes the state leading the others out of the deadlock. After all, experts who proposed ways to eliminate chemical and biological weapons in the Middle East quickly found that “[t]he key question is who takes the first step...⁶”. According to this possible view, despite the formal Egyptian and Syrian position, if Israel were unilaterally to join the CWC, this would be sufficient to turn them around. The recent meeting in The Hague between Israel’s bi-ministerial (Foreign and Defense) delegation and Ambassador Rogelio Pfrter, the OPCW Director-General (DG), may attest to this evolving perception. After all, in this unusual formal meeting, held in March, the DG “stressed the importance of achieving universality of the Convention, including in the Middle East”.⁷

This article does not, however, intend to analyse the implications of such a step on the part of Israel — if and when it is realised — towards CWC universality (i.e., Arab accession to the CWC); instead, its goal is to review the pros and cons of each position from Jerusalem’s perspective.⁸

Before reviewing the inventory of arguments, we should stress that in the absence of concrete assurances from Arab states, Israel should assume a lack of reciprocity. The fact that Israel’s signing of the CWC in January 1993 did not yield mutuality—Egyptian and Syrian signatures—despite US diplomatic efforts in this regard points to the need for some additional Israeli concessions in the arms control field beyond the CWC framework. In fact, given the Arab states’ declared policy of linking chemical to nuclear disarmament, this working assumption became imperative. It may be that Israeli nuclear concessions — even if they fall short of relinquishing the nuclear option entirely — would convince the Arab states to follow suit and join the CWC. A mere Israeli ratification doubtless would not. Moreover, a different working assumption should make any Israeli misgivings about unilateral ratification — which I shall discuss — redundant, as Israel has reputedly declared its intention to join the treaty once its Arab neighbors are willing to follow suit.⁹

Another working assumption that should affect Jerusalem substantially relates to the economic context. Although exclusively security imperatives instructed arms control and disarmament decision-making in the past, economic interests have gained unprecedented importance within the public debate over Israel unilaterally joining the CWC. The reason for this shift was the belief, shared by many Israelis, that once the CWC took effect, heavy restrictions, if not a complete ban, would eventually be imposed on Schedule 3 chemicals trade with non-state parties within five years (in furtherance of Part VIII of the CWC Verification Annex, paragraph 27). In light of this belief, a trade-industry lobby for unilateral ratification, headed by the Ministry of Industry and Trade (MI&T) and supported by the Ministry of Foreign Affairs, was formed. Indeed, the treaty dictates that trade in Schedule 2 chemicals with non-state parties was to be banned as of April 2000. However, since it was obvious that Israel does not make significant use of those chemicals, and that the local economic influence of the ban would thus be negligible, the internal debate focused on Schedule 3 chemicals.¹⁰

Given the annual import of thousands of tons of Schedule 3 chemicals into Israel, the MI&T claimed that the anticipated negative impact of sanctions on Israel’s pharmaceutical and electronics industries would reach \$700 million annually. In addition, commentators stressed that full participation in the CWC by the industrialized states would, by default, single out

and eventually delegitimize Israel’s pharmaceutical industry. At the very least, it would increase difficulties in importing dual-use chemicals from industrial states in general, and from those trading with Israel in particular.

Economic implications might even go beyond formal restrictions. An example posited was potential investors’ fears of investing in Israel’s extensive chemical industry or, alternatively, a preference for other suppliers with respect to treaty-linked transactions. Still another concern was eventual price increases for schedule 3 chemicals imported by non-member states, if not difficulties in acquiring those chemicals owing to possible concerns of their producers from the supervision process regarding sales to non-member states. Indeed, an Israeli commentator warned as early as 1999 that Israel’s ‘chemical clock’ was ticking.¹¹

However, Israel’s Ministry of Defense, which dominates Israeli security policy-making and politics relative to the Ministry of Foreign Affairs and other ministries, felt that the damage would be much more limited and that alternatives could be found to the formal trade ban. The Ministry clarified that in a “worst-case scenario...the government could compensate the industrialists affected by the embargo¹²”.

Indeed, a special ministerial committee, headed by the then Prime Minister Binyamin Netanyahu, examined the possibility of unilateral ratification of the CWC in 1997; it decided to refrain from ratification and wait for further developments. As Yitzhak Mordechai, a committee member and Minister of Defense at the time stated: “We had discussions in the cabinet, and we decided to postpone decisions for a certain period. We will discuss it again...¹³”. It is worth mentioning that one committee member who opposed joining unilaterally because he held the view that it would endanger Israel was Ariel Sharon, then Minister for National Infrastructure and Israel’s current Prime Minister.¹⁴

Looking back, postponement of the decision was economically sound. Notwithstanding the fact that the treaty explicitly calls for review of this issue (transfer of Schedule 3 chemicals to/from non-member states five years after the treaty’s EIF), the designated review remained off the agenda of the CWC in 2002 as well as the first Review Conference held in 2003.

As concerns over possible damage to Israel’s pharmaceutical industry have since evaporated, the main incentive for Israel to join, even without reciprocal moves on the part of Arab states, has had the same fate. As Gerald Steinberg, a senior Israeli arms control scholar has stressed: “[T]he key factor in support of [Israel’s] ratification was and remains economic¹⁵”.

Summing up, Israel’s working assumption should be continuity in the current mild restrictions on Schedule 3 chemicals (i.e., end-user certificates and other guarantees as dictated by the Convention), meaning that their flow to Israel will continue undisturbed. We should point out that any change in this situation would force Israel to reassess unilateral ratification. In the context of such a reassessment, it would seem that if heavier restrictions on Schedule 3 chemicals were to be imposed, it would tilt the scale towards ratification. After all, Israel has a highly developed chemical industry, employing over 26,000 workers (2002) with annual sales of \$8.5 billion, over 50% of which is exported.¹⁶

After this clarification of the economic context, a review of arguments in the political and strategic settings follows.

The Political Setting

Any discussion of the political and strategic implications deriving from Israel joining the CWC demands a judgment regarding Israel's very possession of CW. Indeed, Israel is the only independent state not a member of any of the three major treaties dealing with so-called Weapons of Mass Destruction (WMD). Israel has also refrained from definitive declarations regarding her possession of CW. However, confidence among independent CW experts and government officials regarding Israel's nuclear, chemical and biological capabilities varies considerably. After the 1986 revelations by Mordechai Va'anunu, a former technician at the Dimona nuclear site, Israel's nuclear capabilities have been considered self-evident, but this clarity is lacking in the CW arena.¹⁷ Yet, given Israel's advanced pharmaceutical industry, its proven qualitative edge in all major categories of conventional weaponry, its general security concerns and the fact that its opponents have armed themselves with CW, our working assumption should be that Israel does not lag far behind the Syrian, let alone Egyptian, CW programme. Therefore, first and foremost, we will scrutinize the implications derived from declaration of CW capabilities.

Experience has shown that contrary to other, relatively marginal issues (e.g., the location of India's CW Destruction Facility), secrecy regarding the identity of a new member state with declared possession of CW is doomed. CW experts' confidence that South Korea is the "state party of withheld identity" possessing CW illustrates the futility of such attempts. Moreover, in the current situation, where the majority of states are CWC members, any announcement of newfound CW possession will be linked immediately to the new member state.

Before proceeding to analyse the implications of exposure from an international stance, we briefly review the possible implications of such a revelation in Israel's internal arena—were they to be true.

It appears that the Israeli public would receive a revelation of such capacities with understanding, despite the fact that significant proportions of the Israeli populace are either the children or the grandchildren of victims of the Nazi gas chambers. After all, mere production does not contradict any international commitment that Israel has taken upon herself. Even during its accession to the Geneva Protocol in February 1969 (which does not ban CW production), Israel took care to protect—as many other states had done—the right of retaliation in kind if and when she should be attacked with CW. In addition, a revelation of CW capacities would not contradict any previous formal declarations, given Israel's tenacious refusal to either deny or confirm possession of CW. This is far different from the Indian case, which teaches us that public reactions may be rather restrained. Until it joined the CWC, India had denied having CW; still, reactions in the internal and international arena alike were much more moderate than expected. In sum, the failure of Oslo and the eruption of the second *intifada* in September 2000 have enflamed the Israeli public's patriotic sensibilities, making the likelihood of a harsh internal reaction improbable. This being the case, we should focus on the international reaction.

Some assessments by the international community indicate that Israel possesses CW. However, a general assessment is one thing; reliable information on specific capabilities is another matter entirely. This is would be especially true if it turned

out that the specific Israeli capabilities were exactly those that Israel has herself attributed to the Arab states, in particular Syria and Iraq, as part of her propagandist war against them. Yet, Israel's so-far successful policy of drawing attention away from her own CW programme and towards those of the Arab states has, at this point, become counterproductive. No matter how we look upon it, the exposure of Israeli CW capabilities would provide some justification for Arab CW activities—with all the problems this entails.

Significantly more detrimental would be the effect of such an exposure on other WMD *capabilities* ascribed to Israel. Especially problematic is the biological sphere, which is viewed as heavily linked to the chemical sphere. While Israel has successfully kept a low profile in the biological sphere, such an exposure could indeed attract embarrassing and difficult queries regarding its capabilities there. In such a case, Israel would have to decide whether to join the Biological Weapons Convention (BWC), an act already advocated by some Israeli scholars.¹⁸

Nevertheless, the major problem entailed in unilateral ratification is the weakening of the arguments Israel has advanced in order to ward off international pressure to join global arms control conventions, especially regarding WMD. Israel's formal position states that the international community, or rather the regimes currently in place, have not addressed the Middle East's characteristic problems, including an intense arms race and a history of deceit (e.g., the Iraqi and Iranian cases). Historically—so the argument goes—only special and regional arrangements have yielded verifiable arms control regimes and normalized relations between states in the region. Unilateral ratification would substantially undermine this paradigm and make it a negative incentive for unilateral moves, although Israel has yet to raise this claim formally in relation to the CWC.¹⁹

In contrast, within the array of positive considerations, it is clear that unilateral ratification could soften potential negative reactions to Israel's exposure of its alleged CW arsenals. The continued objections by Egypt and Syria could be stressed in Israeli diplomacy as it moved from a defensive to a more offensive stance regarding continuing Arab objections to joining the treaty. With appropriate public relations, Israel could even strike at the Arab states' traditional attack on Israel's position in the field of WMD. In addition, this step could reinforce US policy by neutralizing the "double standard" claims repeatedly raised in reference to the US preference for avoiding confrontation with Israel over its alleged WMD capabilities.²⁰ Indeed, prior to the CWC EIF, the US conveniently pitted Israel's willingness to sign the treaty against Arab reluctance to do so.

Alternatively, it could be argued that in light of the current Bush Administration's "crusade" against CW, a campaign that rallied—or at least attempted to rally—local and international support in favor of the war and occupation in Iraq, it would be severely embarrassing if Israel were to admit possessing those same "abhorrent" weapons. In effect, the possibility that Israel will continue to enjoy US largesse after taking such an important step was dramatically reduced when the Clinton administration came to an end. Yet, within the boundaries of the special relationship between Israel and the US, such appreciation always contains the potential for translation into economic benefits.

The Strategic Setting

The most important setting for cases such as Israel, which has been defined as “a garrison state” exhibiting a leadership unremittingly anxious over its very survival, is the strategic setting.²¹ However, as the conventional wisdom regarding the payoffs of its nuclear option has been attacked, what benefits could Israel derive from the chemical option if its very existence is questioned by potential targets, the Arab states?²² Indeed, it is hard to conceive of any active role played by Israel’s ascribed chemical capabilities. As the retired Egyptian General El Fayoumi wrote: “On the military level, Israeli military capabilities, which represent the main potential threat to Egypt, are thought not to rely heavily on CW²³”. This being so, arguments have been put forth in favor of Israel’s unilateral ratification of the CWC.²⁴ Yet, the mere possession of CW capabilities may still contain the capacity to deter Arab nations from using their own CW capabilities. Such a scenario demands maintenance of retaliatory capabilities for situations proscribing nuclear weapons yet demanding responses beyond the reprisal threshold of conventional weapons. Unilateral ratification on the strategic level implies, first and foremost, departing from the opacity shrouding Israeli reprisals to a chemical attack by Arab nations.

Indeed, exactly what the Arab world has deemed Israel’s CW capabilities to be remains unclear. Although articles attributing CW capabilities to Israel appear in the Arab press—especially in papers published in Europe—Egyptian and Syrian leaders by and large ignore such reports.²⁵ At most, statements made by several prominent Egyptian and Syrian personalities teach us that they believe that Israel enjoys only “production capability”.²⁶ However, Egypt and Syria both allocate resources and hold defensive manoeuvres geared to chemical warfare.²⁷ We must consequently confront the following two alternate explanations of their actions irrespective of their declared positions:

According to the first explanation, Syria and Egypt have no intention of making offensive use of CW. This interpretation is supported by past combat experience, during which both countries refrained from using the CW weapons in their possession (Syria during the 1973 war, Egypt during the 1967 and 1973 wars) despite their strategic disadvantages.²⁸ That is, both countries’ actions derived from a defensive strategy rooted in fears of Israeli use of CW.

If this explanation holds, Israel’s loss of its CW option would have minimal strategic impact. Israel’s unilateral ratification of the treaty would reduce the incentive acting upon Arab states to invest in defensive CW preparations, at least insofar as Israel was concerned. Whatever the strategic value of these gains, in view of the current zero sum game being played, such as that between Israel and Syria, exhaustion of an enemy’s military resources is valuable in itself.

However, a more significant explanation is found in the second interpretation of Syrian and Egyptian behavior: The exercises stem from the necessity to practice CW and associated defensive maneuvers given the objective of CW use during offensive actions. Namely, the appropriate context for examining Israel’s unilateral ratification, a step amounting to one-sided relinquishment of the CW option, is deterrence. Jerusalem thus needs to ask herself whether unilateral

ratification will not indeed encourage possible Syrian use of CW in a future where Israel lacks the capability to retaliate in kind. This interpretation assumes, of course, that from the Syrian perspective, a conventional Israeli response to CW uses against her does not represent a sufficient deterrent.

Since Israel is believed to have nuclear capabilities, CW is, for her, an intermediate solution. Nullification of an Israeli CW option would thus lower the threshold of the attributed Israeli nuclear response. This step would initiate a *de facto* equivalence between Arab use of CW and an Israeli nuclear reprisal. We believe that such a correspondence should be highly welcomed by Jerusalem. However, here as elsewhere, we must differentiate between possible Syrian attacks on civilian objectives (e.g., urban communities) and attacks on legitimate military objectives whether strategic or tactical (e.g., in the battlefield).

In the first scenario, it is clear to the aggressor that heavy Israeli casualties will prompt a nuclear response; hence, ratification of the CWC would be a positive step. However, even in such circumstances, concern over Syrian CW brinkmanship and even use of such weapons following unilateral ratification by Israel would remain. Israel would then find herself in a bind given nullification of her CW option on one side and tradition of non-use of nuclear weapons in world politics on the other. Such a possible situation would thus become a consideration against unilateral ratification of the CWC.

In the context of the second scenario of actions against legitimate military targets, the scales are clearly tipped against unilateral ratification of the CWC because it is obvious to all parties involved that a nuclear response is a non-option. In such a case, it may even be preferable for Israel to publicly amplify its profile of CW capabilities as a deterrent against Arab tactical deployment of CW.

Yet, this concise analysis does not capture the entire picture regarding the possible roles CW might fulfill in a future Arab-Israeli war. An expanded picture might teach us that if a scenario exists in which Syria or Egypt consider using CW, despite the expected international impacts, that could be a scenario seeking protection against Israeli attempts to conquer Damascus.²⁹ Not that such employment lacks drawbacks, but all other scenarios dictate that CW use would deprive the user of international support regarding the initiated military actions, some of which might be considered legitimate (such as reclaiming occupied territory in the Golan Heights). These negative reactions would be followed by allowing Israel free rein in its response and culminate in international sanctions against the initial user of CW. Furthermore, despite the idea of “self-reliance” dominating Jerusalem’s thinking, it is impossible to ignore the support that the CWC treaty provides its members should they experience a CW attack.³⁰

The final issue to be mentioned in this setting is Israeli fears of the possible abuse of challenge inspections as a mechanism to discover other capabilities. In the case of Israel which is not a member of either the CWC or the BWC, such a possibility represents a serious disincentive to ratification.³¹ However, not only have challenge inspections never been implemented during the eight years of the CWC’s existence, two remedies are at Israel’s disposal. First, challenge inspections do not imply unlimited access but only “managed access”.³² Second, Israel could copy, *mutatis mutandis*, the

US precedent of forestalling such inspections (while, of course, violating the treaty) through internal legislation.³³ Replication of US law regarding CWC implementation would also address Israeli fears regarding sampling.³⁴ Given this precedent, it would be awkward to attack Israel on those grounds.³⁵ Above all, as Israel's leaders repeatedly claim, Israel is a democratic state; as such, it should refrain from chicanery and deceit. It is therefore reasonable to assume that exposure of Israel's CW capabilities, if they exist, would nullify such concerns.

Conclusion

In conclusion, we should state that from Israel's narrow, local perspective, unilateral ratification of the CWC is tantamount to unilateral concession of a potential defense and deterrent. That said, in light of Israel's nuclear option, and her significant conventional advantages, the question arises as to whether Israel would ever need a CW retaliatory option.

Within the contemporary environment CW is abhorrent; nations presuming to belong to the international community shun its use, even as retaliation. All the more so when the greater part of the international community has already joined the CWC. As one expert has recently written "It is clear that the international community has moved against *any* use of chemical and biological weapons for any reason whatsoever".³⁶ Realizing this new reality, some analysts and senior Israeli officials consider the practical considerations against unilateral ratification to be irrelevant. Not surprisingly, one of Israel's former Ministers of Justice, Yossi Beilin, had stated already in 2001: "We must not become a pariah state ... we can't be stuck in the mud forever, only because of things that were or were not done in the past."³⁷

In the end, if Israel can look beyond local considerations, she may realize the virtue of global elimination of CW and promotion of the treaty's universality. After all, it was Shimon Peres, Israel's Minister of Foreign Affairs who, at the January 1993 signing of the CWC, called upon the region's nations "...to sign the Chemical Weapons Convention, and build a new Middle East free from the horrors of war."³⁸

Notes

- ¹ The author is a lecturer in the International Relations Department, the Hebrew University of Jerusalem. The author wishes to acknowledge The Israel Science Foundation for its support of his comprehensive and on-going research on Israel's arms control and disarmament policy, on which this short article is based.
- ² For the Office of the National Security Adviser of the Interim Iraqi Government's statement on its intention to join the treaty and the response of the OPCW's Director-General, see *CBWCB* 65 (September 2004):8.
- ³ At the end of that Conference, the Council of the League of Arab States issued a communiqué linking progress on the CWC to progress on nuclear disarmament. See *CWCB* 4 (May 1989): 7.
- ⁴ For Egypt awareness see, e.g., El Fayoumi: "Many Arab states that supported the Egyptian view, and expressed the same position regarding linkage to the NPT, finally saw no alternative other than to join the Convention" Moukhtar El Fayoumi, "The CWC in The Present Middle East Environment: An Egyptian View", *OPCW Synthesis*, November 2000, p. 27.
- ⁵ In addition to this objective it is intended to increase awareness of the Convention among the designated participant states. See

Note by the Director-General, *Workshop on the Chemical Weapons Convention*, Cyprus, 13-15 June 2005, External Relations Division S/477/2005, 4 March 2005. See also *CBWCB* 4 (March 2005): 9.

- ⁶ Jez Littlewood, "Strengthening the Role of the BTWC and CWC", in: *Building a Weapons of Mass Destruction Free Zone in the Middle East*, Geneva: UNIDIR, 2004: p 33.
- ⁷ See "Delegation of Israel Visits the OPCW", OPCW Press Release No. 3, The Hague, 9 March 2005.
- ⁸ Such an analysis demands a view from Cairo and Damascus – subjects for articles for themselves.
- ⁹ See Aluf Benn, "Israel Readies to Join Regional WMD Clean-up after Libyan, Iranian Moves", *Ha'aretz*, 2 January 2004 (internet edition); Aluf Benn, "Inner Cabinet to Review Iran Strategy", *Ha'aretz*, 31 December 2003.
- ¹⁰ According to an Israeli journalist, there was only one substance, which had been imported by a single chemical plant "and the company somehow found a way around the problem." Aluf Benn, "Israel's Decision Time", *Bulletin of the Atomic Scientists*, March-April 2001, p 23.
- ¹¹ Ze'ev Schiff, "The 'Chemical Clock'," *Ha'aretz*, 2 July 1999, B1. Aluf Benn, "Israel's Decision Time": 22-24.
- ¹² For the report and the quotation see Yossi Melman, "When the Chemistry is All Wrong," *Ha'aretz*, 18 September 1997, as well as the extended Hebrew version "They Shall Ratify First," *Ha'aretz* 18 September 1997, B2. (Hebrew). See also in this aspect Schiff, "The 'Chemical Clock'".
- ¹³ Ze'ev Schiff, "A Warning to the Palestinians: Don't Declare a State", an interview with Yitzhak Mordechai, *Ha'aretz*, 16 April 1998.
- ¹⁴ See Steve Rodan, "Israel Faces Dilemma Over CWC," *Defense News* (Washington, D.C.), 28 July-4 August 1997.
- ¹⁵ Gerald M. Steinberg, "Israeli policy on the CWC" *OPCW Synthesis*, November 2000 (pp. 29-31): 30.
- ¹⁶ For overview and data on Israel's chemical industry see <http://www.industry.org.il/Eng/SubIndex.asp?CategoryID=112>
- ¹⁷ As Avner Cohen has recently written "Nobody – in or out Israel – cares to ask Israeli leaders uncomfortable questions about the nation's nuclear status. Israel's once big secret is regarded now as the world's worst-kept secret, so there is no point in asking". Avner Cohen, "The Last Taboo: Israel's Bomb Revisited", *Current History*, April 2005: p 169.
- ¹⁸ See Avner Cohen, "Weapons of Mass Distraction", *Ha'aretz*, 25 December 2003 (internet edition).
- ¹⁹ For a brief presentation of this stance regarding Israel's reluctance to join the NPT see Gerald M. Steinberg, "Is the NPT Still Relevant for the Middle East?", *Middle East Roundtable* vol 3 no 18, 19 May 2005 [available on bitterlemons-international.org]
- ²⁰ For such a policy see E J Hogendoorn, "A Chemical Weapons Atlas," *Bulletin of the Atomic Scientists* 53, no. 5, (September/October 1997): 36; Dana Priest, "U.S. Goes Easy on Allies in Arms Control Crusade," *Washington Post*, 4 April 1998, A1.
- ²¹ For such a threat perception see, for example, the following paragraph by Israel Tal, a prominent figure in Israel's military establishment: "There is no small state whose existence is guaranteed beyond doubt. Small states can be destroyed...In general, the shadow of existential danger hovers over small

- states; this is especially true for the state of the Jews. There are those who have wanted to destroy it from the day it was established, and there have been actual attempts toward that end” (Israel Tal, *National Security: The Israeli Experience*, trans. Martin Kett [Westport, CT: Praeger, 2000], 219).
- ²² For an excellent article that poses under question mark the conventional wisdom regarding the Israel’s benefits from its nuclear option see Zeev Maoz, “The Mixed Blessing of Israel’s Nuclear Policy” *International Security* vol 28 no 2 (Fall 2003): 44-77.
- ²³ See Moukhtar El Fayoumi, “The CWC in the Present Middle East Environment: An Egyptian View,” *OPCW Synthesis*, November 2000, 26-28, 26.
- ²⁴ Avner Cohen, for instance, argued that he could not see “any conceivable situation in which Israel would be persuaded to use chemical weapons.” Steven Rodan, “Bitter Choices: Israel’s Chemical Dilemma,” *The Jerusalem Post*, 15 August 1997, A10; see also Ze’ev Schiff, “Beware of Double Standards,” *Ha’aretz*, 1 March 1, 1998, B1.
- ²⁵ On 7 May 1999, for example, the Arabic-language London weekly *Al-Hawadith*, described in detail reputed Israeli CBW as cited in *CBWCB* 45 (September 1999): 18. Apart from Qadaffi, the Arab leaders have avoided citing those articles.
- ²⁶ El Fayoumi, for instance, explained recently that “On the strategic level chemical weapons have almost no presence. On the tactical level as well, chemical weapons...do not match with the new weapons systems and tactics adopted by the Israeli forces, which have so far proved to be fully satisfactory. However, an Israeli capability to develop CW is present”. El Fayoumi, “The CWC in The Present Middle East Environment,” 26.
- ²⁷ In November 1996, for example, the official Egyptian news agency report of a military exercise (“Majd-1”) stated, “Chemical warfare elements also showed ability to perform their mission of protecting the forces against possible chemical activity by the enemy...”. See *CWCB* 35, March 1997, p 26.
- ²⁸ For support for this interpretation see Muhammad Hasanein Heikal, *Illusions of Triumph: An Arab View of the Gulf War* (London: HarperCollins, 1992): 91.
- ²⁹ For a presentation and analysis of those scenarios see Eitan Barak, “Where Do We Go From Here? The Chemical Weapons Convention in the Middle East in the post-Saddam Era”, *Security Studies*, vol 13 no 1 (Autumn 2003):130-137.
- ³⁰ See Article X on emergency assistance in case of a threat with or use of CW, as well as Article XI on international cooperation and technology transfers among states parties.
- ³¹ That is, an Arab member state could take advantage of the green light procedures to infiltrate security at the Dimona nuclear reactor. The “green light” procedures mean the need for a three-quarter majority in the OPCW Executive Council *to block* the request for a challenge inspection. See for example Rodan, “Bitter Choices: Israel’s Chemical Dilemma”; Benn, “Israel’s Decision Time” 23. Although a challenge inspection has never yet been requested under the CWC, many open foreign sources (see for example Gordon M Burck & Charles C Flowerree, *International Handbook on Chemical Weapons Proliferation*, New York: Greenwood Press, 1991: 193) allege that Israel has a chemical weapons production facility in that vicinity, so the Israeli fear is natural.
- ³² This concept was developed exactly in order to provide negotiated access to very sensitive installations.
- ³³ The US law allows presidential veto on a particular challenge inspection based on national security grounds. See *Chemical Weapons Convention Implementation Act of 1997*, S.610, Sec. 307. It should be noted, however, that the US exception is commonly perceived as a considerable weakening of the convention.
- ³⁴ For those fears see, for example, Schiff, “Beware of Double Standards.” The US law prohibits transferring samples that were collected in the United States “for analysis to any laboratory outside the territory of the United States”, *ibid.* Sec. 304 (f) (1) “sampling and safety.”
- ³⁵ Let alone the fact that other important states parties have already notified the OPCW that they intend to follow the example set by the United States,. India, for instance, has already adopted such legislation. Hence, we disagree with the view that Israel would not able to imitate the US precedent as she lacks “the leverage of the U.S. vis-a-vis the OPCW”. See Steinberg, “Israeli policy on the CWC”: 30
- ³⁶ See Littlewood (note 6 above), p 37.
- ³⁷ Aluf Benn, “Israel’s Decision Time” 24.
- ³⁸ Address by the Foreign Minister of Israel, Mr Shimon Peres, at the Signing Ceremony of the Chemical Weapons Convention Treaty, Paris, January 13, 1993.

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not allow accession since they face military threats, including nuclear weapons threats. In this category are states in the Middle East. This hurdle may be overcome if activities currently under way to establish in the Middle East a zone free from weapons of mass destruction are brought to fruition. Other states argue that the Convention will bring them no advantage since dual-use chemicals and sensitive technology may continue to be denied them by the Australia Group. Other states have not joined because they lack the financial or human resources to implement the CWC.

Thus, more must be done to achieve universality⁵. It is not only ratification or accession that matters, but also changing the reality to include:

- destroying chemical weapons and related production facilities;

- preventing proliferation of chemical weapons, including the proliferation of new types of such weapons;
- regular publication of information about compliance or non-compliance, as determined by objective verification activities;
- effective assistance and protection against chemical weapons;
- unrestricted economic and technological development under the aegis of the Convention;
- international co-operation in chemical activities not prohibited by the Convention.

“*Interpretation in good faith in accordance with the ordinary meaning given to the terms of the treaty in their context and in the light of its object and purpose*”. With these words the 1969 Vienna Convention.⁶ codifies the general rule of treaty interpretation. This rule must be respected if

the international consensus enshrined in the text of the CWC is to be implemented. From the first days of the Preparatory Commission (1993-1997) a misguided interpretation of the CWC was followed in some areas and continues to persist, culminating in misinterpreting the definition of chemical weapons. Article II of the Convention defines as chemical weapons all toxic chemicals, related precursors, munitions and special devices, unless they are intended for purposes 'not prohibited under the Convention'. Such purposes are listed in the same Article and constitute the ultimate criterion (often referred to as the general purpose criterion) for exempting toxic chemicals from prohibition. This definition covers all toxic chemicals including novel agents that have been or may be created, for instance, so-called 'nonlethal agents'. Disregarding the definition amounts to attacking the comprehensive prohibition stipulated in Article I of the Convention, which excludes any restriction with the words: "never under any circumstances".

Issue of interpretation: 'Nonlethal' weapons and law enforcement including domestic riot control in Article II, paragraph 9(d).

In 2002, The Sunshine Project reported on the activities of certain US research and development programmes on 'nonlethal' chemical weapons (e. g. US Marine Corps sponsored work at the Pennsylvania State University) which might violate the CWC.⁷ In October of the same year, the hostage drama in a Moscow theatre, where chemicals related to Fentanyl, an anaesthetic, were used to help free the hostages, and which in the process killed more than 120 of them, was portrayed as one of the scenarios in which new 'nonlethal' weapons are needed. Interpretations have been brought forward that ignored both the letter and the spirit of the Convention. When the RevCon convened, action was critically needed to prevent damage to the Convention. However, despite the fact that New Zealand, Norway and Switzerland had made national statements referring to this issue, the OPCW chose not to take action in the RevCon⁸.

During the *Open Forum on the Chemical Weapons Convention* convened in parallel to the formal sessions of the RevCon, several speakers from outside the OPCW addressed the subject of Article II, subparagraph 9(d).⁹ Dr Adolf von Wagner – former Ambassador of the Federal Republic of Germany and, during the last year of CWC negotiations in 1992, Chairman of the Ad Hoc Committee on Chemical Weapons of the Conference on Disarmament – referred to the issue in his Keynote Address, saying that attempts to misuse this provision to justify the use of chemicals – other than riot control agents – made it clear that "any interpretation considering 'law enforcement' to be a purpose of its own, not defined in the Convention and, therefore, allowing to differentiate between toxic chemicals not prohibited for law enforcement and toxic chemicals not prohibited for domestic riot control is simply false". Following from this, the definition of 'riot control agent', in paragraph 7 of Article II, is valid for all agents for the purposes covered by the statement in paragraph 9(d). Furthermore, von Wagner referred to the Geneva Protocol of 1925 that prohibits any use of toxic chemicals in any conflict.¹⁰ Any interpretation considering *law enforcement* to be a purpose of its own and, therefore, allowing a differentiation between toxic chemicals not prohibited for law enforcement and toxic chemicals not

prohibited for domestic riot control purposes – from a purely legal standpoint – is simply false. It would be an interpretation out of context and inconsistent with the object and purpose of the CWC. According to the rule stated in Article 30 paragraph 2 of the Vienna Convention, and Article XIII of the CWC, an interpretation of the CWC incompatible with the prohibition of the Geneva Protocol is excluded. A study by the present author has come to the same conclusion.¹¹

Most other contributions on this subject in the Forum supported the position of Ambassador von Wagner. Only David Fidler, for the Federation of American Scientists, opposed it. He argued that "the use of toxic chemicals for law enforcement purposes under the CWC is not limited to riot control agents", explaining that he considered law enforcement as a category of its own (separate from riot control) for which all toxic chemicals, except those listed in Schedule I, are permitted, whether their lethality be low or high. Such an interpretation was justified, he maintained, because the use of lethal chemicals for execution of the death penalty is covered by the purpose 'law enforcement'. It must be said that the justification of chemicals for such a purpose did not enter into the CWC negotiations, as it was not salient to the Convention's object and purpose. To proceed from Fidler's false assumption to an interpretation of paragraph 9(d) that could serve as justification, for example, of the massacre at Halabja¹² would be absurd, and incompatible with interpretation in good faith.

Malcolm Dando of Bradford University, referring to the Moscow siege case, warned the Forum that "some military forces, some police forces, might consider or be tempted to use similar kinds of chemicals in similar kinds of operations – and not just in a domestic context". In a previous study Dando had observed that renewed interest in 'nonlethal' weapons had recently developed within the military forces of technologically advanced countries. At this juncture he cited a publication by Fidler in which the latter reflected on arguments that new 'nonlethal' weapons give new capabilities to military forces – which then "affect how we evaluate the ethics of weapons' use" even to the point where the elements of international law concerning disarmament and of humanitarian law in armed conflict may be set aside if operational needs and new military technology require.¹³

EFFECTIVENESS OF ONGOING VERIFICATION ACTIVITIES

Issues with direct impact upon the effectiveness of the CWC verification system include: the independent and non-partisan position of the Technical Secretariat (TS), national implementation by states parties, recognition of technological developments, use of sampling and analysis during inspection, and the effects of political decisions on the Verification and Inspectorate Divisions of the TS. These are now addressed in turn.

Independence of the Technical Secretariat

In order to fulfil their purpose, verification activities have to be carried out by an independent body. Article VIII, paragraph 46 of the CWC prohibits the Director-General, the inspectors and the members of the staff of the TS "[t]o seek or receive instructions from any Government or from any other source external to the Organization". The provision in paragraph 47 obliges the states parties to "respect the exclusively

international character of the responsibilities” of those persons and “not seek to influence them in the discharge of their responsibilities”. But the independence of the TS, a cornerstone for objective verification, is being eroded. The Administrative Tribunal of the International Labour Organisation (ILO) considers that such disregard is inconsistent with the proper functioning of an international organization.¹⁴ The states parties of the CWC stress (in paragraph 12 of the Political Declaration of the RevCon) that the verification system shall be applied in a non-discriminatory way and underline (in paragraph 13) their commitment to an effective and credible verification regime.

In order to preserve independent verification, the provisions on privileges and immunities of the members of the inspection teams provide for full diplomatic immunity, *inter alia*, for the papers and correspondence, including records and samples and approved equipment.¹⁵ These key provisions had been violated during hundreds of inspections. Despite the fact that the inspectors’ notebooks are protected by immunity under the Convention, states parties may nevertheless request that copies of the notebooks be made.

National implementation

Much remains to implement fully the obligations under Article VII. This is clearly expressed in paragraphs 15 and 16 of the Political Declaration. Nicholas Sims, in his presentation to the Open Forum, underlined the undertaking in Article VII “not to permit in any place under its control any activity prohibited to a State Party under this Convention”, including the promulgation of appropriate legislation. Despite increasing levels of important assistance from the TS over recent years, the present state of affairs is not encouraging: as of 31 October 2004 most states parties had not fully complied with this obligation: while 82% of states parties had established a National Authority, only 58% had informed the OPCW of the implementing legislation they have adopted and only 32% had reported legislation that covered covers all key areas for enforcement of the Convention.¹⁶ Besides national legislation, further enforcement measures are also required in order to ensure that all not-prohibited activities are consistent with the criteria defined by Article II, especially the general purpose criterion. This relates to operational monitoring and steering of domestic chemical activities (production, consumption, export, import). The Schedules of chemicals are an important tool, especially for the verification and implementation of import and export restrictions. States parties are to inform the OPCW when experience dictates that additions to the Schedules are required. This obligation is widely neglected, however, especially by those states parties that have extensive research programmes on chemical, biological agents. But while Schedules of chemicals should be an important tool for referencing non-proliferation implementation, they in effect became a tool for limiting verification. The provision of Article II, paragraph 2, that subsumes all toxic chemicals into the scope of the Convention, will become void if routine verification is confined to the existing Schedules without continuously adapting them to developments. Schedules affect what should be declared under the provisions of Part VI of the Verification Annex. Outdated Schedules result in loopholes that policy-making organs need to close by addressing the risks posed by new agents and techniques as quickly as possible.

Taking into account scientific and technological developments

The Review Conference recognised the need to consider new industrial methods not foreseen by the Convention, such as microreactors and nanotechnologies. Other new chemical technologies necessitate a closer look at certain facilities producing unscheduled discrete organic chemicals (DOCs) and data on risk chemicals should be added into the OPCW analytical database. For example, agents of the Novichok-category are not in the Schedules. In the Open Forum it was explained¹⁷ that sophisticated process control nowadays demands a very high degree of technical knowledge in the inspectors. Microreactor based production of Scheduled chemicals, Novichoks, etc. can, in a globalised environment, potentially be diverted for illicit purposes. Additional attention must be given to biotechnology and mid spectrum agents and agents that pose a serious risk as ‘nonlethal’ weapons. Malcolm Dando warned: “I think this Conference ... will strongly reaffirm that the Convention unequivocally covers all chemicals and particularly points out that in consequence things like toxins, *prions*, proteins, peptides and bioregulators and their biologically or synthetically produced analogues and components are covered, and if you don’t do it, when you come back next time you’ll have a real mess on your hands”.¹⁸ Unfortunately, the Conference did not respond to those warnings.

Sampling and analysis

The analysis of samples is a very important tool provided by the Convention to obtain indisputable evidence about compliance and non-compliance. However, the use of this tool by the TS is being effectively curtailed: states parties mostly prefer to have their own equipment used. While the Convention prohibits a states party from placing any restriction on the inspection team using equipment properly approved by the Conference, the implementation of this prohibition has been impeded by several means. This started 1997 when the US made the legally flawed reservation not to allow samples to be analysed outside their own territory. India followed this example and included a right of refusal into her national law. The obstruction of this essential provision was followed by financial constraints for equipment and training of personnel. Nowadays, in neglect of CWC provisions, states parties in general are questioning the need for sample analysis in chemical industry verification. This is the thrust of reactions by two states parties (Germany and Japan) to an April 2004 draft paper of the TS *Sampling and Analysis in Article VI Inspections*. The arguments were: Sampling and analysis is too costly for the OPCW; it might be used tentatively at some complex Schedule 2 plant sites; it would take away financial resources from verification of CW destruction; it would be incompatible with the ‘least intrusive manner’ principle of the CWC; and it should be used only on exceptional occasions in order to clarify ambiguities. This position obviously contradicts the findings by the International Union of Pure and Applied Chemistry (IUPAC) that Christopher Murphy,¹⁹ presented on behalf of the Union, comprising National Academies and Chemical Societies of forty-four countries, which account for 85% of the chemical industry world-wide. He discussed new synthetic methodologies of producing chemicals, new methodologies, like database mining, which can allow rapid focus on toxic chemical developments, and the fact that modest

sized batch facilities could potentially be used to produce toxic chemicals that might be diverted for illicit purposes. He focussed on the consequences for verification, for instance for the Other Chemical Production Facilities regime and, in general, emphasised new analytical methods and analytical instrumentation of increased sensitivity. It is to be hoped that his idea of a two-way street of education and outreach, to be paved between the international scientific society and the OPCW, will be taken up not only by the staff of the OPCW Secretariat but also by the representations of states parties to the OPCW.

Efficiency of the political process in the OPCW

The deliberations of the RevCon were suspended to convene a one-day Special Session of the Conference of the States Parties. Amazingly, the special session adopted a decision on the commencement of a tenure policy of 7 years maximum for TS staff and inspectors, which had been debated on and off for 10 years. It was decided that the first seven-year period began retroactively in 1999. The decision insists on a turnover every year of 14.5% of all personnel belonging to these categories, and allows a special one-off exception during the first period to retain 10% of staff beyond 2006 up to 2009.²⁰ This will ensure that the TS cannot retain its most experienced people, particularly its professional staff in Verification and Inspectorate Divisions. The institutional memory of the TS built up since 1993 will be gone by 2009. The increasing load of inspecting destruction facilities for chemical weapons in the second part of this decade, coupled with the need to train new people, will place heavier demands upon the professionalism and integrity of the entire verification effort (Declaration paragraph 14). There was an awareness of the dangers related to such a concept, but, due to the pressures by influential states parties, a decision was forced at this Special Session.

There is a striking inconsistency between adopting such a decision and, on the other hand, making a commitment to a credible and effective verification regime.²¹ While there is reason to promote some degree of healthy turnover of staff, it is clearly counterproductive to execute this in an inflexible way. It should be a matter of prime importance to prevent the loss of highly qualified and experienced staff, irreplaceable in the light of the new challenges in the field of verification and national implementation of the CWC.

MODUS OPERANDI OF THE OPCW

The Executive Council

In 2001, after the May session of the Conference of the States Parties, the Harvard Sussex Program observed an “increasing paralysis in the policy making organs of the Organization”. The Appeal on the part of former negotiators and interested scientists for upholding the CWC stated “regrettably, governments have reduced, to less than a routine level, the attention they give to the Convention”.²² Alexander Kelle noticed a ‘culture of deferral’ with respect to the decision-making of the Executive Council.²³

At the present date, the list of unresolved issues, including some left over from the Paris Resolution of 1992,²⁴ has still not been addressed. And further issues evolving from inspection activities have arisen, that will require action by the Council. Its record is less than encouraging when it comes

to the solution of key issues of the verification regime. This goes for both destruction of chemical weapons and industry verification. Furthermore, there have been significant delays within the Executive Council in approving detailed plans for the verification of destruction of chemical weapons or chemical weapons production facilities, and/or decisions on requests and plans for the conversion of chemical weapons production facilities. Despite the opinion of the Scientific Advisory Board that salts of scheduled chemicals should themselves be scheduled, the Council did not act accordingly and buried the case in an expert meeting.

There were bright spots however: the decisions on boundaries of production and captive use of Schedule 2 and 3 chemicals, which greatly enhance the potential for even-handed declaration of the production of such chemicals; and the swift support of a change under Article XV to enable Libya to make use of the possibility of converting a former CW production facility to purposes not prohibited.

A rule of decision-making *solely* by consensus is illegal²⁵, and has proved to be counterproductive for years. Entrusting representatives with the preparation of decisions as ‘facilitators’ might be constructive if they could present the results of their efforts when the necessary support – a two thirds majority of all members of the Executive Council – is visible. Endless ‘facilitating’ due to the resistance of a few members hiding in anonymity ends up by hampering the work, not only of the Council but of the OPCW itself. The paralysis of the Council necessarily negatively affects the work of the Conference of the States Parties, since Article VIII mandates the Council with important general tasks and 68 special tasks²⁶ which are essential for the Conference.

The most important responsibility of the Council is stipulated in paragraph 36 of Article VIII: consideration of doubts and concerns regarding compliance and cases of non-compliance. The Council, together with the respective state party, must either redress the situation or, if that fails, take other measures.²⁷ Eight years after entry into force, not one such case has happened or, more exactly, has become generally known. This contrasts with the bulk of issues or matters of non-compliance (e.g. arbitrary misinterpretation of provisions, violating the immunities of inspectors and inspection equipment, non-implementation of national measures, submitting initial declarations or financial contributions after the due date) of which only a few are mentioned here. This stalemate is reflected also in the work of the Conference that has not yet assumed responsibility under Article XII since the Council failed to make recommendations concerning compliance. An exception is an Article VII Action Plan of the TS mandated by the RevCon.²⁸ Especially with regard to Resolution 1540 of the UN Security Council (see below) the obligation of the Conference to bring cases of particular gravity to the attention of the UN General Assembly and the UN Security Council deserves consideration.

A transparent procedure ought to be established to solve issues on compliance in accordance with Article VIII, paragraphs 35 and 36 CWC within fixed time frames. Only this will exclude attempts to force inspectors or related staff of the Verification Division to neglect unresolved ambiguities or otherwise to influence the evaluation of verification material. A ‘culture of concealment’ must not become added to the ‘culture of deferral’.

The Budgetary Process

The budgetary process, also a hostage of the illegal consensus procedures of the Council, has proved damaging to the proper evolution of the OPCW and to the verification regimes. First, the budget has never been established as a result of reflections about what is needed for a credible verification regime. In order to gain consensus every year a *quid pro quo* is sought. Secondly, the budget has been rationalized as a result of how much states parties are willing to pay.

The TS is supposed to determine where, when and how often facilities should be inspected. Instead, each year a target number of inspections in each category is set through the budget process. For example, while the TS has pointed out that the risk engendered by a declared Schedule 1 facility is minimal, the budget has ensured that it may have been inspected as many as 6 times. This contrasts with the nearly 5000 declared Other Chemical Production Facilities where less than 250 inspections have been accomplished in that same period of time.

Nowhere in the Convention does it say that states parties can control verification by budgetary actions, but each year it happens, to the detriment of real, credible verification. The budgetary process should follow the precepts of results based budgeting (RBB) concepts which have been endorsed by the Rev Con. In this process the TS would adjudge the need for inspections and the numbers of inspections in each category: Schedule 1, Schedule 2, Schedule 3 and OCPF. That would result in credible Article VI verification. The states parties should then attempt to support these proposals by appropriating the necessary funding. If funds are limited, the most important verification measures should be supported. Verification needs to be seen as central task of the TS and not one that gets billing equal to or less than administration, international cooperation and assistance, external relations, etc. As the years have passed the status of verification activities in relation to more diplomatic and political activities has been eroded.

UN Security Council resolution 1540 (2004)

The resolution adopted in April 2004 by the United Nations Security Council is aimed at barring the proliferation of nuclear, chemical and biological weapons. It refers to Chapter VII of the UN Charter: 'Action with Respect to Threats to Peace, Breaches of the Peace and Acts of Aggression'. Under Article 39 in this Chapter, the Security Council "shall determine the existence of any threat to the peace and shall make recommendations" that are binding for all States and international organizations.²⁹ This resolution has significant repercussions on the CWC and the work of the OPCW and the states parties. Its implementation has to take into account Article 2, paragraph 1 of the UN Charter, which stipulates the principle of sovereign equality of States. Their constitutional order will prevail when implementing the UN Security Council's recommendations concerning legislation for specific enforcement measures with regard to non-state actors.³⁰ Equality before the law, a principle of every democratic constitution, has to be respected. It requires implementing general international obligations by promulgating domestic prohibitions that bind everybody under the state's jurisdiction. Resolution 1540 defines a non-state actor as an "individual or entity not acting under the lawful authority of any State in conducting activities which come within the scope of this resolution". First, "a lawful authority of any State" cannot

justify activities that are generally prohibited under multilateral international law. Secondly, national enforcement measures for international disarmament treaties cannot differentiate between people acting for a government and non-state actors. Instead, the wording of the CWC, Article VII, fulfils those requirements. It obligates states parties "to prohibit natural and legal persons... any activity prohibited to a State Party under this Convention".³¹ This wording prevails over that of UN Resolution 1540. Because of the aforementioned, it should be given model-character for the respective provisions for nuclear and biological weapons required by the resolution.

Paragraph 5 of the resolution states that the rights and obligations from all three disarmament treaties for their members and international organizations remain untouched by the resolution. This also true for Article XI of the CWC that requires economic co-operation in the chemical field, as well as the promoting and expanding of international trade and technological development. Thereby, the binding interpretation of Article XI is to be respected that had been agreed upon by the Conference of Disarmament on a text proposed by the Australian representative in the CD speaking on behalf of the members of the Australia Group.³² It will add to the responsibility of the organs and the TS of the OPCW to provide clear verification results with strong evidence about compliance of the states parties. In such cases, the rights of states parties under Article XI must not be impaired by any export controls of the Australia Group or other measures not foreseen in the CWC.

Pursuant to the UN-OPCW Relationship Agreement, the UN and the OPCW are to intensify co-operation in aspects of information about compliance with the obligations under the CWC identical or similar with those under the UN resolution. This relates to the following aspects: National implementation issues, such as legislation, penal enforcement, import and export of dual use agents; international verification; independent and unbiased activities of the TS; schedules of chemicals and sample analysis updated to new scientific and technological developments; export and import control; and physical protection of stored CW and civil chemical facilities.

Transparency of work and accountability for results

The Political Declaration of the RevCon states in its first paragraph that the Convention, universally and effectively implemented, will be an asset for all humankind. But if this statement is to be more than just an empty phrase, it must be followed up by a concept of action to provide the public with meaningful, quantitative, and properly evaluated information on the activities of the OPCW. The OPCW is not transparent. Except for a sanitized Annual Report, which avoids any assessment of the degree of compliance, or unresolved issues of compliance or non-compliance, not much information reaches the public – including the NGOs, researchers and associations. The annual Verification Implementation Report is classified 'highly protected' and remains under lock and key within the TS and the states parties governments. Under the present circumstances, most substantive information released from the OPCW Headquarters reaches the delegates of a state party in The Hague and the desk in its foreign ministry or National Authority, but the information reaches neither the parliaments nor the public. The only information available to an interested public is the quarterly review on Progress in The Hague that this Bulletin began publishing in

1993, but this has also suffered from the information controls that imbue the Organization.

CONCLUSION

Disarmament law is a project to change civil society. This change will happen when the Convention is embraced by society. Without the support of society, the OPCW cannot honestly be said to be successful.

An asset for the sake of peace and humanity - 10th anniversary the Chemical Weapons Ban is the title of an appeal launched on 13 January 2003. It has been signed by more than 60 individuals and institutions that actively participated in the negotiation and implementation of the CWC. It concludes: "Regrettably, governments have reduced, to less than a routine level, the attention they give to the Convention. A proactive policy is needed, geared to the full implementation of the Convention and its adaptation, where appropriate, in the light of experience gained during its first five years of implementation, scientific and technological advances and the new challenges posed by the threat of chemical terrorism." A way forward requires "a change in the present restrictive attitude, by some States Parties, towards the CW Convention and its Organization and an effort by all States Parties to redress the damage inflicted on it; resolute effort by the political organs of the Organization to concentrate on issues of compliance and to inform the public about those issues – they must be prepared to take difficult decisions more effectively and more transparently; and a return to the basic consensus developed during the negotiation of this Convention: each state party must be convinced by objective and impartial procedures that all other States Parties fully comply with and abide by their respective obligations. Looming dangers of war should inspire such action to maintain the purposes and objectives of the Convention."

Notes

¹ The author is a Berlin-based consultant on the Chemical Weapons Convention, having previously held positions within the OPCW Technical Secretariat and its forerunner, the Provisional Technical Secretariat. As a member of the delegation of the German Democratic Republic to the Conference on Disarmament in Geneva, he was one of the longer serving negotiators of the Convention, latterly chairing working groups of the CD Ad Hoc Committee on Chemical Weapons.

² OPCW document RC-1/3 dated 9 May 2003.

³ OPCW document RC-1/5 dated 9 May 2003. See also The CBW Conventions Bulletin no 60 (June 2003), pp. 2-5.

⁴ See, for example, Robert J Mathews, "Reviewing the Chemical Weapons Convention: gently does it", *VERTIC Verification Yearbook 2003*.

⁵ Jean Pascal Zanders, "The Chemical Weapons Convention and universality: a question of quality over quantity?" *Disarmament Forum*, [United Nations Institute for Disarmament Research] 2002 no 4, pp 23-29.

⁶ The Vienna Convention on the Law of Treaties (1969) came into force on 27 January 1980.

⁷ <http://www.sunshine-project.org/publications/pr240902map.html>.

⁸ *The CBW Conventions Bulletin* no 60 (June 2003), pp 1-5 & 49.

⁹ *Open Forum on the Chemical Weapons Convention: Challenges to the Chemical Weapons Ban*, Harvard Sussex Program on CBW Armament and Arms Limitation, 1 May 2003. This transcript of the proceedings is also available on the HSP website at <http://www.sussex.ac.uk/spru/hsp/publications>.

¹⁰ Only the use of tear gas against internal riots may be considered to be exempted from this prohibition. Baxter and Buergenthal conclude: "The text of the prohibition of chemical warfare in the Geneva Protocol admits of both a broad and a restrictive interpretation of its intended scope. It is clear, however, that in their conduct and declarations in the past four decades the parties to the Protocol have demonstrated their understanding that this prohibition bars the use in war of all chemical agents having a direct effect on man that might be used as anti-personnel weapons, including tear gas and other forms of irritant chemicals." See: Baxter and Buergenthal, "Legal Aspects of the Geneva Protocol of 1925" in *The Control of Chemical and Biological Weapons*, New York: Carnegie Endowment for International Peace, 1971.

¹¹ Walter Krutzsch, "Non-lethal chemicals for law enforcement?", April 2003, BITS research note 03.2, available at <http://www.bits.de>.

¹² This Kurdish-populated town in Iraq was bombed by Iraqi air force in March 1988. Five thousand civilians lost their lives and 7000 were wounded by chemical weapons.

¹³ Malcolm Dando: "Scientific and technological change and the future of the CWC: the problem of non-lethal weapons", *Disarmament Forum* [United Nations Institute for Disarmament Geneva], 2002 no 4, pp.33-44. The article by D.P. Fidler to which Dando referred was: "'Non-lethal' weapons and international law : Three perspectives in the future.," *Medicine, Conflict and Survival*, vol 17 no 3 (July-September 2001), pp 194-206.

¹⁴ See ILO Administrative Tribunal: Judgements No.2032, No.2232, and No.2256.

¹⁵ CWC Verification Annex, Part II, paragraph 11.

¹⁶ Annex 1 in the OPCW document C-9/DG.7 dated 23 November 2004.

¹⁷ See the statements by: René van Sloten, International Council of Chemical Associations; Christopher K. Murphy, International Union of Pure and Applied Chemistry; Graham Pearson and Malcolm Dando, Department of Peace Studies, Bradford University. See also Malcolm Dando: "Scientific and Technological Change and the future of the CWC" in *Disarmament Forum*, 2002 no 4.

¹⁸ *Open Forum*, proceedings p.39

¹⁹ *Open Forum*, proceedings p.19

²⁰ OPCW document C.-SS-2/Dec 1 dated 30 April 2003

²¹ Vertic (2002). *Getting verification right*. [The report argues for "scrapping of the rigid fixed tenure policy"]

²² Appeal (2003), *An asset for the sake of peace and humanity - 10th anniversary the Chemical Weapons Ban*, available at: <http://www.cwc-support.org>.

²³ Alexander Kelle, "The First CWC Review Conference: taking stock and paving the way ahead", *Disarmament Forum*, 2002 no 4, p 7.

²⁴ Adopted by the Signatory States to the Convention at the Signing Ceremony in Paris, 13-15 January 1993, reprinted in L. Tabassi, *OPCW: The Legal Texts* (1999) pp 523-534.

²⁵ Paragraph 29 of Article VIII of the Convention stipulates two-

thirds majority of all its members for decisions on substance and simple majority for decisions on procedural matters.

²⁶ See Walter Krutzsch and Ralf Trapp, *A Commentary on the Chemical Weapons Convention*, Martinus Nijhoff Publishers, 1994, Index, p.537.

²⁷ The measures under Art. VIII, paragraph 36 are: Inform all States Parties – bring the issue to the attention of the Conference – make recommendations to the Conference regarding measures to redress the situation and to ensure compliance (Article XII) – inform, in serious and urgent cases, the UN General Assembly and the UN Security Council.

²⁸ OPCW document C-8/DEC.16 dated 24 October 2003.

²⁹ Documented in *The CBW Conventions Bulletin* no 64 (June 2004), pp12-13.

³⁰ This is confirmed by Resolution 1540, paragraph 5.

³¹ Nicolas Sims referred to the UK Chemical Weapons Act 1996: “Proponents of Section 37 were concerned to make it explicit,

beyond argument, that government service could never be invoked as an excuse for contravening the Act. They insisted that government officials, including defence scientists and members of the armed forces, as well as the politicians to whom they are answerable, should be bound by exactly the same obligations as the rest of the population”. He added: “This is a principle of comprehensiveness which ought to apply globally” and added examples from Australia and Canada. *Open Forum*, proceedings, p 15.

³² In his report of 3 Sept.1992 to the CD (CD/PV.635) on the agreed draft text of the CWC, the Chairman of the ad hoc Committee on Chemical Weapons read out the statement by the Australian representative on 6 August 1992, in which he stated: “They (members of the Australia Group) undertake to review, in the light of the implementation of the Convention, the measures that they take to prevent the spread of chemical substances and equipment for purposes contrary to the objectives of the Convention, with the aim of removing such measures for the benefit of States Parties to the Convention acting in full compliance with their obligations under the Convention.”

Report from Geneva

Review no 23

The Biological Weapons Convention Meeting of Experts

As reported in *Bulletin 66* (December 2004), the Meeting of the States Parties of the Biological and Toxin Weapons Convention (BWC) during 6-10 December 2004 looked ahead in the final plenary session to the topic identified for 2005:

v. The content, promulgation, and adoption of codes of conduct for scientists

Ambassador John Freeman of the United Kingdom circulated a letter to the states parties which shared some initial reflections on this subject. The letter also set out seven questions that could be examined at the meetings in 2005:

- *How can we raise awareness of the BTWC provisions in the global scientific community and reinforce the responsibilities of scientists?*
- *Should under-graduate and post-graduate education programmes address the ethical and practical aspects of preventing the misuse of science? How can we encourage due consideration of the possible consequences of the misuse of research?*
- *How can we encourage universities, industry, research bodies and government to reflect BTWC issues in their own in-house codes of practice and operational frameworks? Might we consider the introduction of guidance or instructions into existing structures that deal with the safety and ethics of individual experiments and research?*
- *How can we promote the proper use of science-based activities and knowledge and encourage appropriate oversight of such work?*

- *Is it necessary to provide guidance on how to deal with research that throws up unexpected or unpredictable results of relevance to the BTWC prohibitions?*

- *How might we promote consideration among research and project funders of BTWC issues when considering proposals, eg, whether the research could be misused in the future and what steps might help prevent this?*

- *To whom or to what body might an individual turn if he/she suspects that someone else's conduct is in breach of BTWC prohibitions? What safeguards might there be for such individuals? And how might any malign accusations be filtered out?*

The Meeting of Experts to consider this topic was held in Geneva from 13 to 24 June 2005.

Preparations for the Meeting of Experts, 2005

During the spring of 2005, Ambassador John Freeman of the UK, as Chairman of the 2005 meetings, wrote a further letter to the representatives of the states parties to the BWC on 24 March. In this he said that he tended to the view that given the scope and character of the work this year on codes of conduct for scientists, it was necessary to arrange the work in June so that there is sufficient time to hear from all those considering the issue of codes of conduct. He made it clear that by this he meant “*States Parties; International Organisations; NGOs; and other organisations outside government (be it in academia, industry or science's professional bodies) whose work or interest is relevant, or could be impacted,*” by the discussions in Geneva. The term ‘stakeholders’ was used to cover these organizations for the purposes of the letter. He hoped that states parties

would agree that it would be beneficial to their discussion for them all to have the fullest possible picture of what already exists or is in the planning stage on codes of conduct. He also added that it would be necessary to ensure that time was allowed to cover all the aspects of the 2005 mandate, i.e. “content” and the issues surrounding “promulgation” and “adoption” of codes of conduct.

Ambassador Freeman said that he was keen to have as broad a base of organizations as possible, both in terms of addressing the scope of the work and in terms of geographical coverage, and he would therefore encourage states parties to inform him of any organizations or groups they believe should be included. He attached a preliminary list to his letter of some 17 such organizations of which he was already aware: World Health Organisation (WHO), Food and Agriculture Organisation (FAO), World Organisation for Animal Health (OIE), Organisation for the Prohibition of Chemical Weapons (OPCW), International Atomic Energy Agency (IAEA), UN Educational, Scientific and Cultural Organisation (UNESCO) – in particular the Commission on the Ethics of Scientific Knowledge and Technology (COMEST), Organisation for Economic Co-operation and Development (OECD), The InterAcademy Panel on International Issues (IAP), International Centre for Genetic Engineering and Biotechnology (ICGEB), International Union of Microbiological Societies, International Committee of the Red Cross (ICRC), International Society for Infectious Disease, International Council of Scientific Unions, International Federation of Associations for the Advancement of Science, International Union of Biochemistry and Molecular Biology, International Federation of Pharmaceutical Manufacturers & Associations, and World Medical Association (WMA). Ambassador Freeman said that he intended to approach representatives of these organizations and other relevant national or international organizations which were brought to his attention by States Parties or the Secretariat with a view to inviting them to brief the Meeting of Experts in June.

The letter also set out an indicative timetable for the meetings in June which proposed a mixture of ‘open’ sessions in which the ‘stakeholders’ would make presentations on work that they are doing related to the topic for 2005, and that these would be followed by working sessions in which the states parties would have follow-up discussions. Provision was included in the indicative time table for an informal NGO session on the morning of Friday 17 June.

In addition, Ambassador Freeman said in his letter that he had asked the secretariat to produce four information papers. These would be a paper summarising or listing existing codes of conduct that reference biological weapons; a paper summarising or listing codes of conduct relevant to the life sciences or biotechnology which do not reference biological weapons; a paper reviewing and analysing existing codes in other fields which might serve as models for the biological field; and a comprehensive list of organisations etc that might serve as sources of guidance.

There were four background papers: *Existing Codes of Conduct which Refer to Biological and Toxin Weapons* (10 pages), BWC/MSP/2005/MX/INF.1 — this and other official documents for MX/2005 are available at <http://www.opbw.org>; *Codes of Conduct Relevant to the Life Sciences or Biotechnology Which Do Not Refer to Biological and Toxin Weapons* (14 pages), BWC/MSP/2005/MX/

INF.2; *Review and Analysis of Relevant Elements of Existing Codes of Conduct in Other Fields* (20 pages), BWC/MSP/2005/MX/INF.3; and *Relevant Organisations, Associations, Professional Bodies and Institutions Which Might Serve as Sources of Guidance on the Formulation of Codes of Conduct and as Agents for Adopting and Promulgating Such Codes* (41 pages), BWC/MSP/2005/MX/INF.4. The papers were issued on 13 April 2005 (INF.1, 2 & 3) and on 27 April 2005 (INF.4) with summaries of the first three documents issued on 26 April 2005. The Secretariat are to be commended in producing these information papers in April some two months prior to MX/2005, as this enabled states parties to benefit from their availability – in contrast to the situation in 2004 when the information papers were issued less than a month before the start of MX/2004.

Meeting of Experts, 13 to 24 June 2005: Opening Plenary Session

The Meeting of Experts began on Monday 13 June 2005 in a plenary session where Ambassador John Freeman welcomed the representatives and experts from the States Parties. 82 States Parties participated in the Meeting of Experts – one less than in the corresponding 2004 Meeting of Experts – as eleven (Azerbaijan, Bolivia, Cambodia, Georgia, Iraq, Lithuania, Luxembourg, Mauritius, Nicaragua, Portugal, Singapore) participated whilst twelve (Albania, Bhutan, Bosnia and Herzegovina, Ghana, Iceland, Lebanon, Monaco, Mongolia, Oman, Senegal, Sri Lanka, Venezuela) did not. Three signatory States also participated: Egypt, Madagascar and Syrian Arabic Republic. One State, Israel, neither party or signatory to the Convention, participated as an observer. The Convention now has 155 States Parties and 16 Signatory States (BWC/MSP/2005/MX/INF.5 dated 21 June 2005) as the Republic of Moldova and Tajikistan had recently acceded. The United Nations, including UNDDA, UNIDIR and UNMOVIC, also attended the meeting – the participation of UNMOVIC was the first time that there was a seat in the room at a BWC meeting for UNMOVIC, or its predecessor, UNSCOM, although both UNSCOM and UNMOVIC had been included in the lists of participants for previous BWC meetings.

Representatives from eight Intergovernmental Organizations (FAO, ICGEB, ICRC, OECD, OPCW, UNESCO, WHO and OIE) participated as observers. In addition, at the invitation of the Chairman, and, as the final report stated, “in recognition of the special nature of the topic under consideration at this Meeting and without creating a precedent” twenty three scientific, professional, academic and industry bodies (AAAS, ABSA, AMA/CEJA, ASM, ABPI, Center for Deterrence of Biowarfare and Bioterrorism, Center for Biosecurity of the University of Pittsburgh Medical Center, CSIS, Det Norske Veritas, ICSU, Inter Academy Panel on International Issues, ICLS, IFPMA, IUPAB, IUBMB, IAS, Japanese Bioindustry Association, National Institute of Animal Health (Japan), Nature, NTI Global Health and Security Initiative, Royal Society (UK), Wellcome Trust (UK), and WMA) made presentations and participated in the open sessions “as guests of the Meeting of Experts.” Although the provisional programme of work (BWC/MSP/2005/MX/2) makes it clear that expert contributions were planned from ‘government science’, from ‘universities, funders, research

and publishers' and from 'industry', it was evident that the approach taken to achieve such participation varied enormously, with some invited as "guests of the Meeting of Experts" whilst others were included within delegations, and yet others — who had carried out original work of direct relevance — were only present as NGOs, and were thus unable to make salient points that could have found their way into the listing of issues. In addition, sixteen NGOs (BWPP, CACNP, Landau Network – Centro Volta, Monterey Institute, Orchard Network, Pax Christi International, Pôle Bernheim (Belgium), SIPRI, The London School of Economics and Political Science, The Sunshine Project, The US National Academies, University of Bradford, University of Exeter, University of Maryland, University of Sussex, and VERTIC) attended the open sessions of the Meeting. Over 500 individuals participated, which was more than at the Meeting of Experts in 2004, and included over 280 scientific and other experts from capitals and international agencies.

In the opening formalities, the provisional agenda (MX/1) and the provisional programme of work and indicative timetable (MX/2) were adopted, as were the rules of procedure of the Fifth Review Conference (as annexed to CONF.V/17) which would apply *mutatis mutandis*. The provisional programme of work included open sessions and closed sessions — the latter would be open to the delegations of states parties and the state signatories only. Provision was also made on the morning of Friday 17 June 2005 to suspend the formal session — as had been done at both the Fourth and Fifth Review Conferences and at the 2003 and 2004 Meetings — to allow a number of NGOs to make short statements in informal session.

An intervention was made by the representative of Iran, who assured the Chairman of the full cooperation of the Iranian delegation and went on to say that it was the view of Iran that the contributions proposed by observer organizations in the open sessions would not constitute any precedent for any other BWC meeting or for any other disarmament forum. The Chairman thanked Iran for its comment and went on to mention that the Secretariat had prepared four background papers (MX/INF.1, INF.2, INF.3 and INF.4) that had been made available to all delegations.

The Chairman recalled that in his letter of 24 March 2005 to States Parties he had invited them to advise him of any relevant national or international organizations with a view to his inviting them to brief the Meeting of Experts. He had consequently written to about 50 such organizations and about 30 had accepted his invitation. Some were individual experts who were participating as part of delegations whilst others would be participating as specialized agencies or guests of the Meeting of Experts.

In chairing the Meeting of Experts, Ambassador Freeman said that his personal objective would be to bear in mind the mandate from the Review Conference "to discuss and promote common understanding and effective action" on the topic for 2005 in order to prepare for the Meeting of States Parties in December 2005. His intention would be to follow the precedent established in previous years. He would seek to consult with delegations and regional groups and his aim would be to work as transparently as possible. He would be focusing on the subject and he believed that it might be helpful if attention was given to the seven questions that he had posed in his letter of December 2004 (reproduced in the Introduction above).

Eleven States Parties (Japan, China, Malaysia, Canada, United States, Iran, Cuba, India, Algeria, Republic of Korea, and Libya) then made statements before the end of the plenary session. A further statement was made by Nigeria during the afternoon session. This was significantly less than the 19 statements made at the start of MX/2004; it was notable that there was no statement by a member state of the EU or on behalf of the EU in contrast to MX/2004 when statements were made by Germany, UK and the Netherlands (on behalf of the EU).

Japan noted that this year marked the 30th anniversary of the entry into force of the BWC and the 80th anniversary of the signing of the 1925 Geneva Protocol and said that Japan supported the Joint Statement issued by the three co-Depositories in March. Japan encouraged all States Parties to take necessary national measures to implement the Convention and called upon all States Not Party to the BWC to join promptly. In regard to this year's topic, Japan said it was important in order to raise a sense of responsibility among scientists, increase public awareness and encourage debates over how to balance scientific and technological development and security concerns. Looking ahead to the Sixth Review Conference in 2006, Japan hoped that it "*will provide an opportunity to adopt further measures for strengthening the BWC against the backdrop of recent scientific and technological developments.*"

China said that the Meetings of Experts and States Parties are useful endeavours and important venues for strengthening the effectiveness of the Convention. In regard to codes of conduct, China noted that in a broad sense, the code of conduct is the joint social responsibility and strict criterion of conduct of the scientific community and the integration of scientific and humanistic spirits. The statement went on to point out that "*the international community and bioscience community care more and more about the responsibility and obligation of biological scientists in eliminating biological weapons threat, safeguarding world peace, security and stability.*" It concluded by noting that "*the profound changes in the international situation and the fast development of biotechnology have brought greater opportunities and challenges to the Convention than ever before.*"

Malaysia said that it was "*fully convinced that the establishment of an international code of conduct for those engaged in the life sciences would certainly make a significant and effective contribution in combating the present and future security threats of biological weapons and bioterrorism.*" They went on to say that it is important that all States Parties who are engaged in technology advances in the field of biological sciences strengthen their biosafety and biosecurity measures to ensure the safe handling of pathogenic microorganisms in their facilities. At the same time, Governments should also "*develop procedures and legislations that aimed to contain the movement and to minimize the risk of biological agent falling into the hand of irresponsible individuals for deliberate criminal acts.*"

Canada said that codes of conduct are an excellent way to inform and educate scientists, industrialists, academics, policy

makers and others who are engaged in an area of technology that is, by its very nature, dual use. Nevertheless, it is *“important to remember for all the usefulness of codes that they are not a replacement for a State Party’s Article IV obligations to ‘take any necessary measures to prohibit and prevent...’”* However, codes can offer a very useful complementary function to national legislation. The statement concluded by noting that this year is the last of the intersessional process leading up to the Sixth Review Conference in 2006 and that *“Canada considers that it is timely for all of us to begin thinking about its preparation.”* Implementation of the Convention must include the assurance that we are all in full compliance with our current legal and political obligations under the BTWC. In addition, Canada urged all States Parties to make every possible effort to complete their annual Confidence Building Measures submission in as thorough and timely a manner as possible.

The **United States** said that the 2003-2005 Work Program has, to date, been extremely constructive as *“it has provided one of the largest-ever international gatherings of experts on potential biological weapons-related activities and created renewed awareness of the importance of effective international measures, and how such measures can work in conjunction with worldwide efforts to stem the threat of biological weapons.”* The US hoped that the discussion and exchanges at MX/2005 will *“help to generate a greater understanding of emerging codes of conduct, their role in reinforcing, and in some cases personalizing, the norm against biological and toxin weapons, and provide an impetus to efforts promoting scientists’ professional responsibilities.”* The statement went on to say that *“I’ve no doubt that our upcoming discussions will also amply demonstrate that there is no ‘one size fits all’ approach to codes of conduct. A universal code of conduct is not, in our view, feasible.”* The statement concluded by listing five presentations to be made by the US government and then, after noting that “a number of United States based non-government experts have chosen to present their views which are not representative of the views of the USG”, listing ten such groups: AMA, Center for Biosecurity, CSIS, CBACI/IISS, NTI, ASM, USC Marshall School of Business, AAAS, Center for the Deterrence of Biowarfare and Bioterrorism at the University of Louisville, ABSA. These NGOs were thus present as Guests of the Meeting of Experts whilst other US-based NGOs participated as NGOs (listed earlier).

Iran noted that the 2005 set of meetings is the third and last part of the process established by the resumed Fifth Review Conference in 2002 *“in order to help keep the important issue of strengthening the implementation of the Convention in the multilateral framework.”* Iran had *“concerns over the fate of the work carried out by the Ad Hoc Group negotiating the Protocol strengthening the implementation of the BTWC. We were also unsatisfied with the selection of certain issues relevant to the Convention while remaining silent or even negligent on some other aspects of high importance to mainly developing States Parties.”* The statement went on to say that *“We still believe that the effective strengthening of the implementation of the BTWC is only possible through the adoption of a comprehensive, multilaterally negotiated legally*

binding international instrument.” It then said that the 2003 and 2004 meetings provided an opportunity for experts from States Parties to exchange views and experiences and get to know the best practices on the four issues assigned to those meetings and that Iran would participate likewise in 2005. Iran emphasized the importance of having a clear common understanding of the mandate and defining the limits of the discussion. Iran went on to point out that any conclusions or results are to be reached by consensus and that it is left to the 2006 Review Conference to consider the work of these meetings and decide on further action required.

Cuba expressed its concern about the absence of a legally binding instrument to strengthen the Convention and noted that, whilst codes of conduct could be beneficial effective, strengthening of the Convention would come only through multilateral negotiations and the completion of a legally binding instrument. Insofar as codes of conduct for scientists are concerned, it would be up to each country to decide what should be done, as there should not be a universal recipe for a code of conduct since it was impossible for poor countries to implement a pattern adopted by developed countries. The conclusion of MX/2005 should be a factual report, as there is no mandate for any negotiations. Looking ahead to the Sixth Review Conference in 2006, this should not be limited to a follow-up of the meetings in 2003, 2004 and 2005 as the Review Conference has a far broader mandate and needs to address how to strengthen the Convention in an integrated fashion.

India recognized that *“recent advances in bio-sciences, including genetic engineering, biotechnology and information and communication technologies offer novel ways of manipulating basic life processes and can possibly be misused, deliberately or even unintentionally.”* India went on to say that *“The States Parties, therefore, have the primary responsibility, in order to meet the obligations undertaken by them under the Convention, to ensure that the research and development work in bio-sciences and biotechnology, conducted by scientists working in public institutions and private enterprises, do not contribute to proliferation of technologies, materials or equipment”* that may enable biological weapons. Those who *“conduct, fund, administer, and regulate research and development work in bio-medical sciences need to be made aware of their responsibilities to assure that they will use their knowledge and skill for the advancement of human welfare and will not engage in activities contrary to the obligations undertaken by the States Parties under the Convention.”*

Algeria said that the risk of vertical and horizontal proliferation of biological weapons is a genuine threat to peace and security. The biological threat is becoming more urgent, requiring coordinated action and a collective response. The Convention is a useful and effective tool to counter these challenges. However, it does not yet have the necessary verification mechanism that would guarantee its effective implementation. Although the annual meetings have been very useful, these have not been an alternative to the strengthening of the Convention through a legally binding verification instrument. Algeria urged the States Parties to seize the opportunity at the 2006 Review Conference to reinstate the negotiations of a legally binding instrument into which the States Parties have

already invested some seven years of effort. Algeria noted that the Secretary-General's High Level Panel had urged the States parties without delay to resume negotiations of a credible verification protocol and that the biotechnology sector should be invited to participate actively. Finally, in regard to codes of conduct, Algeria considered that there would be benefit in a matrix of codes.

The Republic of Korea said that the proliferation of biological weapons is a serious issue affecting the security of the international community as a whole. They went on to say that the advance of state-of-the-art biotechnology and of the life sciences – and accordingly the widespread availability of dual-use technology – have “*rendered it increasingly difficult to make a clear distinction between the peaceful use of microorganisms permitted in the BWC and the military use prohibited by the Convention. There is, indeed, a greater risk that potential proliferators will take advantage of those loopholes.*” Korea welcomed UN SCR 1540 which clearly outlines the obligations each country should take to counter proliferation of WMD by non-State actors. This, together with the 2004 G-8 Action Plan on Non-Proliferation should help us to focus on our tasks during the next two weeks. Korea concluded by saying that it believes that the universal adoption of codes of conduct, codes of practice or codes of ethics by all related sectors, such as biotechnology and the life sciences, will “*provide very concrete and solid ground from which useful best practices can emerge.*”

Libya recalled the efforts that had been made to negotiate a legally binding instrument to implement all Articles of the Convention, as without such an instrument it was difficult to verify that there was no non-compliance with the Convention. Libya considered that the best way to enhance the Convention was through a legally binding instrument. The statement went on to outline a number of measures that had been taken, frequently with the UK and the US, to show Libya's compliance with the Convention and its good intentions.

Although this concluded the statements by States Parties made in the morning session, there was a further statement made at the start of the Monday afternoon session by Nigeria.

Nigeria said that it is committed to the full implementation of the BTWC. Nigeria considered that a code of conduct for scientists is absolutely necessary. Recent events in various parts of the globe have shown that “*there is a need to establish an international code of conduct for those engaged in life sciences as part of efforts to prevent present and future threats from biological weapons and bioterrorism*”. The Code should lay out standards internationally for work relevant to the Convention.

Intergovernmental Organization Presentations

In the afternoon of Monday 13 June 2005 seven IGOs – UNESCO, ICGEB, ICRC, OECD, OPCW, FAO and OIE – made the following presentations, giving an overview of the relevant activities of these organizations:

- UNESCO, *Code of Conduct for Scientists*
- ICGEB, *Building Blocks for a Code of Conduct for Scientists, in relation to the Safe and Ethical Use of*

Biological Sciences

- ICRC, *Preventing Hostile Use of Life Sciences: Connecting Law and Ethics to Best Practice*
- OECD, *The Organisation for Economic Co-operation and Development*
- OPCW, *OPCW Activities and Perspectives on the Content, Promulgation and Adoption of Codes of Conduct for Scientists*
- FAO, *Consideration of the Content, Promulgation, and Adoption of Codes of Conduct for Scientists*
- OIE, *Consideration of the Content, Promulgation, and Adoption of Codes of Conduct for Scientists*

These presentations are available at <http://www.opbw.org>

NGO Activities

As already noted, the opening plenary session agreed that non-governmental organizations (NGOs) could make short statements in informal session on the morning of Friday 17 June 2005. Short 6 to 8 minute statements were made by the following NGOs:

- Malcolm R. Dando, Department of Peace Studies, University of Bradford
- Elisa Harris, Center for International and Security Studies at Maryland (CISSM)
- Alan Pearson, Scientists Working Group on CBW, Center for Arms Control and Non-Proliferation, Washington DC
- Paul Lansu, Pax Christi International
- David Atwood, Quaker United Nations Office on behalf of the International Network of Engineers and Scientists for Global Responsibility (INES)
- Jean Pascal Zanders, BioWeapons Prevention Project (BWPP)
- Richard Guthrie, Stockholm International Peace Research Institute (SIPRI)

As at the Fourth and Fifth Review Conferences and at the 2003 and 2004 Meetings, the NGO speakers spoke from seats in the room whilst their statements were distributed to all those present. There were about 200 people present in the room during the NGO statements which, with simultaneous translation into the six official UN languages, enabled the NGOs to communicate their views to all present.

There were a series of lunchtime seminars throughout the Meeting of Experts:

- **Monday 13 June 2005** The University of Bradford, Department of Peace Studies, in conjunction with the Quaker United Nations Office Geneva, made presentations on two Bradford Briefing Papers: No. 16, *Codes of Conduct for the Life Sciences: Some Insights from UK Academia*; and No. 17, *Effective Action to Strengthen the BTWC Regime: The Impact of Dual Use Controls on UK Science*, and then on five Review Conference Papers: No. 10, *Preparing for the BTWC Sixth Review Conference in 2006*; No. 11, *What Would Be a Successful Outcome for the BTWC Sixth Review Conference in 2006 ?*; No. 12, *Remedies for the Institutional Deficit of the BTWC: Proposals for the Sixth Review Conference*; No. 13, *Achieving Effective*

Action on Universality and National Implementation: The CWC Experience; and No. 14, *The UN Secretary-General's High Level Panel: Biological Weapons Issues*. All these papers are available at <http://www.brad.ac.uk/acad/sbtwc>.

- **Tuesday 14 June 2005** The BioWeapons Prevention Project made a launch of Phase 1 of the BioWeapons Monitor, a civil society initiative to track the compliance of governments and other entities with the 1972 Biological and Toxin Weapons Convention. A demonstration was made of an online searchable database. The Bioweapons Monitor is online at <http://www.bwpp.org/bwm/>.
- **Wednesday 15 June 2005** The Royal Society (UK) held a seminar entitled *Towards Effective Codes of Conduct* which was chaired by Professor Julia Higgins, FRS, Vice President and Foreign Secretary of the Royal Society, with short presentations by Brian Rappert (University of Essex), Vivienne Nathanson (British Medical Association) and Elisa Harris (Center for International and Security Studies at Maryland)
- **Monday 20 June 2005** A seminar entitled *Codes of Conduct: Critical, Technical and Scientific Issues* was chaired by Professor Malcolm Dando of the University of Bradford, with short presentations by Professor Ronald M Atlas, Co-director of the Centre for the Deterrence of Bio-warfare and Bio-terrorism at the University of Louisville, Kentucky, and Professor Alastair Hay of the University of Leeds.
- **Wednesday 22 June 2005** A seminar organized by the Universities of Bradford and of Exeter was chaired by Patricia Lewis, Director of UNIDIR, with short presentations by Brian Rappert of the University of Essex, Malcolm Dando of the University of Bradford and Jean-Pascal Zanders of the BioWeapons Prevention Project.

Outcome of the Meeting of Experts

The Meeting of Experts met in both open and closed sessions during the period from 13 to 24 June 2005 in accordance with the programme of work (BWC/MSP/2005/MX/2). One statement was made by a representative of a State Party on the afternoon of Monday 13 June. On 14 June, two open sessions were devoted to consideration of government science, during which the Meeting heard a total of 20 presentations and statements from States Parties. The three remaining open sessions, held between 15 and 20 June, were devoted to expert contributions, including from universities, funders, research, publishers, industry and professional bodies. During these sessions, the Meeting heard 10 presentations and statements from States Parties and 20 presentations and statements from guests of the Meeting. It was notable that, although the Chairman invited questions after each of the presentations, there were very few. This was especially evident following the IGO presentations on the afternoon of Monday 13 June, although the situation improved following the presentations on Tuesday when some provoked a lively discussion whilst others attracted no questions.

Statements were made by States Parties on the morning of Monday 13 June, followed in the afternoon by a further

statement by one State Party, then the IGO presentations and finally one presentation on government science by a State Party whose representative had not been able to be present on Tuesday 14 June when the morning and afternoon sessions had been devoted to government science. Wednesday 15 June saw presentations by representatives from universities, funders, research and publishers, and Thursday 16 June saw presentations from representatives from industry. Friday 17 June saw the informal session with short statements from NGOs. The second week started on Monday 20 June with presentations from professional bodies, and then on Tuesday and Wednesday working sessions addressing first the content of codes of conduct followed by issues relating to the promulgation and adoption of codes of conduct. The final couple of days were to consider the draft factual report and then to adopt this.

By the end of the Meeting of Experts, 35 Working Papers had been submitted by 15 States Parties well under half of the 83 Working Papers submitted by 21 States Parties to the corresponding 2004 Meeting of Experts and just over half of the 66 Working Papers submitted to the 2003 Meeting of Experts. The reduced number of Working Papers probably reflected the fact that only a single topic is being considered in 2005. In 2005, the Working Papers were submitted by Canada (7), Germany (6), Australia (4), UK (4), Cuba (2), Japan (2) Russian Federation (2), and Argentina (1), China (1), India (1), Indonesia (1), Iran (1), Italy (1), Korea (1), and South Africa (1). In contrast to 2004, there were no Working Papers from France, Hungary, Netherlands, Norway, Poland, Spain, Sweden, Thailand and the Ukraine, although in 2005, there were Working Papers from Argentina, Indonesia and Korea. In addition, three MISC papers were circulated: Misc 2. by Argentina entitled *Normas de Ética de la Asociación Física Argentina*, Misc 3. by Iran entitled *The Avicenna Prize for Ethics in Science*, and Misc 4. by the USA entitled *Presentations submitted by the United States*.

The Working Papers all address aspects of the topic of codes of conduct. As at the Meeting of Experts in 2004, at the end of the first week on Friday 17 June 2005, the Secretariat made available to delegations a tabulation prepared by the Chairman providing a chronological listing of “*considerations, lessons, perspectives, recommendations, conclusions and proposals drawn from the presentations, statements, working papers and interventions on the topics under discussion at the meeting*” relating to Agenda Item 5 “*Consideration of the content, promulgation, and adoption of codes of conduct for scientists*”. The tabulation separates out the separate morning and afternoon sessions throughout the first four days – 13 to 16 June 2005 — and includes as well a tabulation of points drawn from the Working Papers up to WP. 23 (with points from two unnumbered WPs for Bulgaria and South Africa).

In the second week, on the penultimate day, Thursday 23 June 2005, a clustered tabulation prepared by the Chairman of “*considerations, lessons, perspectives, recommendations, conclusions and proposals drawn from the presentations, statements, working papers and interventions on the topics under discussion at the meeting*” relating to Agenda Item 5 “*Consideration of the content, promulgation, and adoption of codes of conduct for scientists*” was provided to delegations. As at MX/2004, this was annexed to the report of the Meeting of Experts as Annex

II. The paragraph in the report relating to this states that:

The Chairman, under his own responsibility and initiative, prepared a paper listing considerations, lessons, perspectives, recommendations, conclusions and proposals drawn from the presentations, statements, working papers and interventions on the topics under discussion at the Meeting. The Meeting of Experts noted that this paper had no status; that it had not been discussed; that it could not be considered as being complete; that the appearance of any consideration, lesson, perspective, recommendation, conclusion or proposal in the paper did not in any way indicate or imply that States Parties agreed with it; and that it should not necessarily form a basis for future deliberations. The Meeting of Experts noted that it was the Chairman's view that the paper could assist delegations in their preparations for the Meeting of States Parties in December 2005 and in its consideration of how best to "discuss, and promote common understanding and effective action on" the topic in accordance with the decision of the Fifth Review Conference.

This was closely similar to the corresponding paragraph which had appeared in the report of MX/2004, although with one change in that the paragraph in the report of MX/2004 in the first sentence had included the words "made by delegations" after the word "interventions". This change accurately reflects the inclusion in the listing of points arising from presentations made by international organizations and by the guests of the meeting.

An analysis of the States Parties, IGOs and Guests of the Meeting who had put forward items listed in the drafts of Annex II is shown in the Table alongside.

This shows that some 28 States Parties out of the 82 participating in the Meeting of Experts were identified with 369 items listed in the Annex. 16 States Parties put forward 10 or more items: US (54), Australia (50), China (30), Japan (30), Canada (24), Iran (17), UK (17), Italy (16), Cuba (13), Germany (13), Nigeria (13), Pakistan (13), Argentina (12), Russian Federation (12), South Africa (12) and France (11). Three of the eight IGOs were identified with 7 items and 17 of the 23 Guests of the Meeting were identified with 59 items.

Although the report of MX/2004 had included as a useful innovation in its Annex III to the factual report of a draft agenda and indicative schedule for the Meeting of States Parties to be held in Geneva in December 2004, this was regrettably not continued in 2005. As was noted in the report on MX/2004 in the *CBWCB 65*, the schedule in Annex III showed a General Debate on Monday 6 December, followed by an informal session on the morning of Tuesday 7 December for statements by NGOs. Whilst the agenda and the programme of work would be formally adopted at the opening of the Meeting of States Parties, the indicative schedule provided a valuable opportunity to plan for participation at the Meeting of States Parties in December 2004.

Towards the end of the Meeting of Experts, the UK, on behalf of the three co-Depositaries, announced that the Preparatory Committee for the Sixth Review Conference would meet in Geneva during the week commencing 24 April 2006. It also became known during the Meeting of Experts that the nomination by the NAM of the President for the Sixth Review Conference would be Ambassador Mahood Khan of Pakistan.

	Agenda Item 5 (Codes of Conduct) (Annex II MX/3)
State Party	Number of items
Algeria	6
Argentina	12
Australia	50
Bulgaria	2
Canada	24
China	30
Cuba	13
France	11
Georgia	1
Germany	13
India	7
Indonesia	4
Iran	17
Italy	16
Japan	30
Korea	3
Libya	4
Malaysia	6
Nigeria	13
Norway	1
Pakistan	13
Poland	2
Russian Federation	12
South Africa	12
Sweden	7
Ukraine	3
UK	17
USA	54
Number of SPs	28
Number of Issues	369

IGOs	
ICGEB	5
OECD	1
UNESCO	1
Number of IGOs	3
Number of Issues	7
Guests of the Meeting	
AAAS	12
ABPI	4
ABSA	1
AMA	1
CDBB	3
Center for Biosecurity, University of Pittsburgh	3
CSIS	1
Det Norske Veritas	6
Inter Academy Panel	6
ICLS	1
Islamic WAS	2
IUBMB	3
Japan, National Institute of Animal Health	1
Japanese Bioindustries Association	1
NTI	4
The Royal Society	7
WMA	3
Number of Guests of the Meeting	17
Number of issues	59

Reflections

The Meeting of Experts in June 2005 followed the pattern that was established at the corresponding Meeting of Experts in 2004. The background papers in 2005 were available two months prior to MX/2005 which was a significant step forward on which the Chairman and the Secretariat are to be congratulated. The chairman also succeeded in significantly extending the participation in MX/2005 through the invitation of 23 “guests of the Meeting of Experts” which increased the expert involvement in the consideration of the topic of “*the content, promulgation, and adoption of codes of conduct for scientists*”. It is a step forward to be able to include items identified in these presentations in the Annex to the report of the list of “*considerations, lessons, perspectives, recommendations, conclusions and proposals drawn from the presentations, statements, working papers and interventions on the topics under discussion at the meeting*” prepared by the Chairman. However, although the provisional programme of work (BWC/MSP/2005/MX/2) made it clear that expert contributions were planned from ‘government science’, from ‘universities, funders, research and publishers’ and from ‘industry’, it was evident that the approach taken to achieve such participation varied enormously with some such experts invited as “guests of the Meeting of Experts”, whilst other such experts were included within delegations, and yet other experts who had carried out original work of direct relevance, were only present as NGOs, and were thus unable to make salient points that could have found their way into the listing of issues.

It is evident that in general the Chairman, Ambassador John Freeman of the UK, is following the precedent that had been set in 2004. Consequently, it seems probable that the next step will be, as in 2004, the preparation of a synthesis paper to help the States Parties prepare for the Meeting of States Parties on 5 to 9 December 2005. It is hoped that, as in 2004, any such synthesis will appear at least a couple of months before the Meeting of the States Parties. There is much to be said for such a synthesis appearing in September 2005, as this will then give States Parties adequate time to consider it before the Meeting of States Parties in December.

In regard to the substance of the topic “*the content, promulgation, and adoption of codes of conduct for scientists*”, there appears to be recognition of the value of a matrix of codes comprising an overarching set of moral and ethical principles which might have wide applicability, a code of conduct which could give guidance and, at the more detailed level, an extension to an existing national code of practice which might set out steps that need to be taken as a regular process when any new work is being considered. There also appears to be widespread recognition that education and awareness-raising will be an essential part if any codes are to be effective. It is also recognized that any code should apply to all those engaged in all activities in the life sciences. Furthermore, it was recognized that codes could usefully complement, but not be a substitute for, national implementation legislation

This review was written by Graham S. Pearson, HSP Advisory Board.

What follows is taken from issue 68 of the Harvard Sussex Program CBW Chronicle, which provides a fuller coverage of events during the period under report here, and also identifies the sources of information used for each record. All such sources are held in hard copy in the Sussex Harvard Information Bank, which is open to visitors by prior arrangement. For access to the Chronicle, or to the electronic CBW Events Database compiled from it, please apply to Julian Perry Robinson.

1 February In Moscow, the Director-General of the Novosibirsk-based State Science Centre of Virology and Biotechnology (Vektor) says that Russia has stopped funding research into countering bioterrorism. Speaking during a joint Russia-US conference on terrorism, Lev Sandakhchiyev says: "Russia has effectively wound up its programme to develop protection against pathogens. From 2005 onwards this programme is not being funded... There are no real, constructive programmes for cooperation between Russia, the USA and Europe [in countering bioterrorism]. There are no agreements whatsoever between the Russian and US health ministries in this field."

1 February The US Army publishes a "rapid action revision" to its regulation on *Classification of Former Chemical Warfare, Chemical and Biological Defense, and Nuclear, Biological, and Chemical Contamination Survivability Information*. Effective as of 1 March 2005, the regulation, *inter alia*, introduces guidance for "nontraditional agents" (NTA), a term that had been introduced a year or so previously to embrace FGAs (Fourth Generation [nerve] Agents), or Novichoks [see 9 Feb 04]. The regulation classifies as UNCLASSIFIED (a) "the use of generic terms such as NTA in generic descriptions of chemical defense work provided the term is not associated with specific chemical compounds, any specific nation, or any nonstate actor"; and (b) the "indication that an NTA is generic term for potential threat agents developed by foreign entities (not further identified)". The regulation classifies as SECRET the "identification of the structure, formula, synthesis, production process, or significant physical properties of any NTA".

1 February The US Central Intelligence Agency (CIA) has, in a classified report, concluded that Iraq abandoned its chemical weapons programmes in 1991, so reports the *Los Angeles Times*, quoting unidentified "officials familiar with the document". The *Times* says that the report *Iraq: No Large-Scale Chemical Warfare Efforts Since Early 1990s*, dated 18 January, is based largely on findings by the Iraq Survey Group (ISG) and marks the first time the CIA has officially disavowed its pre-war judgements. The report is quoted as stating: "Iraq probably did not pursue chemical warfare efforts after 1991. [The new conclusions] vary significantly [from past assessments] largely because of subsequent events and direct access to Iraqi officials, scientists, facilities and documents." A note in the report describes the document as the second in a "retrospective series that addresses our post-Operation Iraqi Freedom understanding of Iraq's weapons of mass destruction and delivery system programs." The Associated Press quotes an unidentified "intelligence official" as saying that the document is "no more than a dozen pages" and is one in a series of new classified reports on Iraq prepared by the CIA's intelligence analysis division, which will be available to all fifteen agencies making up the US intelligence community.

1 February The US Department of Defense (DoD) says that 931 people were "mistakenly vaccinated" after District Judge Emmet G Sullivan ordered the DoD to halt its mandatory vaccination programme last year [see 27 Oct 04].

Two weeks later, Sullivan warns Defense Secretary Donald Rumsfeld he could face proceedings for being in contempt of court, for acting contrary to the terms of the order. He orders Rumsfeld to "show cause" by 28 February why "he/or the government should not be held in contempt" for failing to follow the earlier ruling.

2 February The UK National Audit Office releases a report by the Comptroller and Auditor General *Department for Environment, Food and Rural Affairs [DEFRA]: Foot and Mouth Disease: Applying the Lessons*. The report states: "The 2001 outbreak of Foot and Mouth Disease is most likely to have been caused by the illegal feeding of unprocessed swill containing meat contaminated with the Foot and Mouth Disease virus to pigs. The 2001 epidemic was made worse by the rapid dispersal of infected animals via livestock markets to farms in at least 16 counties, and to three other European countries, before the disease was reported... The Department has improved its capacity to deal with future outbreaks of livestock diseases and their contingency plan is one of the best available. It now also includes explicit consideration of vaccination. The Department has made considerable progress since February 2001 in improving its capacity and preparedness for combating another major disease outbreak including plans for increasing veterinary and other staff and other resources; over two hundred agreements with a wide range of suppliers of essential services; and capacity to deploy at least 50 vaccination teams within five days of confirmation of disease."

3 February In Tbilisi, Georgian Prime Minister Zurab Zhvania is found dead in a friend's apartment. Speaking at a press briefing later in the day, Georgian Interior Minister Vano Merabishvili says: "Zhvania, accompanied by his security guards, went to visit his friend, deputy governor of Kvema Kartli region Raul Yusupov. As the premier did not respond to his guards' telephone calls, they broke down the apartment's door at 5:00 in the morning and found Zhvania and his friend dead... Zhvania was found slumped over a table in a room, and his friend was found in the kitchen... Preliminary information indicates there was a leakage of household gas from an Iranian-made heater installed in the apartment." Later in the day chief of the Georgian National Expert Examination Bureau forensic medical examination service Levan Chachua says: "Zhvania's death was caused by carbon monoxide poisoning. There are no signs of violence on his body or the body of Raul Yusupov." A spokesman for the Georgian Forensic Science Service says: "A substance has been found in the blood that forms when carbon dioxide gets into a body. A test showed the content of this substance [in the body] was 40%,"

while even 20% of it in a body is lethal.”

Five days later, following a request by the Georgian authorities, a group of US FBI officers arrive in Tbilisi to assist in the investigations. Three days later, Bryan Paarmann, the legal attaché of the US Embassy in Georgia, announces that the experts had found no evidence that would contradict the initial conclusions of the Georgian authorities and that there was “no reason to allege that a third party was involved in the incident”.

Eight days later, Gazeta.ru quotes “an authoritative Russian expert in the sphere of chemical weapons” as saying that the signs indicate with 99 per cent probability that Zhvania was poisoned by a toxin that produces effects in the body almost indistinguishable from carbon monoxide. According to the unidentified source, the substance used was iron pentacarbonyl, which “is used by the special services in preference to the equivalent dioxin”.

4 February North Korea has, amongst other things, a stockpile of 2,500-3,000 tons of chemical and biological weapons, according to Yonhap news agency, quoting a South Korean Ministry of Defence white paper.

4 February The US Department of Defense (DoD) submits a written appeal requesting a modification of an injunction preventing it from continuing with its mandatory anthrax vaccination programme [see 27 Oct 04]. Four days previously, the Food and Drug Administration (FDA) declared the existence of “emergency” conditions permitting the DoD to restart the programme on a voluntary basis for service members and other defence personnel considered at risk of biological attack. The FDA said the programme “will be revised to give personnel the option to refuse vaccination”, but that the DoD will reconsider the possibility of mandatory vaccinations “later this year”. Under the authority granted by the FDA, the military would be allowed to vaccinate US forces for six months but could not court martial those who refuse. According to acting FDA Commissioner Lester Crawford the “known and potential benefits of the [vaccine] outweigh the known and potential risks.” The special authorization followed determinations by the DoD and Department of Health and Human Services that a formal anthrax emergency existed for some troops stationed abroad [see 10 Dec 04]. [See also 1 Feb].

5 February The Moscow *Pravda* reports the Soviet Union as having used rats to spread *Francisella tularensis* among the army of Friedrich von Paulus during the Second World War. “The effect”, it reports “was astonishing”. “Paulus had to take a break in his offensive on Stalingrad. According to archive documents, about 50 percent of German prisoners, who were taken captive after the battle of Stalingrad, were suffering from classic symptoms of tularemia. Unfortunately, every action leads to a counteraction. The use of infected rats against the Nazi army had an inverse effect too: the disease came over the front line, and infected a lot of Soviet soldiers. Soviet scientists continued their research with the tularemia microbe after the end of WWII. Military biologists brought the bacteria to perfection at the end of the 1970s, having increased its destructive capacity.”

7 February The Israeli Lands Administration (ILA) states, by way of an affidavit, that it used chemical agents not authorized by the Ministry of Agriculture when it conducted aerial spraying operations around Bedouin villages in the Naqab (Negev) [see 19 Oct 04]. The admission is made in response to a petition filed at the Supreme Court of Israel last year by attorney Marwan Dalal of Adalah, the Legal Center for Arab Minority Rights in Israel [see 22 Mar 04]. Israel Scope, direc-

tor of the ILA’s supervisory division, states that three different types chemicals – all derivatives of glyphosate – were used since the spraying commenced in 2002: Roundup, Typhoon and Glyphogen. “The label on the Typhoon packaging does not specify any instructions regarding aerial spraying. This means that aerial spraying with Typhoon has not been approved... The manufacturer of Typhoon did not seek approval for aerial spraying [but] given the chemical make-up of Typhoon, there would be no difficulty in obtaining such approval... [Use of Typhoon] was strictly limited. In 2004, the only year it was used, it constituted just 28 percent of the chemicals used in aerial spraying... From now on, the ILA will make every effort to ensure that only approved substances are used for aerial spraying.” [See also 12 Jul 04]

7 February In Budapest, Hungarian Defence Minister Ferenc Juhasz and Belgian Defence Minister Andre Flahaut discuss, among other things, the joint establishment of a laboratory for undertaking work pertaining to protection against chemical and biological weapons.

7 February The Canadian government and the Nuclear Threat Initiative (NTI) conclude an agreement to provide funding for critical infrastructure work at the Shchuch’ye chemdemil facility. Under the agreement, NTI will pay \$1 million towards the construction of a bridge across the Miass River as part of the construction of an eleven-mile railway line connecting the chemical weapons storage depot near Planovy to the Shchuch’ye chemdemil facility. As with the construction of the railway, the project will be managed as part of the Russia Assistance Programme of the UK Ministry of Defence [see 19 Nov 03]. Under the G8-led Global Partnership Against the Spread of Weapons and Materials of Mass Destruction [see 26-27 Jun 02], Canada pledged to contribute \$1 billion over a ten-year period towards non-proliferation projects in Russia

7 February US President George Bush submits to Congress his budget request for FY 2006. Under the request, the Department of Defense (DoD) is allocated around \$900 million for biological-weapons related RDT&E (notwithstanding that this figure is around \$50 million too low according to the Program Budget Decision of 23 December 2004). An additional \$65 million is allocated for the first year of the USAMRIID re-capitalization effort. The Department of Homeland Security (DHS) is allocated \$385 million for its Bio-countermeasures RDT&E. The Department of Health and Human Services (DHHS) is allocated \$4.2 billion towards biodefence (\$154 million more than the previous year). The allocation for the Centers for Disease Control and Prevention (CDC) bio-surveillance efforts remains at \$79 million. Grants to state and local authorities to improve local preparedness are set at \$797 million (\$130 million less than in FY2005). The CDC is also allocated \$600 million in funding for its Strategic National Stockpile (\$203 million more than the previous year). The Food and Drug Administration (FDA) is allocated \$244 million for biodefence under the request.

Three weeks later, the Department of Defense (DoD) submits to Congress its FY 2006 annual report on Cooperative Threat Reduction (CTR), which sets out how the DoD intends to spend the \$415.5 million (current spending of \$409.2 million) requested by Bush. The total requested by Bush for CTR – which includes allocations for the Department of State and the Department of Energy – amounts to around \$1 billion. The report states: “Since inception of the CTR Program, 62 program areas have received funding. Fifty-four of the program areas are now complete or do not require additional funding and are not included in the President’s Budget submission.” The DoD proposes reducing funding for chemdemil programmes –

consisting primarily of the construction of the Shchuch'ye chemdemil facility – in Russia, from \$158.4 million in 2005 to \$108.5 million in 2006. Its request with regard to preventing proliferation of biological weapons, e.g. eliminating biological weapons infrastructure, redirecting bioweapons scientists into peaceful research, etc, amounts to an increase of more than \$5 million to \$60.8 million.

7-8 February In Brussels, the threat from bioterrorism is among various subjects on the agenda at the second annual East-West Institute (EWI) conference on *Protecting People and Infrastructure: Achievements, Failures and Future Tasks*, which is being hosted by the World Customs Organization. More than three hundred representatives from international organizations, the European Union, governments, the private sector and civil society attend the conference.

8 February Afghan Deputy Interior Minister General Mohammed Daud says the authorities are investigating fresh allegations of aerial spraying of poppy fields with toxic chemicals. He tells Agence-France Presse (AFP): "We were informed by our provincial authorities that opium crops have been aerially sprayed in four villages in Nausad district [south of the capital Kabul] three days ago... We have sent a delegation to the site to find the truth." Responding to the allegation, spokesman for the US-led coalition in Afghanistan Major Mark McCann says: "Coalition forces are not involved in any type of poppy eradication in Afghanistan and we do not do aerial spraying." AFP reports that in November 2004 the Afghan government launched an inconclusive probe into similar claims that unidentified foreign troops sprayed fields in eastern Nangarhar province.

8 February The US Senate Health, Education, Labor and Pensions Committee Subcommittee on Bioterrorism and Public Health Preparedness holds its first hearing on the subject of *Biodefense*. Those testifying include Director of the National Institute of Allergy and Infectious Diseases Anthony Fauci, and Assistant Secretary for Science and Technology Department of Homeland Security Penrose Albright.

9 February In Tokyo, the Japanese Ministry of Foreign Affairs hosts the second [see 13 Nov 03] Asian Senior-Level Talks on Non-Proliferation (ASTOP). The purpose of the meeting is for officials – in charge of non-proliferation policies from the Association of Southeast Asian Nations (ASEAN) countries, Australia, China, South Korea, USA and Japan – to exchange views on various issues relating to the enhancement of the non-proliferation regime in Asia.

10 February The Ukrainian Attorney-General says he has gathered sufficient evidence to prove that President Viktor Yushchenko was deliberately poisoned in a plot that probably involved the previous administration. The Vienna *Der Standard* quotes Svyatoslav Piskun – who is in Vienna to interview the doctors who treated Yushchenko after he fell ill last year [see 10 Sep 04] – as saying: "There is no doubt that this was a planned act, which probably involved people from the government. Not everybody has access to such substances... Today I obtained [medical reports compiled by experts in Austria, the UK, Germany and the Netherlands] that give us the medical proof that Yushchenko was poisoned... We have always known roughly [that] the poison was administered [around the time he attended a dinner in early September] [see 20 Dec 04]... The time probably coincides with the dinner, but we cannot say that it was exactly this day... The circle of suspects is so big that I do not want to leave anybody out and hurt their feelings." Last year [see 10 Sep 04] Ukrainian public

prosecutors declared that Yushchenko had suffered a case of food poisoning, but they reopened their investigation after the Austrian doctors revealed their findings shortly prior to Yushchenko's victory in a re-run of the presidential election last December.

Ten days later, during a press conference in Kiev, Ukrainian Security Service head Oleksandr Turchynov says "a Russian trace in the Yushchenko poisoning case may become a subject of conversation after the end of the investigation".

10 February In the UK House of Commons, Under Secretary of State for Defence and Minister for Veterans Ivor Caplin refers to a Ministry of Defence investigation of rejected war pension cases referred to in the report of the Independent Public Inquiry on Gulf War Illnesses [see 17 Nov 04]. In a written ministerial statement, Caplin states: "One of the recommendations referred to: 'some 272 claimants who have had their claims rejected [and] should have those claims reviewed in the light of this report'. Of these cases, more than half related to diagnosed disorders such as traumatic physical injuries, low back pain, or coronary disease which we would expect to find in any group of service personnel and which certainly do not relate to anything that might be construed as a 'Gulf war illness'. This investigation therefore concentrated on the remaining 100 or so cases that may or do relate to Gulf veterans' illnesses... This work is now complete and revealed some form of irregularity in six of the 110 cases... One involved a procedural error, involving failure to implement a decision that the individual was suffering from an illness attributable to service in the Gulf. Arrangements are being made to pay the arrears as soon as is practicable... One claim was wrongly rejected... In the other four cases the claim was only partly answered – the decisions made did not cover the full range of conditions and symptoms claimed, all of which related to service in the Gulf... In all these cases, the relevant decisions are being formally reviewed and will be notified to the claimant, with an appropriate notice of award or rejection. Any decision taken on review will carry a full right of appeal."

12 February From London, Greenhill Books publishes *Biological Espionage* by former senior KGB member Alexander Kouzminov, who worked in the department that concentrated on matters relating to biological warfare. Kouzminov writes: "Towards the end of the 1980s and early 1990s it became apparent that the West did not have a real offensive biological warfare programme. Neither did it have the means of delivery for biological weapons, operational plans for their use, nor any effective means of defence against the Soviet (Russian) programme. We found out that although scientific experiments were carried out in the West with dangerous pathogens, their aim was to develop defences against the well-known types of biological warfare. We discovered that, at that time, Western countries were absolutely unprepared to face our weapons if the Soviet Union (or, later, Russia) had started a biological war against the main enemy, the USA and the NATO countries."

12-20 February In Riyadh, a special training course for officers and response unit commanders take place under Article X of the CWC. Thirty-two civil defence representatives attend the course, which is jointly organized by the Saudi Civil Protection Department and the OPCW. The purpose of the course is to support a long-term national capacity-building project to strengthen the national response of Saudi Arabia to the use or threat of chemical weapons.

14 February An Australian microbiologist, who worked for Australian intelligence for more than twenty years, speaks on ABC television's 'Four Corners' public affairs programme

about his time as a weapons inspector for UNSCOM and UNMOVIC. By 2003, Rod Barton was working as the special advisor to UNMOVIC Executive-Chairman Hans Blix, helping Blix to write the reports for the Security Council on Iraqi weapons of mass destruction. In early January 2003, he was involved in reviewing the chemical and biological weapon sections of a classified assessment on WMD undertaken by the Australian intelligence agencies.

Interviewed by Liz Jackson about his time as a weapons inspector with UNSCOM, Barton says: "I think we were compromised towards the end, '98, at the end of UNSCOM, towards the end, because the United States wanted us to put in special equipment to intercept Iraqi communications, and we did this... The executive chairman who was Richard Butler would've been aware of what the capabilities of the black box [special equipment] was... When this all became known, I think it fatally compromised UNSCOM... Iraq was a member state of the United Nations, and here we are spying on it - not only we, the United Nations - but it was the United States that was receiving the information - in fact, all the information. And that was fatal, I believe, to UNSCOM... Richard Butler [would have been the one to have authorized the installation of the 'black box'] ... I think that was an error of judgment by Richard Butler."

On the question of Iraq's unaccounted stocks of anthrax, Barton says: "Iraq said that they destroyed the anthrax at the facility where they produced it, a place called Al Hakam... But what really happened to the anthrax is they moved it around the county on semitrailers, all the way during the Gulf War in 1991, and it was still in the trailers in July 1991, and the trailers had finished up in a place called Radinawiyah, which is south of Baghdad, and the order came at the time to destroy the agent, so they destroyed it. Unfortunately, it was right outside a palace, and they decontaminated the containers and they poured the anthrax onto the ground. Now, when it came to confessing to the United Nations that they had done this, Dr Taha, who was head of the program, could not now confess this because she would be more in trouble with Saddam for pouring this out - he would not be pleased. So to protect herself from the wrath of Saddam, she lied to the United Nations, and lied to us. So we knew that there was a lie, but we jumped to the wrong conclusions. So we, ourselves, had a lesson to learn there, that we should be more objective, we should be more critical of everything they say."

Asked what his reaction was to the UK's 45-minute claim [see 24 Sep 02] Barton says: "I remember most of us thought it was nonsense, and this is what virtually we said to Blix; 'This does not make sense to us'. We don't know that. We don't know where the information came from. We certainly didn't have information ourselves that would indicate this, but even as stated, it's a nonsensical statement... [I challenged] David Kelly ... [who] was working for the British Government as their senior scientific advisor... I said, you know 'What's this nonsense about this 45?'. I said 'Why did you write this, David?', knowing full well David would not have written about the 45 minutes, and he was quite embarrassed and he said 'Oh well, some people put in what they want to put in'. Asked what his view is on the way Kelly was treated by the UK government, Barton replies: "[A]trociously and, of course, that led to his suicide, and I do believe it was suicide - led to his suicide later."

Barton says that even after Head of the Iraq Survey Group David Kay's interim report [see 2 Oct 03] and his testimony before the Senate Armed Services Committee [see 28 Jan 04] "the attitude was you've only got to go out there and you will find them". He says: "I was an experienced inspector, and I knew that there would be some indicators if they really had a program, and there were no indicators whatsoever..."

Barton resigned immediately after the ISG completed its

interim report, which was presented to the US Congress last year by Head of the ISG Charles Duelfer [see 30 Mar 04]. He says: "I felt that I was part of the dishonesty by being there, by continuing on with this, and so although I quite enjoyed the work, I did leave, and immediately the report was finished. I was on the next plane out... There was a British colleague of mine who already left for similar reasons, and again a former UNSCOM inspector, one of the most senior people, or experienced people around." He says that censorship of what should go into the report started after Duelfer became the new head of ISG [see 23 Jan 04]. Barton says: "[Duelfer] talked to me about a different style of report altogether ... a much shorter report, a report that had no conclusions in. When we'd found out a lot, we knew a lot of the answers... I said to him 'I believe it's dishonest. If we know certain things, and we're asked to provide a report, we should say what we found and what we haven't found, and put that in the report', and most of it's already written... We left the impression that yes, maybe there were - was WMD out there; maybe there were programs still to find... So I thought it was dishonest... There were some things - this didn't come directly from Charles, but some of his staff, the senior CIA staff, some of the things we couldn't write about at all; for example, aluminium tubes that might have been involved in nuclear weapons programs. We were allowed to refer to them, but not say what we thought they were all about, and our conclusions at that stage is that the aluminium tubes that Iraq had imported were part of a rocket program, and nothing to do with nuclear. They were not to do with nuclear enrichment... We were not allowed to put that in... In our previous report we'd addressed about mobile biological program, and mobile production facilities of which we had, apparently, according to the CIA - we had two examples of these mobile production units actually in our camp at the ISG camp, which is called Camp Slayer. We actually had two of these. Well, we'd inspected these and these were nothing to do with biology in our view... It was on the CIA web page that these were mobile biological trailers. This was not our conclusion. In fact, our conclusion was just absolutely the opposite. They were nothing to do with biology. We believed that they were hydrogen generators... Charles' attitude was he did not want to inspect [the trailers] them or know, then he could genuinely say in Washington that he doesn't know what they are for. We don't want to know what they are. It's just too politically difficult, and I was told politically difficult to put this in, and I said ... 'We are not political. We are apolitical. We have to be objective.' 'No, you cannot write about this', so that did not go into the report either... Both Washington and London wanted other things put in [to the report] and to make it - I can only use these words - to make it sexier... I had an email from [Chairman of the UK Joint Intelligence Committee John Scarlett], through Charles, about the things he wanted in, and I looked at these and I thought 'We cannot accept any of these - just on principle for a start', and Charles, to his credit, decided the same, that we would not put any of them in, but the report was still awful... Back in the middle of 2003 I called a friend in the Government who was responsible in this area, and suggested to him that perhaps [Australian Foreign Minister Alexander] Downer should keep his mouth shut, and I noticed that Downer made no further reference after the middle of 2003 to such trailers... [Last September] I was contacted by Charles Duelfer ... asking whether I'd come back, that he needed people, he needed experienced people, and he said that he is absolutely doing his own thing now, and no-one influences him, and he's doing an honest report, he told me. And he said 'I'd like you to come back and help put the report together', and he said 'If you don't believe me, talk to some of the others', which is what I did, I contacted some of my colleagues... [The British colleague who had resigned with

me] had returned and I spoke to him and I was reassured. So I was quite happy at that stage to go back to Baghdad and help put the report together. I think it's a good report; as objective and it's as neutral as one can be in this sort of thing... [In October 2004] there was certainly some indications amongst some of the people [in the CIA], not all, that they weren't wrong, that we were wrong, in other words, the ISG was wrong, and that the CIA is still right."

Barton also describes the camp in which interviewees were being detained. "There's a separate prison, not Abu Ghraib. There's a prison where what is known as the high value detainees are kept. It's called Camp Cropper and it's near the airport. I won't go into details exactly where it is, but it's near the airport. And we had - when I say 'we', the ISG and other agencies in Iraq, other coalition agencies - have prisoners kept there, about 100 prisoners in all, and these are all the senior people from Iraq... These people [should be released]... [T]hey may not be the most desirable people in the world, but they haven't done anything wrong, at least internationally. They may have been involved in production of biological or chemical weapons, or even nuclear weapons, in the past, but under international law, as long as they weren't involved in the use of these weapons, that's not illegal." He says he was "quite annoyed" when Australian Defence Minister Robert Hill said that no Australians were involved in interrogating the prisoners. "I immediately phoned up the Department and reported that I was annoyed, that I'd provided testimony and that the Department's response was 'Well, we regard that you did interviews and not interrogations'."

Jackson concludes the interview by saying: "Three months ago the Department of Defence in Canberra received a thank you note from Charles Duelfer [which stated]: 'To express my gratitude for the support you provided in the person of Mr Rod Barton. Mr Barton's unique experience and talents have been extremely valuable in producing a credible and balanced report.'"

Six weeks later, testifying before an Australian Senate committee, Barton says that a second Australian official resigned his position with the ISG shortly before he himself did, saying that the interim report had fudged the absence of weapons of mass destruction when there was certainty that none would be found. *The Australian* subsequently identifies the second official as John Gee, former UN weapons inspector in Iraq and deputy-director of the OPCW.

14 February In the Philippines, a team of twenty Philippine and international experts commence a week-long assessment involving the inspection of more than fifty institutions in Manila and the southern city of Davao with a view to assessing the country's readiness to handle health risks posed by a bioterror attack. The group undertaking the assessments include eight experts from the World Health Organization (WHO). A statement from the WHO says that the assessment will use WHO draft guidelines - field-tested in Thailand in 2003 and in Jordan and Canada in 2004 - for the assessment.

14 February The United Arab Emirates announces that it has agreed to purchase a chemical defence system from a German company.

14 February The Russian government has established a special commission for chemical and biological security headed by Health Minister Mikhail Zurabov, so reports ITAR-TASS news agency, quoting the press service of Prime Minister Mikhail Fradkov. The objectives of the commission are reported as being "to make state regulation of biological and chemical security more effective" and to draw up proposals

"to establish and refine the Russian Federation's systems of chemical and biological security".

14 February At UN headquarters, the chairman of the Security Council Committee established pursuant to resolution 1267 (1999) concerning Al-Qaida and the Taliban, César Mayoral, transmits the second report of the Analytical Support and Sanctions Monitoring Team [see also 15 Nov 03]. The report states: "The Monitoring Team remains convinced that Al-Qaida retains a keen interest in acquiring [CBRN] weapons, as demonstrated by its statements and doctrine... Al-Qaida-associated groups in both the United Kingdom and Jordan have come close to mounting such attacks. It seems only a matter of time before a successful [CBRN] attack occurs."

14-16 February In Melbourne, a forum - *Decon Downunder* - takes place, which is co-hosted by the Australian Defence Science and Technology Organization (DSTO) and the US Defence Threat Reduction Agency (DTRA) Joint Science and Technology Office for Chemical and Biological Defense. More than 150 participants from the scientific community, emergency services and the civil defence community - from Australia, Austria, Belgium, Germany, New Zealand, Singapore, the UK and the USA - with expertise in chemical and biological decontamination attend the forum. Subjects addressed by keynote speakers include protection against bio-terrorism; and lessons learned from anthrax clean-up operations.

16 February In the US Senate, before the Select Committee on Intelligence, at its annual worldwide threat hearing, Director of Central Intelligence Porter Goss says "it may be only a matter of time before al-Qa'ida or another group attempts to use [CBRN] weapons." In his first public appearance since becoming director of the CIA, Goss also says: "We believe North Korea has active CW and BW programs and probably has chemical and possibly biological weapons ready for use."

Testifying before the Committee, Director of the Defense Intelligence Agency Lowell E Jacoby says: "We judge terrorist groups, particularly al-Qaida, remain interested in Chemical, Biological, Radiological and Nuclear (CBRN) weapons. Al Qaida's stated intention to conduct an attack exceeding the destruction of 9/11 raises the possibility that planned attacks may involve unconventional weapons. There is little doubt it has contemplated using radiological or nuclear material. The question is whether al-Qaida has the capability. Because they are easier to employ, we believe terrorists are more likely to use biological agents such as ricin or botulinum toxin or toxic industrial chemicals to cause casualties and attack the psyche of the targeted populations."

Director of the Federal Bureau of Investigation Robert S Mueller testifies thus: "[B]ecause of al-Qa'ida's directed efforts this year to infiltrate covert operatives into the US, I am ... very concerned with the growing body of sensitive reporting that continues to show al-Qa'ida's clear intention to obtain and ultimately use some form of chemical, biological, radiological, nuclear or high-energy explosives (CBRNE) material in its attacks against America."

In his testimony, Assistant Secretary of State for Intelligence and Research Thomas Fingar says: "Despite the diffusion of know-how and dual-use capabilities to an ever-increasing number of countries, the number of states with known or suspected CW programs remains both small and stable. Most of those that possess such weapons or have the capability to produce quantities sufficient to constitute a genuine threat to the United States or Americans (civilian and military) outside our borders are not hostile to us, appreciate

the significance of our nuclear and conventional arsenals, and are unlikely to transfer such weapons or capabilities to terrorists. There are nations that might use CW against invading troops, even American forces, on their own territory, but we judge it highly unlikely that nation states would use CW against the American homeland or specifically target American citizens except as an act of desperation. Terrorists, by contrast, have or could acquire the capability to produce small quantities of chemical agents for use against selected targets or random individuals. We judge the chances of their doing so as moderate to high. One or a few disgruntled individuals or a small terrorist cell could do so in a manner analogous to the 1995 Aum Shinrikyo sarin gas attack on a Tokyo subway [see 20 Mar 95]. The severity of such an attack would be small in terms of lethality, but the psychological and political impact would be huge. The risk posed by nation states with biological weapons is similar to that for CW; many nations have the capability, but few have programs and even fewer would be tempted to use them against the United States. The danger of acquisition and use by terrorists, however, is far greater. Though hard to handle safely and even harder to deliver effectively, BW agents have the potential to overwhelm response capabilities in specific locations, induce widespread panic, and disrupt ordinary life for a protracted period, with resulting economic and social consequences of uncertain magnitude.”

16 February The USA has now safely destroyed thirty-five per cent of its declared chemical weapons stockpile – involving forty-two per cent of originally declared munitions – at its Utah, Maryland, Alabama, Oregon, and Johnston Island chemdemil facilities. The Chemical Materials Agency says that disposal operations are set to begin in Arkansas and Indiana in the coming months. [See also 2 Feb]

18-20 February At Wiston House in the UK, there is a Wilton Park conference on *Chemical and Biological Terrorism: Forging a Response*, convened in cooperation with the Chemical and Biological Arms Control Institute (CBACI) [see also 8-10 Oct 04]. The conference addresses such issues as: CBW terrorism case studies on al-Qai'da and Jemaa Islamia; the changing technological landscape: impact on the offence/defence balance; transatlantic cooperation: new links and exercises; promoting international cooperation in law enforcement: the role of Interpol; bolstering international efforts: OECD and the G8; and, how codes of conduct can contribute to the life sciences community.

20 February In Melbourne, a number of people are hospitalized and hundreds evacuated from a terminal at the city's airport after unidentified chemical fumes spread through the area. Ambulance services spokesman James Howe says forty-seven people were taken to hospital and another ten were treated at the scene. Most of those hospitalized are released later in the day. Symptoms of those taken to hospital include nausea, vomiting and respiratory problems. Airport spokeswoman Brooke Lord says: "Initially... there was immediate testing done of the air quality and the air conditioning systems, and nothing was identified through that that could have caused the problem. Five days later, an article in the Melbourne *Herald Sun* dismisses the event as an attack of "mass hysteria", referring amongst other things to the fact that those taken ill came mainly from a unit of people who could influence each other's reactions, i.e. security staff and Virgin Blue airline employees. It quotes Sydney psychiatrist Yolande Lucire as saying: "You probably did have mass hysteria there... But don't call it that. It's too impolite. Call it a mass psychogenic phenomenon."

20 February In the southern Russian republic of Kabardino-Balkaria, an unknown number of "alleged" militants are killed during a shoot-out after Russian security forces stormed an apartment building in Nalchik and in the process "set off poison gas", according to the British Broadcasting Corporation. The security forces had, for two days, been besieging a group of suspected Islamic militants hiding in the block.

21 February In Melbourne, an Asia-Pacific workshop on the BWC takes place, the purpose of which is discuss ways of combating bioterrorism in the region, including the development of new laws and codes of conduct to deal with the threat, as well as ways of securing toxic agents. Representatives from twelve south-east Asian and Pacific nations attend the workshop, which is hosted jointly by Australia and Indonesia.

21 February In Johannesburg, the Constitutional Court commences hearing an application by the State for leave to appeal against certain findings of the Supreme Court of Appeal relating to the trial of Wouter Basson. Last year, the Constitutional Court found that constitutional implications had arisen requiring review [see 10 Mar 04]. Seven days later, the court reserves judgment after hearing that the State would be ready to retry Basson within three months of a successful application and that a new trial should be completed within a year.

21 February The UK National Archives releases Foreign and Commonwealth Office papers from 1974 in which government officials had described as "inherently unrealistic" an assessment by the UK Joint Intelligence Committee (JIC) relating to the threat of a chemical attack by the USSR on the UK. The annex to a Defence Policy Staff "nuclear threat" assessment had stated: "In 1971 the JIC assessed that Soviet aggression might include conventional air attack on the UK, in which chemical weapons might also feature".

22 February In the UK House of Commons, a debate takes place at Westminster Hall, continuing the debate [see 10 Jan] on the service volunteer programme at the Chemical Defence Experimental Establishment Porton Down, with particular focus on the nerve gas experiments during the 1950s. Parliamentary Under-Secretary of State for Defence Ivor Caplin again rejects calls for a public inquiry [see 10 Jan]. "I do not believe that a public inquiry could address the key question of whether there are any unusual patterns of mortality or cancer incidence among former volunteers: only epidemiology can do that. For that reason, we are funding [a study] conducted under the auspices of the Medical Research Council [which] will conclude in 2006."

23-24 February In New York, the UNMOVIC College of Commissioners convenes for its eighteenth [see 17-18 Nov 04] regular session, attended, as on previous occasions, by observers from the OPCW and IAEA.

24 February In London, the Royal Institute of International Affairs at Chatham House hosts a seminar on *The Proliferation Security Initiative: Is It Legal? Are We More Secure?* The seminar, organized by the Institute's International Law Programme, brings together lawyers, academics, and representatives of international organizations, NGOs and governmental departments. The subject of the discussion is the extent to which PSI activities, in particular the interdiction of foreign vessels by participating states, fit within the existing framework of international law.

26 February The London *Daily Telegraph* runs an interview with former US Secretary of State Colin Powell in which Powell discusses, in his first interview since leaving office, the briefing he gave to the UN Security Council on alleged Iraqi weapons of mass destruction [see 5 Feb 03]. "I'm very sore. I'm the one who made the television moment. I was mightily disappointed when the sourcing of it all became very suspect and everything started to fall apart... There was a little too much inferential judgment. Too much resting on assumptions and worst-case scenarios... With intelligence, sometimes you are talking to people who are perhaps selling you lies."

28 February In al-Fallujah, Iraq, US-led forces used "bombs which gave off apple-scented poisonous gas" against the inhabitants of the city during the previous two days, according to the Saudi newspaper *al-Jazirah*, quoting unidentified sources from the Iraqi Association of Muslim Scholars. The sources are reported as saying that after inhalation the victims' skin "turned dark grey" and they "died suddenly" apparently from having been "suffocated", there being "no apparent signs of wounds or injuries".

The next day, *Mafkarat al-Islam* news agency quotes a representative of the Iraqi Ministry of Health as saying that US forces used *inter alia* "mustard gas, nerve gas, and other burning chemicals" during its recent offensive on the city [see 10 Nov 04]. Khalid ash-Shaykhli, who was authorized by the Ministry to assess health conditions in the city, is quoted as saying: "What I saw during our researches in al-Fallujah make me believe everything that has been said about that battle. I absolutely do not exclude their use of nuclear and chemical substances, since all forms of nature were wiped out in that city. I can even say that we found dozens, not to say hundreds, of stray dogs, cats, and birds that had perished as a result of those gasses."

28 February At UN headquarters, Secretary-General Kofi Annan transmits to the Security Council the twentieth [see 26 Nov 04] quarterly report on the activities of UNMOVIC, for the period 1 December 2004 to 28 February 2005. The report states: "Of the 411 sites inspected in the period from November 2002 until March 2003, Commission experts have acquired and examined post-war high-resolution imagery covering 353 sites, including those considered the most important. As part of the examination and analysis, experts have determined that approximately 70 of the sites were subjected to varying degrees of bomb damage. In previous quarterly reports, UNMOVIC noted the reported looting and razing of sites that contained dual-use equipment and materials subject to monitoring, some of which have been discovered outside Iraq. The continuing examination of site imagery has revealed that approximately 90 of the total 353 sites analysed containing equipment and materials of relevance have been stripped and/or razed... In its last quarterly report to the Council, the Commission stated that it shared the concerns raised in the report of the Iraq Survey Group [see 6 Oct 04] with respect to the fate of biological agent seed stocks in Iraq and that the issue remained a verification concern... In 1991, Iraq declared to the Special Commission that it had obtained 103 vials of bacterial isolates (reference strains) from foreign suppliers, and provided details on the individual types, source, year of importation and quantities. Of the 103 imported vials, 13 were declared to have been used, while 90 were provided to the Special Commission unopened... The Special Commission was able to verify parts of Iraq's declarations with respect to its use and subsequent destruction of master and working seed stocks. However, the Special Commission had noted that accounting for all seed stock vials obtained from

open vials would be virtually impossible as they could have been widely distributed as secondary seed stock throughout Iraq. As a consequence, the issue remains as part of the residue of uncertainty with respect to the continued existence in Iraq of seed stocks that could possibly be used in the future for the production of biological weapon agents. Given its unresolvable nature, the issue could best be dealt with through monitoring to detect *inter alia* any possible future activity associated with biological weapon agent production or significant related laboratory research work... UNMOVIC retains a core staff of nine local nationals in Baghdad... The Cyprus field office has been reduced to four staff members... Core UNMOVIC staff in the Professional category at Headquarters at present total 51 weapons experts and other personnel drawn from 25 nationalities..." An appendix to the report provides a four-page overview of the "UNMOVIC Information System".

28 February The US Government Accountability Office transmits to Congress *Bioterrorism: Information on Jurisdictions' Expenditure and Reported Obligation of Program Funds*. The report concludes that "in assessing the pace at which jurisdictions are spending [FY 2002 and 2003 funds to prepare for bioterrorist attacks] it is useful to consider that prudent use of public funds – particularly for new programs – requires careful and often time-consuming planning".

28 February In the USA, an open letter – signed by 758 scientists – criticizing the National Institute for Allergy and Infectious Diseases (NIAID) to "prioritize research of high biodefense but low public health significance", is sent to National Institutes of Health (NIH) Director Elias Zerhouni. The letter, published by the journal *Science* four days later, states: "[T]he NIH peer-review process, and the research sector responsible for ... remarkable advances in science and public health ... are threatened by unintended consequences of the 2001-02 decision by the [NIAID] to prioritize research of high biodefense, but low public-health significance... The result has been a massive influx of funding, institutions, and investigators into work on prioritized bioweapons agents: i.e., the agents that cause tularemia, anthrax, plague, glanders, melioidosis, and brucellosis. The number of grants awarded by NIAID that reference these agents has increased by 1500% (from 33 in 1996-2000 to 497 in 2001 to January 2005)... Over the same period, there has been a massive efflux of funding, institutions, and investigators from work on non biodefense-related microbial physiology, genetics, and pathogenesis. The number of grants awarded to study non biodefense related model microorganisms has decreased by 41% (from 490 in 1996-2000 to 289 in 2001 to January 2005) ... and the number of grants to study non biodefense-related pathogenic microorganisms has decreased by 27% (from 627 in 1996-2000 to 457 in 2001 to January 2005)... The diversion of research funds from projects of high public-health importance to projects of high biodefense but low public-health importance represents a misdirection of NIH priorities and a crisis for NIH-supported microbiological research... [W]e urge you to take corrective action..."

28 February-3 March In Dhaka, Bangladesh, a national workshop for development of response system against chemical weapons agents takes place under Article X of the CWC. Jointly organized by the Bangladeshi national authority and the OPCW, the aim of the workshop is to offer a set of concepts and practical solutions that the national authority may wish to utilize in drafting its national programme to strengthen its chemical weapons response abilities. The OPCW had previously noted that the current Bangladeshi response systems are designed for natural disaster situations and that no response system exists for an attack involving chemical weapons.

March The US Department of Defense transmits to Congress its *Annual Report* and its *FY 2004-2006 Performance Plan* on its Chemical and Biological Defense Program.

March US Department of Justice Office of the Inspector General Evaluation and Inspections Division releases *Inspection of the FBI's Security Risk Assessment Program for Individuals Requesting Access to Biological Agents and Toxins*. The report states: "[T]he inspection was made in response to concerns about a backlog at the FBI of pending SRA [Security Risk Assessment] applications submitted by researchers seeking access to controlled agents and toxins... Our inspection showed that the FBI had 3,855 SRA applications pending in November 2003, but by June 2004, had reduced that number to 401... We conclude that the FBI is effectively managing its SRA responsibilities under the Bioterrorism Act."

1 March Russian Defence Minister Sergey Ivanov says "at present it is (chemical) weapons of mass destruction and not nuclear weapons that present the greatest danger." Speaking during a press conference in Moscow, Ivanov adds: "Chechens with instructions how to make weapons of mass destruction were caught in Paris and in London."

1 March The *Moskovskii komsomol'ets* runs an article stating that on 3 May 2004 – two days prior to a woman at the State Scientific Centre (Vektor) becoming infected with the Ebola virus [see 5 May 04] – a senior laboratory assistant who worked at the State Scientific Centre of Applied Microbiology in Obolensk died after becoming infected with glanders. In contrast to the case of Antonina Presnyakova at Vektor, however, the death of Galina Boldyreva was kept secret. The paper states that a special commission established to investigate the death of Boldyreva concluded that she died from a "professional infection" comprising "an acute glanders infection of the septicopyemic form". The paper reasons that, based on interviews with persons working at the Centre, the reason behind the secrecy is the fact that the Centre failed to follow its own health and safety procedures when questions arose relating to the state of health of an employee, e.g. she was admitted to the local town hospital instead of being kept under supervision at the Centre.

1 March French Interior Minister Dominique de Villepin says terrorists from al-Qaeda have been making chemical and biological weapons in Georgia's Pankisi Gorge, according to Interfax news agency. Speaking at the *1st Interpol Global Conference on Preventing Bio-terrorism* taking place in Lyon [see 1-2 Mar], de Villepin says: "[S]everal al -Qaeda cells have been trained in Afghanistan where they have learned to use biological agents including anthrax, ricin and botulism toxins. Later, after the fall of the Taliban regime, those groups continued their experiments in the Pankisi Gorge, on the territory of Georgia, bordering Chechnya." Later, during a press conference, Russian Ministry of Foreign Affairs Spokesman Alexander Yakovenko says: "Moscow has taken very seriously the statement of French Interior Minister Dominique de Villepin, in which he cites data obtained via the channels of French special services. This information confirms the warnings repeatedly made by the Russian side that international terrorists not only find shelter in Pankisi, but that it is being actively used for the preparation of particularly dangerous terrorist acts. The attempts to develop chemical and bacteriological weapons belong to just this category of dangers emanating from international terrorism..." Responding to the allegation, Georgian Interior Minister Vano Merabishvili later says: "Over the last year, no foreign secret service has given us information on

terrorists in the Pankisi Gorge developing biological and chemical weapons." Meanwhile, French ambassador to Georgia Philippe Lefort says: "[T]he declaration of the minister has been taken out of its context and has been deformed, as far as I can understand from ITAR-TASS people. Well, the minister was speaking in Lyon. He referred to the situation in Pankisi at the time when the situation was not controlled."

1-2 March In Lyon, the *1st Interpol Global Conference on Preventing Bio-terrorism* takes place at Interpol headquarters. More than 500 participants – representing the police, scientific and academic communities, international and non-governmental organizations – from 155 countries attend the conference. Interpol Secretary General Ronald Noble, French Minister of the Interior Dominique de Villepin, and Interpol President and National Commissioner of the South African Police Service Jackie Selebi give the opening speeches. A final communiqué issued following the conclusion of the conference reads thus:

"The Conference ... [acknowledged] that the terrorist use of biological weapons, inter alia, constitutes a serious threat to global security and to the civilian population across the world; [agreed] that effective international law enforcement co-ordination and national action is necessary, in partnership with relevant agencies, to recognize, prevent and contain the threat from the terrorist use of biological weapons... In particular, the Conference noted that: [developing] further co-operation between law enforcement agencies, public and animal health authorities and other relevant organizations, nationally and internationally, is essential to address the threat of bio-terrorism; and [Interpol] has an important role to play in supporting national and international efforts to prevent and investigate terrorism generally, and bio-terrorism particularly. In this respect, delegates agreed that: the Conference had provided a valuable opportunity to improve understanding of the current and future threats posed by bio-terrorism; Interpol, as the global police organization, should further promote and enhance co-operation and partnership initiatives between law enforcement and relevant agencies to strengthen the global response to bio-terrorism; and specifically, Interpol should be encouraged to further co-ordinate, develop and enhance the knowledge, training and capability of law enforcement to recognize, prevent, contain and investigate bio-terrorist threats, including by: establishing a resource centre at the disposal of worldwide law enforcement; enhancing co-operation and understanding between international organizations and research centres, including those dealing in genetic engineering; developing an Incident Response Guide; and, providing training and awareness programmes, including Regional workshops; seeking to develop, with law enforcement and relevant agencies, ways of gathering and sharing information concerning the threat of bio-terrorism more effectively."

2 March The Bulgarian government decides – subject to approval by its Council of Ministers – to join the US-led Proliferation Security Initiative, so reports the Bulgarian news agency BTA.

2 March The US Federal Bureau of Investigation (FBI) has information that international terrorist organizations, including al-Qa'idah, are planning to commit acts of terror with biological and chemical substances, according to Deputy Assistant-Director of the FBI Counterterrorism Division John Lewis. Speaking at a press conference in the Russian city of Novosibirsk, Lewis says: "We regard the problem of biological and chemical terrorism as pretty serious... At present, we have no data concerning any specific plans by terrorists to carry out acts of terrorism with the use of chemical and bio-

logical substances in the near future... At the same time operational information is reaching us from various areas of the world that numerous terrorist groups and their cells, including the al-Qa'idah group, are hatching plans to carry out terrorist acts using biological and chemical substances."

2-3 March In Lyon, there takes place an *International Conference on Biosafety and Biorisks*, which is sponsored by the World Health Organization (WHO) Office of Communicable Disease Surveillance and Response, and the Center for Biosecurity of the University of Pittsburgh Medical Center. The objectives of the conference – attended by more than 150 scientists and public health practitioners from 25 countries – are: to share on-the-ground lessons from scientists and public health professionals, learned during SARS and other infectious disease outbreaks of the past; to explore organizational and behavioural approaches to epidemic management and biosafety; to examine the role of WHO, and organizational networks such as ProMED-MAIL, GPHIN, RASBICHAT, and Anthrax EuroNet, in preparing for, detecting, and responding to epidemics; and to discuss the need for common guidelines that cross professional and national boundaries in resolving a public health crisis.

3 March The US Institute of Medicine releases *The Smallpox Vaccination Program: Public Health in an Age of Terrorism*, the final report by the Committee on Smallpox Vaccination Program Implementation. The Committee was charged with providing guidance to the Centers for Disease Control and Prevention (CDC) on how best to implement the president's smallpox vaccination programme [see 13 Dec 02], by providing advice on implementation, through a series of six reports [see 6 Jul 04]. The 286-page report provides a historical review of smallpox vaccination and a summary of the last two decades of policy leading up to the current national vaccination programme, and a discussion of lessons learned. The report states: "The ability of the CDC to speak authoritatively as the nation's public health leader, on the basis of the best available scientific reasoning, was severely constrained, presumably by the top levels of the executive branch... The apparent, unexplained constraints on CDC led to an environment in which the public health and health care communities and their leaders did not receive all the information needed to make institutional and individual decisions regarding smallpox vaccination... The committee recommends that ... [the] CDC define smallpox preparedness; set goals that reflect the best available scientific and public health reasoning; conduct regular, comprehensive assessments of preparedness at the national level and by state; and communicate to the public about the status of preparedness efforts."

4 March The US-German Sunshine Project releases a new open government tool to search and organize research grant data from the US National Institutes of Health (NIH). Optimized to research projects involving biological weapons agents, CRISPER searches NIH's Computer Retrieval of Information on Scientific Projects (CRISP) database and joins the results with financial data from the NIH Office of Extramural Research, a task which the Sunshine Project says was previously "virtually impossible".

5 March Saudi Arabia is to establish a commission under the Ministry of Foreign Affairs to implement agreements with relevant international organizations to ensure non-proliferation of chemical, biological and nuclear weapons, so reports the Arabic daily *al-Madinah*. Committees established in 1995 to monitor chemical, biological and nuclear weapons will be merged in the new body. The daily quotes an

unidentified "high-level" source as saying "The new commission is planned as part of the Kingdom's efforts to make the Middle East free of weapons of mass destruction."

8 March In Wye River, Maryland, on the second day of a bipartisan conference, members of the US House Homeland Security Committee participate in a tabletop exercise involving a smallpox attack by al-Qaeda in the USA, Germany, the Netherlands, Sweden and Turkey. Exercise *Atlantic Storm* – formulated by the University of Pittsburgh Medical Center for Biosecurity and based around the *Atlantic Storm* international exercise which took place recently [see 14 Jan] – also involves the scenario of anthrax attacks in major cities, a few days after the smallpox attack.

8 March Canadian military intelligence has warned that avian influenza (H5N1) could be used by bioterrorists and that a naturally occurring pandemic may be imminent unless rigorous measures are taken to contain the spread of the virus, according to Canada Press news agency, citing a report entitled *Recent Human Outbreaks of Avian Influenza and Potential Biological Warfare Implications*. Obtained by Canada Press under the Access to Information Act, the 15-page "heavily censored" report, dated 8 December 2004, was prepared by the J2 Directorate of Strategic Intelligence. It is reported to state that a method called "passaging", while not entirely predictable, could be a "potentially highly effective" way to push a virus to develop virulence, and that "such forced antigenic shifts could be attempted in a biological weapons program." The report is also said to consider the possibility of a pandemic strain engineered in a laboratory using reverse genetics, stating: "It is feared that this process could be copied ... to produce a human viral strain similar to the 1918-1919 pandemic."

8 March At UN headquarters, the president of the Security Council says "the idea that the mandate [of UNMOVIC] should be revisited is now becoming a reality". Making his comments during a press conference after a meeting of the Council, Brazilian ambassador to the UN Ronaldo Mota Sardenberg says it is "very hard" to give a timetable, but ideally it would be good to wait for a permanent Iraqi government to be elected under a new constitution, which is expected in December. The Associated Press reports unidentified UN diplomats as saying that in his briefing to the Security Council Acting UNMOVIC Executive-Chairman Demetrius Perricos asked whether the Iraq Survey Group's report [see 6 Oct 04] is the final word or whether there is scope for an independent assessment of Iraq's disarmament – and if so who should do it and how. He is also reported as saying that there is still a need to determine Iraq's chemical, biological and missile capabilities to ensure that they are rendered harmless, which includes looking at manufacturing and research facilities; and if disarmament is confirmed, then the Security Council would need to decide if there is a need for dual-use items that had been monitored by the UN to be monitored for a limited period of time. In a letter to Council members ahead of the meeting, Iraqi ambassador to the UN Samir Sumaidaie stated that Iraq's oil revenue is being used to fund two bodies "which have become irrelevant" – at a cost of more than \$12 million annually for UNMOVIC and \$12.3 million in the next two years for the IAEA.

8 March The US Government Accountability Office (GAO) transmits to Congress *Homeland Security: Much Is Being Done to Protect Agriculture from a Terrorist Attack, but Important Challenges Remain*. The report says: "[T]he United States must enhance its ability to quickly identify and control

diseases... Once diseases have been accurately diagnosed, the United States needs to quickly decide whether vaccines should be used to control an outbreak and have the ability to deploy ready-to-use vaccines within 24 hours... Our nation's ports could be unnecessarily vulnerable to the intentional introduction of a disease or pest, unless agencies analyze the reasons for declining agricultural inspections and streamline the flow of information between USDA and DHS inspectors at ports of entry..." Based on its findings, the GAO recommends that the Secretary of Agriculture take a number of remedial steps.

9 March London Resilience, a sub-committee of the Cabinet Civil Contingencies Committee [see 5 Nov 01], releases *Strategic Emergency Plan: An Overview of the Strategic London Response to Emergencies; Summaries and Highlights of Pan-London Arrangements*. The objectives of the document are: to summarize and collate the key plans and procedures produced through the work of the London Resilience Partnership which would be activated in the event of a large scale incident occurring in London; to give an overview of the response to ensure understanding within the London Resilience Partnership; to outline roles and responsibilities of agencies under the different plans; and to provide a basis for joining up existing London Regional Resilience Forum workstreams under one document.

10 March In New York, a district court dismisses a legal action brought by the Vietnam Association for Victims of Agent Orange/Dioxin *et al* against a group of thirty-seven companies that manufactured the Agent Orange which was subsequently used during the Vietnam War. The Department of Justice had earlier urged the court to dismiss the lawsuit on the grounds that opening the courts to such cases would threaten presidential power [see 12 Jan]. The plaintiffs had sought compensation for birth defects, miscarriages and cancer allegedly caused by the dioxin. In a 233-page ruling, Judge Jack Weinstein states: "There is no basis for any of the claims of plaintiffs under the domestic law of any nation or state or under any form of international law... No treaty or agreement, express or implied, of the United States operated to make use of herbicides in Vietnam a violation of the laws of war or any other form of international law until at the earliest April of 1975." He adds, however, that even if the USA had been a signatory to the 1925 Geneva Protocol during the Vietnam War, its provisions would not have covered the use of Agent Orange. "The prohibition extended only to gases deployed for their asphyxiating or toxic effects on man not to herbicides designed to affect plants that may have unintended harmful side effects on people", says Weinstein. The case is the first attempt by Vietnamese plaintiffs to claim compensation for the effects of Agent Orange. The defendants, which include Dow Chemical and the Monsanto Corporation, had argued *inter alia* that the US government was responsible for how the chemical was used, not the manufacturers.

The next day, a lawyer representing one of the plaintiffs announces that the decision will be appealed. William Goodman says he disagrees with Weinstein that Agent Orange and similar US herbicides should be classified as 'poisons', affecting their consequent standing under international humanitarian law. [See also 9 Jun 03]

11 March The US Army Chemical Materials Agency announces the destruction of the last batch of mustard agent at the Aberdeen Proving Ground chemdemil facility. Destruction of the agent commenced two years ago. It took eighteen months to drain and destroy the first half of the agent; the second half took slightly more than four months.

11-12 March In Paris, the France-Vietnam Friendship Association (FVFA) hosts an *International Conference on the Effects of Spraying Defoliants in Viet Nam (1961-1971)*. Participants – government officials, historians, scientists, journalists and non-governmental activists – agree to adopt a four-point plan, which includes the establishment of an international committee and the issuance of an appeal to the UN General Assembly. The conference, attended by around three hundred people, also hears speakers say that the correct principles relating to international responsibility for damages were not applied in the recent US court case which rejected claims for compensation from victims of the spraying [see 10 Mar].

12 March Iraqi Deputy Minister of Industry Sami al-Araji says that, according to observations by government employees and officials, in the weeks following the fall of Baghdad in April 2003, looters systematically dismantled and removed tons of machinery from Iraq's most important weapons installations. He says the operation appeared highly organized, with the prior identification of specific plants housing dual-use equipment: "They came in with the cranes and the lorries, and they depleted the whole sites... They knew what they were doing... This was sophisticated looting." [See also 28 Feb]

12 March Former Iraqi Foreign Minister and Deputy Prime Minister Tariq Aziz offered former Chief Inspector of UNSCOM Rolf Ekeus \$2 million to alter UNSCOM's reports on Iraqi WMD, so reports Reuters news agency. Ekeus, who led UNSCOM's inspection activities from 1991 to 1997, tells Reuters that he told Aziz: "That is not the way we do business in Sweden." He says he passed the information on to the Volcker Commission.

14 March Armenia is to receive a US grant worth \$1.3 million for equipment and training assistance, to include the training of border police in the detection of chemical and biological weapons, according to Armenian public television. The grant – from the US State Department and the Department of Homeland Security – will be made under the Export Control and Related Border Security Assistance Programme, which was established five years ago.

14 March In Washington, DC, workers at a Pentagon postal sorting office are evacuated after tests conducted one week previously reveal the presence of anthrax. Hours later, hundreds of employees at a Defense Department postal sorting office in nearby Fairfax County, Virginia, are kept at work for several hours after a sensor detects a "suspicious biological substance", according to the *Washington Post*. Department of Defense officials recommend that nearly 700 people commence antibiotic treatment; the Postal Service starts treating 200 workers at its main government sorting office. The state of Virginia despatches antibiotics for 3,000 people to the sorting office in Fairfax County.

The next day, a series of tests return negative for the bacterium following a subsequent analysis of more than 70 samples taken from filters, surfaces and machines at both sorting offices. The *Washington Post* quotes an unidentified senior military official as saying that investigators are concentrating on the possibility that the sample from the Pentagon was in fact contaminated at a contractor's laboratory in Richmond. The material, a swab taken from a filter on a biohazard detector, was then passed on to scientists at Fort Detrick. The Associated Press quotes a "senior administration official", speaking on condition of anonymity, as saying the confusion stemmed from a mistake at a Defense Department laboratory at Fort Detrick, where a sample of the bacterium, kept for

comparison purposes, was mixed up with the sample taken from a Pentagon mail centre.

14-17 March In Doha, Qatar, a regional workshop for national authorities of the Gulf Cooperation Council (GCC) states on the practical implementation of the CWC is held. Seventy-eight participants from all six GCC member states' national authorities attend the workshop to learn from each other's experiences with regard to the practical implementation of the CWC. The workshop, which is jointly organized by the government of Qatar and the OPCW, follows the two previous workshops on the same subject which were hosted by Kuwait and Saudi Arabia. The GCC members are the United Arab Emirates, Bahrain, Saudi Arabia, Oman, Qatar and Kuwait

15 March In Paris, the first in a series of four seminars – the last one being set for 5 April – *Chemical Warfare: Between Scientific Uncertainty and Legal Impunity in the Context of Agent Orange in Vietnam* is scheduled to take place. The seminars – organized by the Centre d'Etude du Vivant of the Institut de la Pensée Contemporaine – are for historians, medical practitioners, environmental scientists and international criminal lawyers.

15 March In Granada, the interior ministers from Spain, the UK, France, Germany and Italy – meeting as the G5 – agree to create an information exchange network covering *inter alia* the theft of stocks of nuclear, biological and chemical weapons. The information held in their respective police databases will be made available to their counterparts on demand, with a view to facilitating access to information on suspects.

15 March The US Department of Defense Joint Chiefs of Staff release *Doctrine for Joint Nuclear Operations*, which provides guidelines for the joint employment of forces in nuclear operations, and guidance for the employment of US nuclear forces; command and control relationships; and weapons effect considerations. Regarding the threat or use by an adversary of chemical or biological weapons, the report states: "When formulating COAs [courses of action], operation planning must address the possibility that an adversary will use WMD. Planning should also evaluate nuclear, biological, and chemical (NBC) defensive measures... The combatant commander must consider the adversary's WMD and delivery system capability when considering COAs. If the adversary threat capability assessment indicates a WMD potential, the campaign plan should address active and passive defensive and offensive measures necessary to counter the potential use of such weapons and provide guidance for defending against such a threat... Geographic combatant commanders may request Presidential approval for use of nuclear weapons for a variety of conditions. Examples include ... attacks on adversary installations including WMD, deep, hardened bunkers containing chemical or biological weapons or the C2 infrastructure required for the adversary to execute a WMD attack against the United States or its friends and allies."

15 March The US Department of Homeland Security (DHS) has identified twelve possible terrorist scenarios which it views as most plausible, so reports *The New York Times*, referring to a document entitled *National Planning Scenarios*. The *Times* reports that a draft of the document, which it says the DHS did not intend to make public, was inadvertently posted on a Hawaii state government web site. The scenarios postulated in the document include: the release of sarin in office buildings; the blowing up of a chlorine tank, killing 17,500 people and injuring more than 100,000; the spreading

of pneumonic plague in the bathrooms of an airport, sports arena and train station, killing 2,500 and sickening 8,000 worldwide; and the infection cattle with foot-and-mouth disease at several sites. The next day, the DHS announces that it will publish the document in the coming months.

15 March From Washington, DC, the Search for International Terrorist Entities (SITE) Institute reports that a message posted on "a jihadist website affiliated with al-Qaeda" provides step by step instructions on how to make chemical weapons. SITE quotes the web site as stating that the gases are divided into four categories "tear gases, nose gases, choking gases with irritating fumes, and blistering gases which result in burns" and include mustard gas, tear gas and phosgene. Abu Elhareth Alsawahri, the author of the message, is reported as saying: "We know that if we had gases as effective as mustard gas or phosgene, the Americans would not stay in their guarded bases and we would not have to continue with costly suicide operations." SITE describes itself as a "non-profit organization that provides information related to terrorist networks to the government, news media, and general public".

15-18 March At OPCW headquarters, the Executive Council convenes for its fortieth regular session. Alfonso M Dastis of Spain is elected as the new Chair of the Council, while representatives from Colombia, Iran, Russia and South Africa assume the roles of vice-chairmen. After considering the third progress report on implementation of the obligations under the Article VII action plan, the Council stresses the importance of States Parties and the Secretariat working towards the Conference being in a position to implement a decision on the matter at its ninth session.

The Council notes, *inter alia*, the report on the implementation of the regime governing the handling of confidential information by the Technical Secretariat in 2004; the report on the verification-optimization trial at the Anniston CWDF; a progress report on the implementation of the universality action plan; and a report from the Director-General on the progress made by states parties in destroying their chemical weapons.

The Council receives a paper on the review of the findings of the SAB that were submitted to the First Review Conference [see 9 May 03].

17 March The Moscow *Kommersant* reports that a lawyer defending twelve victims of the Moscow-theatre siege [see 26 Oct 02] claims that 174 persons died in the operation, as opposed to 129, as claimed by the Office of the Prosecutor General (OPG). Karina Moskalenko says she made the discovery while studying a 16 October 2003 resolution of the OPG. The OPG, however, flatly refutes her claim.

17 March In Brussels, Anatoli Safonov, the special representative of the Russian President Vladimir Putin says, at a press conference, that Russia and the EU have agreed to focus their attention on preventing terrorists gaining access to components of weapons of mass destruction, with particular emphasis on biological weapons.

17 March In London, the Royal Institute of International Affairs at Chatham House hosts a discussion meeting on *Counter-Proliferation Initiatives: Forging Integrated and International Responses* [see also 24 Feb]. The meeting is organized by the Institute's News Security Issues Programme as part of its continuing work on non-proliferation, in particular, implementation of UN Security Council resolution 1540 [see 28 Apr 04]. US Department of Defense Principal Deputy Assistant Secretary for Negotiations Policy Guy B Roberts

opens the meeting with a discussion relating to WMD counter-proliferation, interdiction and transportation security initiatives, including activities to implement the Proliferation Security Initiative, the SUA Convention/Protocol, and UN Security Council resolution 1540.

17 March From London, Channel 4 television broadcasts *The Government Inspector*, a drama telling the story of David Kelly [see 17 Jul 03].

17 March The US Department of Veterans Affairs (DVA) announces the launch of a scheme to trace around 4,500 service members who were exposed to mustard gas or lewisite during their period of service, with a view to inviting them to file for disability compensation. According to the DVA, the majority of those concerned participated in tests during the Second World War, which were designed to evaluate clothing, ointments and equipment that would protect US troops.

17 March Off the coast of Kalaeloa, Hawaii, Pisces submarines from the Hawaii Undersea Research Laboratory uncover the remains of a Japanese Imperial Navy I-401 submarine, one planned mission of which during the Second World War had been to use rats to spread disease, according to the *Honolulu Star Bulletin*. The report describes the I-401 – which was scuttled in May 1946 – as being “400 feet long and 39.3 feet high, could reach a maximum depth of 330 feet, and carry a crew of 144”. It continues: “[The I-401] carried three fold-up bombers inside a watertight hangar, plus parts to construct a fourth airplane. The bombers, called Seiran or ‘Mountain Haze’, could be made ready to fly in a few minutes and had wing floats for return landings. Fully loaded with fuel, the submarines could sail 37,000 miles, one and a half times around the world. Three were captured at the end of the war, as well as a slightly smaller test design called the I-14. Their first mission was called ‘Operation PX’, a plan to use the aircraft to drop infected rats and insects with bubonic plague, cholera, dengue fever, typhus and other diseases on American West Coast cities”; but the “bacteriological bombs could not be prepared in time”.

17-18 March In Roseau, Dominica, a workshop is held on the national implementation of the CWC. Jointly organized by the Dominican Ministry of Foreign Affairs and Dominica’s OPCW National Authority, the workshop brings together representatives from Dominica’s police force, fire and ambulance services, port authority, customs and excise, pesticide board, as well as chemical importers and various government officials.

18 March In Rotterdam, a Dutch businessman is charged with complicity in genocide and war crimes for having supplied thousands of tonnes of chemical agents to Iraq [see 28 Jan], which it later used in the 1980-1988 war with Iran and in the attack on Halabja [see 18 Mar 88]. Frans van Anraat is the first Dutchman to face such charges. He faces possible life imprisonment if convicted. The trial is likely to commence later in the year.

18 March The US Department of Defense (DoD) releases *The National Defense Strategy of The United States of America* (NDS) – issued periodically – and *The National Military Strategy of The United States of America* (NMS) – updated every two years. The documents outline how the DoD supports the president’s National Security Strategy [see 20 Sep 02] and provide the strategic context for the ongoing Quadrennial Defense Review.

The NDS states: “We will give top priority to dissuading,

detering, and defeating those who seek to harm the United States directly, especially extremist enemies with weapons of mass destruction (WMD)... Particularly troublesome is the nexus of transnational terrorists, proliferation, and problem states that possess or seek WMD, increasing the risk of WMD attack against the United States. Proliferation of WMD technology and expertise makes contending with catastrophic challenges an urgent priority... Problem states may seek WMD or other destabilizing military capabilities. Some support terrorist activities, including by giving terrorists safe haven... Under the most dangerous and compelling circumstances, prevention might require the use of force to disable or destroy WMD in the possession of terrorists or others...”

The NMS states: “Should [adversaries] acquire WMD/E [chemical, biological, radiological, nuclear, and enhanced high explosive weapons] or dangerous asymmetric capabilities, or demonstrate the intent to mount a surprise attack, the United States must be prepared to prevent them from striking... The threats posed by terrorist groups and rogue states, especially those that gain access to WMD/E, mandate an active defense-in-depth... Detering aggression and coercion must be anticipatory in nature to prevent the catastrophic impact of attacks using biological, chemical or nuclear weapons on civilian population centers in the United States or in partner nations... Nuclear capabilities continue to play an important role in deterrence by providing military options to deter a range of threats, including the use of WMD/E and large-scale conventional forces...”

18 March The US Department of Health and Human Services (DHHS) and the Department of Agriculture (DA) issue final rules on the possession, use, and transfer of select agents [see 12 Mar 03]. The rules – effective as of 18 April – are based on the interim final rules [see 10 Dec 02] as amended. The final DHHS rule does not alter its list of specific microbes defined as select agents; the DA rule makes some minor changes to its list. Together, the DHHS and DA lists, which include some overlap, name more than sixty types of bacteria, fungi, toxins, and viruses.

20-22 March In Como, Italy, an *International Forum on Biosecurity* takes place at the Centro Alessandro Volta. The agenda of the forum is based on the recommendations set out in the US National Research Council report *Biotechnology Research in the Age of Terrorism* [see 8 Oct 03], which recommended, amongst other things, that efforts to address the transfer of dual-use technology should be tackled through international mechanisms. The forum – organized by the Inter-Academy Panel on International Issues (IAP), the International Council for Science (ICSU), the Inter-Academy Medical Panel (IAMP) and the US National Academies – brings together individuals from the scientific community and other interested parties.

20-22 March In Omaha, Nebraska, the ninth [see 30 Nov – 2 Dec 04] operational experts meeting on the Proliferation Security Initiative (PSI) takes place. The meeting brings together around two hundred delegates from nineteen states, i.e. Australia, Canada, Denmark, France, Germany, Greece, Italy, Japan, the Netherlands, New Zealand, Norway, Poland, Portugal, Russia, Singapore, Spain, Turkey, the UK and the USA. The purpose of the meeting is to focus on future training exercises; organizing outreach activities to industry representatives; and the domestic and international legal authorities needed for potential interdictions of WMD-related air shipments.

20-23 March In Manama, Bahrain, a training course – organized by the OPCW – for the CWC national authority of

Bahrain takes place. The purpose of the course is to provide Bahrain with direct on-site technical assistance to assist it in meeting the targets established in the Plan of Action on the Implementation of Article VII of the CWC adopted at the eighth session of the Conference of CWC States Parties [see 20-24 Oct 03].

21 March UN Secretary-General Kofi Annan transmits to the General Assembly *In Larger Freedom: Towards Development, Security and Human Rights for All*. Amongst other things, the report says: "We must revitalize our multilateral frameworks for handling threats from nuclear, biological and chemical weapons. The threat posed by these weapons is not limited to terrorist use... Transnational networks of terrorist groups have global reach and make common cause to pose a universal threat. Such groups profess a desire to acquire nuclear, biological and chemical weapons and to inflict mass casualties. Even one such attack and the chain of events it might set off could change our world forever... Further efforts are needed to bolster the biological security regime. The capability of the Secretary-General to investigate suspected use of biological agents, as authorized by the General Assembly in its resolution 42/37 [see 30 Nov 87], should be strengthened to incorporate the latest technology and expertise; and the Security Council should make use of that capability, consistent with Security Council resolution 620 [see 26 Aug 88]."

Annan also recommends that Security Council membership be increased from 15 to 24, that the General Assembly's agenda should be streamlined to improve decision-making; and that new guidelines should be introduced relating to the authorization of military action.

21 March In Anniston, Alabama, a federal court dismisses a legal challenge against the incineration of nerve and blister agents at the Anniston chemdemil facility on the grounds that it poses a threat to the health of the local population and to the environment [see 8 Aug 03]. District Judge David Proctor says that the method used was approved by the facility's 1997 government-issued permit. A coalition of Anniston residents, civil rights and environmental groups filed the lawsuit three years ago [see 19 Nov 02].

22 March In Brussels, a seminar – *Tackling the Threat of Deliberate Disease: Is There Anything We Can Do?* – marking the thirtieth anniversary of the entry into force of the BWC takes place, organized by the BioWeapons Prevention Project (BWPP) and hosted by the European Parliament.

22 March In the UK House of Commons, a debate takes place in Westminster Hall on the subject of *Weapons of Mass Destruction*. During the debate, Parliamentary Under-Secretary of State for Foreign and Commonwealth Affairs Chris Mullin says: "[W]e continue to work towards universal adherence to the [CWC and BWC], in particular to include states such as Egypt, Syria and Israel... As president of the G8, we will follow up on a range of earlier suggestions on tackling biological threats."

23 March The US Office of Inspector General of the Environmental Protection Agency [EPA] releases its final evaluation report on the role of the EPA in the BioWatch programme [see 29 Jan 04 and 8 Apr 04]. The report – *EPA Needs to Fulfill its Designated Responsibilities to Ensure Effective BioWatch Program* – states: "EPA did not provide adequate oversight for the sampling component of the Bio-Watch program, including monitoring State and local agencies and any contractors used for filter collection, potentially

affecting the quality of the samples taken. The BioWatch program depends upon the successful implementation of each component. The failure of EPA to completely fulfill [sic] its responsibilities raises uncertainty about the ability of the BioWatch program to detect a biological attack."

25 March The US Army Criminal Investigation Command announces, without explanation, that it is to reopen an investigation into what it calls a previously closed case concerning the death of an Iraqi government scientist while in US detention in January 2004, so reports the Associated Press. The agency states that Mohammad Munim al-Izmerly is the only known weapons scientist among at least ninety-six detainees to have died in US custody in Iraq. The final report of the Iraq Survey Group [see 6 Oct 04] stated that al-Izmerly was a leader in Iraq's efforts to build chemical weapons in the 1970s and later became an assassination specialist as head of a chemical section for Iraqi intelligence. The report stated that al-Izmerly had confessed to colleagues that he had, under orders, tested techniques by administering poisoned food or injections to twenty prisoners.

26 March The Biological Weapons Convention (BWC) celebrates its thirtieth anniversary since entry into force. A joint statement by the three depositaries of the Convention – Russia, the UK and the USA – reads: "[A]s Depositary Governments of [the BWC] we reaffirm our support for the Convention. We seek practical realisation of all BWC obligations. Our Governments will continue to work to strengthen it by participating fully in the current three-year work program, by encouraging its universality, and by pressing for full implementation of, and compliance with, the Convention by all its States Parties. In particular, we stress the necessity of adoption by all States Parties of relevant penal legislation for violations of the BWC."

26-28 March In Tehran, the *International Congress of Bioethics* takes place, which is attended by, amongst others, Director-General of UNESCO Koichiro Matsuura and Iranian President Mohammad Khatami. At the opening of the debate, Khatami says: "[The] world is seriously threatened by the production and proliferation of weapons of mass destruction... In the name of ethics and in the name of respecting the lives of people all over the world, we have to oppose categorically, with no exception and no precondition, the manufacturing and proliferation of WMDs at all times and in all places."

28 March The US Government Accountability Office transmits to Congress *Protection of Chemical and Water Infrastructure: Federal Requirements, Actions of Selected Facilities, and Remaining Challenges*. The report provides, amongst other things, information about what federal requirements exist for the chemical and water sectors to secure their facilities, what federal efforts were taken by the lead agencies for these sectors to facilitate sectors' actions, what actions selected facilities within these sectors have taken. The GAO does not make any new recommendations on key issues over and above those it has previously made on the subject.

28 March The US Joint Non-Lethal Weapons Directorate is evaluating a tear gas replacement that works like a pepper spray in much smaller doses, according to the weekly *Defense News*, quoting Larry Bickford, "a riot control agents expert" with the US Army's Edgewood Chemical-Biological Center". Bickford is quoted as saying that tests have thus far been promising, but that the materials used do not yet wash off with sufficient ease.

28 March-1 April In Tashkent, another [see 23-27 Aug 04] advanced protection course for specialists and experts from the Central Asian countries takes place as part of the third phase of the Central Asian Project (2003-2005) for the development and improvement of national and regional response capacity against chemical weapons. The central objective of the course is to provide advanced training in the protection against the use, or threat of use, of chemical weapons, in preparation for the international exercise on delivery of assistance – ASSISTEX 2 – which is to be held in Ukraine in October. Attending the course are eighteen participants from Afghanistan, Azerbaijan, Kazakhstan, Tajikistan and Uzbekistan, representing the relevant ministries for emergency situations, defence, interior, health and foreign affairs. The project – launched by the OPCW in January 2003 and funded by Norway – aims to assist central Asian CWC parties in developing national and regional capabilities against the threat or use of chemical weapons. The OPCW Technical Secretariat and the government of Switzerland are involved in implementing the project. The first year of the project focused on national capacity-building; the second year on regional capacity building [see 21-25 Jun 04].

29 March US officials say that a terror suspect in their custody, who is a former Iraqi soldier and al-Qaida member, plotted with an Iraqi intelligence agent in August 1998 to attack the US and other foreign embassies in Pakistan with chemical weapons, according to the Associated Press. Referring to a summary released to it under the Freedom of Information Act, the news agency states that the accusations are set out in a two-page “summary of evidence” presented to the suspect for his appearance before a “combatant status review board” at Guantanamo Bay late last year.

29 March In Arkansas, the Pine Bluff Arsenal chemdemil facility commences the destruction of its stockpile of 3,850 tons of chemical weapons with the incineration of two M55 rockets containing sarin. The facility will eventually destroy 90,000 rockets, and around 3,000 tons of bulk containers of blister agent and land mines filled with mustard gas, according to the Associated Press.

29-31 March In Singapore, the threat from chemical and biological weapons are among the issues discussed at a regional conference on national security, attended by security officials from Malaysia, Thailand, Vietnam, Philippines and Cambodia.

30 March The Berlin political monthly *Cicero*, in its April issue, runs an article that cites unidentified intelligence sources as saying that Abu Musab al-Zarqawi has been planning a chemical weapons attack in Europe. It quotes an unidentified official of the German BND federal intelligence service as saying: “We in Europe have been afraid that a big bang is coming sometime and that Zarqawi is planning it.”

30 March The US Department of Commerce Bureau of Industry and Security publishes a final rule to amend the chemical and biological weapons end-user/end-use controls in the Export Administration Regulations [EAR]. “[T]his final rule expands the country scope of the EAR restrictions on certain chemical and biological weapons end-uses to apply to exports and reexports of items subject to the EAR to any destination, worldwide. Prior to the publication of this rule, such restrictions applied only to exports and reexports of items subject to the EAR to certain countries of concern for chemical and/or biological reasons. The amendments are consistent

with the ‘catch-all’ provisions in the Australia Group’s (AG) *Guidelines for Transfers of Sensitive Chemical or Biological Items*... This rule imposes new export controls for foreign policy reasons.”

31 March From OPCW headquarters, the Technical Secretariat reports that 156 parties have thus far submitted initial declarations under the CWC. Those yet to submit initial declarations are: Afghanistan, Cape Verde, Marshall Islands, Mozambique, Saint Vincent and the Grenadines, Sierra Leone, Solomon Islands, Timor-Leste, Tonga, Tuvalu and Madagascar. The following seven parties are reported to have submitted incomplete initial declarations having failed to submit their Article VI initial declarations: Ivory Coast, Kiribati, Nepal, Seychelles, Suriname, Turkmenistan, and Yemen. Nauru’s declaration is reported as being incomplete as it has yet to submit its initial declaration under Article III. The Secretariat also reports that 35 declarations were submitted regarding past activities in 2004 and 43 have been submitted in respect of anticipated activities in 2005.

31 March The OPCW Technical Secretariat reports that, during March, 7 CWDFs were in operation. It states that 71,373 agent-tonnes of chemical weapons have been declared and 11,434 agent-tonnes destroyed (Category 1 and 2); 8,671,570 munitions/containers have been declared of which 2,179,670 have been destroyed (Category 1 unitary and binary munitions and containers, Category 2 and 3 items and OTCs).

31 March The Canadian Department of Public Safety and Emergency Preparedness releases *Chemical, Biological, Radiological and Nuclear Strategy of the Government of Canada*. The document states: “The CBRN Strategy supports the Government’s National Security Policy [released April last year]. The CBRN Strategy consists of strategic objectives to enhance Canada’s ability to mitigate and prevent CBRN incidents from occurring. The objectives will also allow Canada to prepare for, respond to, and recover from, CBRN incidents. Four strategic objectives are necessary to achieve the CBRN Strategy’s aim: prevention and mitigation; preparedness; response; and recovery.”

31 March In Washington, DC, the Commission on the Intelligence Capabilities of the United States Regarding Weapons of Mass Destruction transmits its report to President George Bush. The Commission, chaired by Judge Laurence Silberman and former Senator Chuck Robb, was established by a presidential executive order last year [see 2 Feb 04]. The 601-page report offers 74 recommendations for improving the US Intelligence Community. The Commission states that its mission was “to investigate the reasons why the Intelligence Community’s pre-war assessments were so different from what the Iraq Survey Group found after the war [see 6 Oct 04].” It points out that it was “not authorized to investigate how policymakers used the intelligence assessments they received from the Intelligence Community.” In the covering letter to Bush, the members of the Commission write: “We conclude that the Intelligence Community was dead wrong in almost all of its pre-war judgments about Iraq’s weapons of mass destruction. This was a major intelligence failure. ... [T]he Commission found no indication that the Intelligence Community distorted the evidence regarding Iraq’s weapons of mass destruction. What the intelligence professionals told you about Saddam Hussein’s programs was what they believed. They were simply wrong... The daily intelligence briefings given to you before the Iraq war were flawed... Through attention-grabbing head-

lines and repetition of questionable data, these briefings overstated the case that Iraq was rebuilding its WMD programs.”

Addressing the issue of reliance by the intelligence community on information provided by a defector, codenamed ‘Curveball’, on Iraqi biological weapons [see 28 Mar 04], the report states: “One of the most painful errors ... concerned Iraq’s biological weapons programs. Virtually all of the Intelligence Community’s information on Iraq’s alleged mobile biological weapons facilities was supplied by a source, code-named ‘Curveball,’ who was a fabricator... At bottom, the story of the Intelligence Community’s performance on BW is one of poor tradecraft by our human intelligence collection agencies; of our intelligence analysts allowing reasonable suspicions about Iraqi BW activity to turn into near certainty; and of the Intelligence Community failing to communicate adequately the limited nature of their intelligence on Iraq’s BW programs to policymakers, in both the October 2002 [National Intelligence Estimate] NIE and other contemporaneous intelligence assessments... [A]fter the publication of the October 2002 NIE but before Secretary of State Colin Powell’s ... address to the United Nations [see 5 Feb 03], intelligence officials within the CIA failed to convey to policymakers new information casting serious doubt on the reliability of [Curveball]... In this instance, once again, the Intelligence Community failed to give policymakers a full understanding of the frailties of the intelligence on which they were relying... Curveball was not the only bad source the Intelligence Community used. Even more indefensibly, information from a source who was already known to be a fabricator found its way into finished pre-war intelligence products, including the October 2002 NIE. This intelligence was also allowed into Secretary of State Colin Powell’s speech to the United Nations Security Council, despite the source having been officially discredited almost a year earlier.”

Regarding attempts by al-Qa’ida to produce chemical and biological weapons, the report states: “Information in the Intelligence Community’s possession since the late 1990s indicated that al-Qa’ida’s members had trained in crude methods for producing biological agents such as botulinum toxin and toxins obtained from venomous animals. But the Community was uncertain whether al-Qa’ida had managed to acquire a far more dangerous strain of agent (an agent we cannot identify precisely in our unclassified report and so will refer to here as ‘Agent X’). The Community judged that al-Qa’ida operatives had ‘probably’ acquired at least a small quantity of this virulent strain and had plans to assemble devices to disperse the agent... Reporting supports the hypothesis that al-Qa’ida had acquired several biological agents possibly as early as 1999, and had the necessary equipment to enable limited, basic production of Agent X. Other reporting indicates that al-Qa’ida had succeeded in isolating cultures of Agent X. Nevertheless, out-standing questions remain about the extent of biological research and development in pre-war Afghanistan, including about the reliability of the reporting described above... Prior to the war in Afghanistan, analysts assessed that al-Qa’ida ‘almost certainly’ had small quantities of toxic chemicals and pesticides, and had produced small amounts of World War I-era agents such as hydrogen cyanide, chlorine, and phosgene... The war in Afghanistan and its aftermath revealed relatively little new intelligence on the group’s chemical efforts... There is reporting indicating that the group was attempting to produce this blister agent, and considered using it to attack Americans. In total, however, these scattered pieces of evidence have not substantially altered the Intelligence Community’s pre-war assessments of al-Qa’ida’s chemical program... As with al-Qa’ida’s biological weapons program, questions persist about the group’s historical and current chemical weapons programs.”

1 April In Washington, DC, a federal court rules that the Department of Defense (DoD) can resume its Anthrax Vaccine Immunization Program (AVIP), but that it should make additional efforts to inform potential recipients that the vaccinations are voluntary. District Court Judge Emmet Sullivan holds that the AVIP can recommence under the terms of the emergency use authorization (EUA) issued on 27 January by the Food and Drug Administration (FDA) [see also 10 Dec 04]. The EUA allows for voluntary vaccinations using drugs not licensed by the FDA without obtaining the subject’s prior consent. Activation of the ruling is delayed for five days so as to give the DoD an opportunity to state what additional measures it would take to inform potential recipients of the order made by the court to halt mandatory vaccinations [see 27 Oct 04].

On 3 May the DoD announces the resumption of its AVIP under conditions set out under the EUA. In a press release it states: “Once vaccinations begin, DoD will provide an education and information program, including an FDA-approved brochure, to inform potential vaccine recipients and healthcare providers that FDA has authorized the emergency use of anthrax vaccine to prevent inhalation anthrax. Personnel will also be informed about the vaccine’s benefits and side effects before they are asked to decide about vaccination... For the most part, vaccinations during the period of the EUA will be limited to military units designated for homeland bioterrorism defense and to US forces assigned to the Central Command area of responsibility and Korea.”

4 April In the UK House of Commons, Defence Secretary Geoff Hoon replies to a written question as to whether he would rule out the use of nuclear weapons on a first strike basis, as follows: “The [UK] would be prepared to use nuclear weapons only in extreme circumstances of self-defence. We would not use our weapons, whether conventional or nuclear, contrary to international law. A policy of no first use of nuclear weapons would be incompatible with our and NATO’s doctrine of deterrence, nor would it further nuclear disarmament objectives. We have made clear, as have our NATO allies, that the circumstances in which any use of nuclear weapons might have to be contemplated are extremely remote. Our overall strategy is to ensure uncertainty in the mind of any aggressor about the exact nature of our response, and thus to maintain effective deterrence.” [See also 10 Feb 03]

4 April The UK Parliamentary Intelligence and Security Committee transmits to Prime Minister Tony Blair its *Annual Report 2004–2005*. The report states: “[The] Butler Review [see 14 Jul 04] [reported] that the [Secret Intelligence Service] SIS had formally withdrawn the line of Iraqi WMD-related intelligence [in *Iraq’s Weapons of Mass Destruction: The Assessment of the British Government*] [see 24 Sep 02] ... in July 2003. This line of reporting had been important ... as the Prime Minister, the Foreign Secretary and a small number of officials had been orally briefed on it by the SIS, but it had been withheld from WMD experts in the DIS. We do not believe that this was the appropriate way of handling the material... On 12 October 2004, the Foreign Secretary announced that a further two lines of SIS reporting on Iraqi WMD had been withdrawn. These lines were highlighted in the Butler Review as being ‘open to doubt’ and ‘seriously flawed’. We are concerned at the amount of intelligence on Iraqi WMD that has now had to be withdrawn by the SIS... In December 2004, the JIC reviewed their key judgements on the Iraq WMD capability and programmes – some of which had formed the basis of the September 2002 dossier ... and came to the following judgements: In 2002, the JIC judged that ‘Iraq may

retain some stocks of chemical agents ... Iraq could produce significant quantities of mustard within weeks, significant quantities of Sarin and VX within months, and in the case of VX may already have done so.' Although a capability to produce some agents probably existed, this judgement has not been substantiated... In 2002, the JIC judged that 'Iraq currently has available, either from pre-Gulf War, or more recent production, a number of biological agents...Iraq could produce more of these biological agents within days.' The [Iraq Survey Group] found that Iraq had dual-use facilities which could have allowed BW production to resume, but not within the timeframes judged by the JIC, and found no evidence that production had been activated..."

4-8 April In the USA, an emergency preparedness and response exercise, TOPOFF 3 [see 12 May 03], takes place. Meanwhile, exercise 'Atlantic Blue' takes place in the UK and exercise 'Triple Play' takes place in Canada. The objectives of the exercises are: to give senior decision-makers in each country the opportunity to exercise their responsibilities in the context of a wide-spread terrorist incident; to practice coordination of strategic public communications at an international level; and to evaluate and test timely information exchange of classified intelligence and operational information between the USA, the UK and Canada. Exercises 'Atlantic Blue' and 'Triple Play' are command post exercises – which involve the creation of a real incident control room to co-ordinate responses, but do not involve live action on the ground – however TOPOFF 3 does include enactment at the operational level. The scenarios include two terrorist attacks resulting in the simulated collapse of a five-story office complex in New London, Connecticut and release of a simulated biological agent in New Jersey. The exercise, costing \$16 million to stage, is attended by officials from both the UK and Canada, and involves 275 government and private organizations, and more than 10,000 people.

5 April In Bahrain, a Joint Communiqué issued following the fifteenth GCC - EU Joint Council and Ministerial Meeting states, *inter alia*, that both sides "reaffirmed their determination to support all efforts to stem the proliferation of WMD and their means of delivery". The GCC (Gulf Co-operation Council) members are the United Arab Emirates, Bahrain, Saudi Arabia, Oman, Qatar and Kuwait. [See also 14-17 Mar]

5 April The UK House of Commons Foreign Affairs Committee releases *Foreign Policy Aspects of the War against Terrorism*. The report states: "We conclude that the United Kingdom's continued support for the [CWC] is essential... [We] recommend that the Government offer support to states which lack capacity in the implementation of the [OPCW] Action Plan, and that it set out in its response to this Report how it is doing so... We conclude that the lack of a verification mechanism for the [BWC] is an extremely serious gap in the international non-proliferation regime, and we recommend that the Government work to garner support for a verification regime, particularly from the US. However, a "coalition of the virtuous " may be better than nothing. We also recommend that in its response to this Report the Government outline the most important developments relating to the BWC, in areas such as the implementation of a code of conduct for biological weapons scientists."

5 April The UK House of Lords European Union Committee releases *Preventing Proliferation of Weapons of Mass Destruction: The EU Contribution*. Amongst other things, the report recommends: "The European Union should

vigorously study and support ways of strengthening the BTWC, whether by verification arrangements, security assurances, improved standards of material safeguarding, or otherwise."

5 April In the US House of Representatives, the Subcommittee on National Security, Emerging Threats and International Relations of the Committee on Government Reform holds a hearing on *Assessing Anthrax Detection Methods*. [See also 14 Mar]

6 April The US Centers for Disease Control and Prevention (CDC) releases *Review of the US Army Proposal for Off-Site Treatment and Disposal of Caustic VX Hydrolyzate from the Newport Chemical Agent Disposal Facility*. The report criticizes the Army's plan to transport the chemical byproduct of VX nerve agent from Indiana to New Jersey. It states: "[Whilst] the CDC found that the Army/Dupont proposal was sufficient to address critical issues in the areas of potential human toxicity, transportation, and treatment of CVXH (generated from recommended VX loading and stabilizer), [Environmental Protection Agency] EPA concluded that the information regarding the ecologic risk of treated CVXH discharge into the Delaware River was inadequate. Consequently, CDC cannot recommend proceeding with the treatment and disposal at the DuPont SET facility until EPA's noted deficiencies are addressed."

6 April In Washington, DC, the Center for Arms Control and Non-Proliferation files a legal challenge in a district court against the Commission on the Intelligence Capabilities of the United States Regarding Weapons of Mass Destruction and John Scott Redd, the Executive-Director of the Commission. President George Bush established the Commission by executive order last year [see 2 Feb 04]. The Commission released its report last week [see 31 Mar]. The plaintiff claims that the Commission failed to comply with its obligation under the Federal Advisory Committee Act to make available for public inspection all unclassified documentation prepared for the Commission. The plaintiff seeks a declaration from the court that the Commission is in violation of the Act and that it order the Commission to comply therewith.

6 April Venezuela purchased from Spain "biological and nerve agents", during the first half of 2004, according to the Spanish news agency Europa Press. The agency states that Venezuela was the only country listed under the category of "states to which chemical warfare agents and radioactive materials were sold," although the quantity only amounts to EUR 30,374 worth. It reports the information as being contained in a Spanish Ministry of Industry, Commerce and Tourism report – a copy of which it has obtained – entitled *Spanish Exports of Defence Materials and Dual-Use Products and Technologies*.

7 April In Tokyo, the Supreme Court upholds the death sentence against a former senior Aum Shinrikyo member for his role in a series of murders in 1989. Kazuaki Okazaki is the first of thirteen Aum defendants sentenced to death by district or high courts [see 28 May 04] to have his sentence confirmed with no right of appeal. Okazaki was found guilty of participating in the murders of lawyer Tsutsumi Sakamoto, his wife, Satoko, and their one-year-old son Tatsuhiko, in November 1989. Sakamoto at that time was helping parents of Aum members who were trying to get their offspring to leave the cult. Okazaki was also convicted for his role in the slaying of Aum member Shuji Taguchi in February 1989 when the victim tried to leave the cult. The Tokyo District Court

sentenced him to death in October 1998 and the High Court upheld the sentence in December 2001. Okazaki fled the cult in 1990 immediately after the Sakamoto murders and turned himself in after the cult's sarin attack on the Tokyo subway system [see 20 Mar 95].

7 April In the US House of Representatives, the Terrorism and Unconventional Threats Subcommittee of the Armed Services Committee holds a hearing on *The Chemical Weapon Demilitarization Program of the Defense Department*. Four days later, in the Senate, the Subcommittee on Emerging Threats and Capabilities of the Armed Services Committee holds a hearing on the same subject.

8 April Cyprus concludes a bilateral agreement with the USA [see also 13 Aug 04] under the framework of the Proliferation Security Initiative (PSI) to establish procedures and safeguards for ship-boarding operations on the high-seas with a view to preventing the proliferation of WMD.

8 April In London, a jury convicts a man of conspiracy to cause a public nuisance by the use of poisons and/or explosives to cause disruption, fear or injury, but is discharged after it fails to reach a verdict on conspiracy to commit murder. Kamel Bourgass and four other men were arrested after police discovered, amongst other things, recipes and ingredients to make ricin when they raided a flat in north London [see 5 Jan 03]. The jury clears Mouloud Sihali, David Khalef, Sidali Feddag and Mustapha Taleb of conspiracy to cause a public nuisance and conspiracy to commit murder. Charges have also been dropped against four other men, Samir Asli, Khalid Alwerfeli, Mouloud Bouhrama and Kamel Merzoug, who were due to face trial next week. Following the raid on the flat in London, Bourgass fled to Manchester where, a week later, in a bid to escape arrest he stabbed a policeman to death. He is currently serving a life sentence, having been convicted of this murder in June 2004. Two years ago, in his presentation before a specially convened session of the UN Security Council, US Secretary of State Colin Powell referred to the arrests as evidence that Iraq and Osama bin Laden were supporting and directing terrorist poison cells throughout Europe [see 5 Feb 03].

Senior Fellow at GlobalSecurity.org George Smith – who was consulted by the defence on the nature and provenance of ricin and other allegedly poisonous recipes seized – writes. “Twenty-two intact castor seeds were recovered. Twenty-one were found in a jewelry case along with another in an unspecified location within the Wood Green apartment... However ... declarations ... that the Wood Green apartment was a working ricin laboratory were hasty and poorly informed... Also seized at Wood Green were notes purporting to show how to purify ricin. These notes, according to a witness statement to the raid, were written in a ‘foreign script’, Arabic. The words ‘ricin’, ‘DMSO’, ‘H₂O₂’ and ‘SODIUM FERROCYANIDE’ were written in English in these notes. Notes addressing the poison ricin were translated and contained reference to grinding 5 grams of castor seeds. A mixture of four parts acetone to one part seed was suggested to set for three days before filtering. The result could be dissolved in 20ml of DMSO, the solvent dimethyl sulfoxide. Other notes addressed solanine, nicotine, botulinum, cyanide and a list of common chemicals that can be used to make improvised explosives. One key point to understanding why the ‘UK poison cell’ was not a UK poison cell and why it was not connected to al Qaida can be found in the nature of the ricin recipe recovered at Wood Green. Originally, the British prosecution claimed that between January 2002 and January 2003, Bourgass and others plotted to commit acts of terrorism. This group, charged the prosecution, planned

to use poisons and explosives to cause death and mayhem in furthering an extreme Islamic cause. To do this, the prosecution would have to link its ricin recipe to al Qaida. However, the distinguishing characteristic of the recipe for ricin, including the one cited in the terror trial, is the ratio of acetone used to wash the weight of castor seeds. It is – four to one –, a marking characteristic of its origin in American sources. Kurt Saxon, originally published it in a pamphlet called *The Weaponeer* in 1984 (currently it can be found in *Saxon's The Poor Man's James Bond*, Vol. 3,” 1988). ‘Put the hulled [castor] beans in a ... blender with four ounces of acetone to each ounce of beans.’ The second major source for ricin recipes of this nature is Maxwell Hutchkinson's *The Poisoners Handbook*, a non-expert unscientific tome published by Loompanics in 1988. Hutchkinson's recipe for ricin is a derivative of Saxon's ‘method’. ‘Place the hulled [castor] beans in a blender with four times their weight of acetone. Pour into a covered jar and let stand for 72 hours. Then pour into another container through a coffee filter,’ writes Hutchkinson on page nine of his book. These instructions, like those delivered by Kurt Saxon and contrary to popular mythology, do not purify ricin. What they do is result in castor beans being reduced to a mash which is rinsed with the organic solvent acetone. Hutchkinson's foolish recipes for plant poisons in the same chapter on ricin also suggests using DMSO, dimethyl sulfoxide, to dissolve the material.

Writing in *The (London) Guardian*, Duncan Campbell, an expert witness for the defence, writes: “The evidence the government wanted to use to connect the defendants to Afghanistan and al-Qaida was never put to the jury. That was because last autumn a trial within a trial was secretly taking place. This was a private contest between a group of scientists from the Porton Down military research centre and myself. [A]t the heart of the case ... was [the origin of five pages of notes compiled by Bourgass] ... containing amateur instructions for making ricin, cyanide and botulinum, and a list of chemicals used in explosives... His co-defendants believed that he had copied the information from the internet. The prosecution claimed it had come from Afghanistan. I was asked to look for the original source on the internet... It is true that when the team from Porton Down entered the Wood Green flat in January 2003, their field equipment registered the presence of ricin. But these were high sensitivity field detectors, for use where a false negative result could be fatal. A few days later in the lab, Dr Martin Pearce, head of the Biological Weapons Identification Group, found that there was no ricin. But when this result was passed to London, the message reportedly said the opposite... The planned government case on links to Afghanistan was based only on papers that a freelance journalist working for the Times had scooped up after the US invasion of Kabul. Some were in Arabic, some in Russian. They were far more detailed than Bourgass's notes. Nevertheless, claimed Porton Down chemistry chief Dr Chris Timperley, they showed a ‘common origin and progression’ in the methods, thus linking the London group of north Africans to Afghanistan and Bin Laden. The weakness of Timperley's case was that neither he nor the intelligence services had examined any other documents that could have been the source. We were told Porton Down and its intelligence advisers had never previously heard of the ‘Mujahideen Poisons Handbook, containing recipes for ricin and much more’. The document, written by veterans of the 1980s Afghan war, has been on the net since 1998. All the information roads led west, not to Kabul but to California and the US midwest. The recipes for ricin now seen on the internet were invented 20 years ago by survivalist Kurt Saxon... When, in October, I showed that the chemical lists found in London were an exact copy of pages on an internet site in Palo Alto, California, the prosecution

gave up on the Kabul and al-Qaida link claims. But it seems this information was not shared with the then home secretary, David Blunkett, who was still whipping up fear two weeks later... The most ironic twist was an attempt to introduce an 'al-Qaida manual' into the case. The manual – called the Manual of the Afghan Jihad – had been found on a raid in Manchester in 2000. It was given to the FBI to produce in the 2001 New York trial for the first attack on the World Trade Centre. But it wasn't an al-Qaida manual. The name was invented by the US department of justice in 2001, and the contents were rushed on to the net to aid a presentation to the Senate by the then attorney general, John Ashcroft, supporting the US Patriot Act. To show that the Jihad manual was written in the 1980s and the period of the US-supported war against the Soviet occupation was easy. The ricin recipe it contained was a direct translation from [*The Poisoner's Handbook*].

Two months later, in the House of Commons, the Solicitor-General is asked by way of a written question on what grounds the Crown Prosecution Service withdrew charges against Bourgass and the other defendants of conspiring to make chemical and biological weapons and substituted conspiracy to cause a public nuisance. The Solicitor-General replies thus: "I am advised that the initial charges of conspiracy to manufacture chemical weapons were based upon preliminary indications that traces of ricin were present on articles recovered during searches made of premises occupied by Mr Kamel Bourgass and others. However, it was later confirmed by scientists from Porton Down that the articles did not contain such traces. In any event, upon a full review of the case papers it was concluded that other offences properly reflected the totality of the alleged offending behaviour. Charges of conspiracy to murder and to cause a public nuisance were therefore substituted." Asked for what reasons government lawyers requested an order requiring no reporting of the charge of making chemical weapons being dropped at the time, the Solicitor-General says: "I am told that the prosecution did not apply for an order restricting reporting in relation to the dropping of the charge."

9 April Turkish army units used "chemical weapons" during operations between 31 March and 7 April in the Cudi Mountains, south-eastern Turkey, according to a statement issued by the HPG People's Defence Forces [Kurdish separatist group] Press Centre and carried by Danish Roj TV.

10-15 April In Slovenská L'upca, Slovakia, the fourth civil-defence training course on protection against chemical weapons takes place, under Article X of the CWC, at the Institute of Civil Protection. The course, which is organized jointly by the government of Slovakia and the OPCW, is attended by eleven participants from the following eleven states parties: Belarus, Bulgaria, China, Greece, India, Malta, Nigeria, Serbia and Montenegro, Spain, Ukraine and Uzbekistan.

12 April The US Department of Justice announces that three men awaiting trial in the UK have been charged with conspiracy to use unconventional weapons in the USA and providing material support to terrorists. A four-count federal indictment states that the men conducted scouting missions from summer 2000 through to April 2001 at the New York Stock Exchange and Citicorp building in New York, the Prudential Building in Newark and the International Monetary Fund and World Bank in Washington, DC. Dhiren Barot, Nadeem Tarmohammed and Qaisar Shaffi are among the eight suspects jailed and charged in Britain last year in connection with the plot against the financial centers [see 17 Aug 04]. The UK Crown Prosecution Service says, however, that the trials of those charged will begin next January, and these, as well as any sentences that might follow, must first be

completed before any possible extradition could take place.

12-14 April In Edinburgh, the Defence Science and Technology Laboratory (DSTL) hosts an *International Chemical Demilitarisation Conference*, which brings together around two hundred delegates from government, industry, and academia, from nearly twenty countries, to discuss global issues surrounding chemdemil.

14 April In Lyon, the International Institute for Strategic Studies (IISS) and the Chemical and Biological Arms Control Institute (CBACI) – with support from the Nuclear Threat Initiative (NTI) – launch the International Council for the Life Sciences (ICLS) during the World Life Sciences Forum BioVision. A press release by the IISS states that the ICLS will serve as an "objective source of authoritative information and analysis of the benefits and related risks of advances in the life sciences."

14 April The US Department of State Bureau of Industry and Security publishes a final rule which, amongst other things, extends the country scope of chemical and biological licence requirements. Under the rule, controls on chemical and biological equipment and related technology included on the commerce control-lists of the Australia Group (AG) are extended from applying to certain countries of concern to all states that are not members of the AG.

14-15 April In The Hague, there is an EU seminar on *Preparations for the Sixth BTWC Conference: How to Strengthen the BTWC?*, which is organized and hosted by the Dutch Ministry of Foreign Affairs.

15 April The OPCW Technical Secretariat reports that 92 inspections have so far been completed at a total of 72 sites since 1 January 2005. The breakdown of completed inspections is as follows: 27 at CWDFs, 6 at CWPfFs, 5 at CWSFs, 27 DOC inspections, 1 at an old chemical weapons site, 3 at a Schedule 1 facility, 16 at Schedule 2 facilities, and 7 at Schedule 3 facilities. Also, 15 CWDF, 6 CWPfF, 3 CWSF, and 2 Schedule 3 facility inspections were in the process of being completed.

The OPCW also reports that 2,037 inspections at 825 sites had been completed since entry into force. The breakdown of completed inspections is as follows: 24 at ACW sites, 507 at CWDFs, 333 at CWPfFs, 269 at CWSFs, 8 at destruction of hazardous chemical weapon sites, 260 DOC inspections, 1 at an emergency destruction of chemical weapons site, 57 at old chemical weapons sites, 1 'other', 142 at Schedule 1 facilities, 291 at Schedule 2 facilities, and 144 at Schedule 3 facilities.

15 April The US Department of Defense (DoD) issues a press release stating that it has reached an agreement with the Canadian Department of National Defence and the UK Ministry of Defence to co-operate in developing a human vaccine against the plague. Information on development of a vaccine for the plague has been shared among the three countries since 2000, in accordance with the provisions of a memorandum of understanding. The DoD states that the UK candidate is a "purified subunit vaccine containing the F1 and V antigens purified separately from recombinant *Escherichia coli* and then mixed together", while the DoD candidate "contains the F1 and V antigens linked together as a fusion protein". According to the DoD, the joint effort will continue until late 2005, at which time the DoD will evaluate both vaccine candidates and select the one for continued advanced development.

16-17 April In Oegstgeest in the Netherlands, there is a special high level workshop of the Pugwash Study Group on the Implementation of the CBW Conventions which addresses *Present Trends and Future Policy Choice*. The workshop is attended by 27 participants from 10 countries, all in their personal capacities.

18-20 April In Arlington, Virginia, the third conference on *Bio-Chem Defense Vaccines and Therapeutics* takes place. The aim of the conference, which is sponsored by the Association of Schools of Public Health (ASPH), is to identify opportunities for meeting the USA's need for chemical and biological defence vaccines and therapeutics.

18-21 April In Sydney, the Australia Group (AG) convenes for its annual plenary meeting. The annual meeting – held in Australia for the first time to mark its twentieth anniversary – is opened by Australian Minister for Foreign Affairs Alexander Downer. The AG welcomes Ukraine as a new participant, bringing the total number of participating countries to thirty-nine plus the European Commission. A press release issued by the AG following the meeting reads as follows: "Participants welcomed ... Israel's recent announcement that it would adhere to the Group's guidelines, which the Group encouraged all countries to voluntarily adopt... Addressing concerns over terrorists' interest in dispersal devices for biological agents, participants agreed to add the most threatening aerosol sprayers to the biological equipment control list. Existing controls on pumps and genetically modified organisms were revised to assist enforcement and help exporters better understand their obligations. As part of the Group's ongoing efforts to keep its common control lists up to date and scientifically relevant, participants also agreed to examine the addition of up to 25 more biological agents to the control lists... To increase the timeliness and effectiveness of information sharing between participants, the Australia Group Information System was established as a secure electronic communication tool between participants."

18-22 April In Spiez, Switzerland, the eighth Chemical Weapons Chief Instructor Training Programme (CITPRO VII) takes place at the NBC Training Centre. Thirty-four participants from twenty-one CWC states parties attend the exercise, including Algeria, Bulgaria, China, Côte d'Ivoire, Cuba, Georgia, Ghana, Greece, Guinea, Iran, Italy, Kyrgyzstan, Malta, Moldova, Nigeria, Romania, Russia, Saudi Arabia, Sweden, Turkey and Uzbekistan. Jointly organized by the government of Switzerland and the OPCW, the course aims to provide participants with basic knowledge in the field of protection against chemical weapons, practical emergency training in the case of attack, and instruction on proper procedure for first responders.

19 April Tokyo High Court rejects claims for compensation by a group of ten Chinese claimants who claim, *inter alia*, to have been the victims of biological experiments perpetrated by the Japanese Imperial Army during the Second World War at Unit 731 in the north-eastern Chinese city of Harbin. The lawsuit was originally filed in 1997 by 180 claimants. Judge Masahito Monguchi upholds an earlier decision by the Tokyo District Court that international law prohibits foreign citizens from seeking compensation directly from the Japanese government, ruling that compensation issues had already been settled under post-war treaties between Japan and other nations [see 27 Aug 02]. Though the court refuses to provide details of the decision, lawyers for the claimants say Monguchi ruled the statute of limitations had expired, it thus being late to seek damages. The claimants, who included relatives of

the victims, had demanded \$186,000 each and an official apology from the Japanese government.

19 April The UK Ministry of Defence (MoD) is granted permission by the High Court to challenge the verdict of 'unlawful killing' reached at the inquest into the death of Ronald Maddison in 1953 [see 15 Nov 04]. Justice Collins says the case raises points "which it would be impossible to say are not arguable... Of course, that is not to say the [the MoD] will succeed". Maddison died within minutes of the start of an experiment involving sarin at the Porton Down research establishment. An inquest at the time held in private for "reasons of national security" ruled that he died from asphyxia.

19 April In London, there is a workshop on *The Changing Face of Proliferation*, hosted by the International Institute for Strategic Studies (IISS) and organized jointly by the IISS and the Center for Strategic and International Studies (CSIS). The aim of the workshop is to gain a better insight into the possible future trends in the proliferation WMD.

19 April From the USA, the *Annals of Internal Medicine* publishes research which concludes that a combination of immunization plus antibiotics is the most cost-effective way to treat people who may have been exposed to anthrax during a bioterrorist attack. Researchers from the Stanford University School of Medicine, and the University of Toronto developed a model to compare potential costs, harm and benefits of four response strategies following a release of anthrax from an aircraft over a large city. The strategies were: no vaccination or antibiotics; vaccination alone; antibiotics alone; or a combination of antibiotics and vaccination. The team led by Douglas Owens from the Stanford University School of Medicine concluded that a vaccination-antibiotics combination was the most effective – and least expensive – costing an estimated \$46,099 per person, and resulting in an average four-month gain in life-expectancy when compared to vaccination alone. The combination approach also resulted in a net cost saving of \$355 per person when compared to vaccination alone. The study also concluded that widespread, preventative vaccination was not cost-effective, e.g. in a city of five million people, such an effort would cost between \$500 million and \$1 billion, without appreciable health benefits.

21 April Niue deposits its instrument of accession to the CWC with the UN Secretary-General. In thirty days, Niue will become the 168th [see 20 Oct 04] party to the Convention.

21 April In Myanmar, government forces used an exploding device that emitted yellow smoke and a "highly irritating odour" during the shelling of a Karenni (force opposed to the government) camp near the country's north-western border with Thailand on 15 February, according to Christian Solidarity Worldwide (CSW). President of CSW Martin Panter says that on 14 April he interviewed five Karenni fighters who suffered symptoms as a result of the alleged attack. A draft report by Panter states: "Allegations had been made that on February 15 at a Karenni border post known as Nya My, some 10km west of the Thai hill town of Mae Hong Son following a prolonged period of heavy artillery shelling starting on January 14, a heavy artillery device exploded in the camp ... with a very distinctive yellow [and a] highly irritating odour. Within minutes those soldiers near enough to inhale vapours from this device became extremely distressed with irritation to the eyes, throat, lungs and skin. Subsequently some developed severe muscle weakness and one coughed up blood. All lost weight between 5-10kg over the ensuing 4 weeks... Using the

[Jones {sic} Chem-Bio Handbook] agent indicator matrix and conducting clinical examinations of five of the soldiers who were effected by this explosive device, additionally using evidence from another doctor – who examined the patients of 21 February 2005, strong circumstantial evidence exists for the use of chemicals, particularly nerve agents, pulmonary agents and possibly blister agents.”

The next day, during a press conference in Yangon, Myanmar Information Minister Kyaw Hsann denies the allegation, saying, “Myanmar has no technology to produce any chemical weapon”.

Four days later, two Myanmar soldiers defect to the Karenni forces and testify “to the widespread use of chemical weapons”, according to Panter, who says he interviewed the two a week after the allegation surfaced. Panter says: “[Myo Min – one of the two defectors, aged fifteen and who had been in the army for one month – says] he had to carry boxes of chemical weapons to the front line almost from the day he arrived... Each box had the emblem of a skull and cross bones on it... He said that whenever these chemical shells were fired soldiers had to wear full head masks and gloves. They were usually launched from a mortar launcher but said there were a number of ways in which they were delivered. But he had only seen the mortar launch, and said that during an artillery attack on Karenni positions they worked on one shell in four being a chemical shell.” Panter says that Soe Thu – the other defector, aged sixteen and who had been with the army for two months – said “the chemical shells were quite different to normal heavy artillery; they were lighter and painted a ‘white colour’”.

21-22 April In Cartagena, Colombia, there is the sixth regional meeting of CWC national authorities in Latin America and the Caribbean, jointly organized by the national authority of Colombia and the OPCW. The purpose of the meeting – which is attended by thirty-seven participants from twenty-six states parties and two non-states parties – is to assist in the identification of common implementation problems and means to resolve them through co-operation. A review is also undertaken of progress made towards meeting the targets set by the Plan of Action on the Implementation of Article VII of the CWC adopted at the eighth session of the Conference of CWC States Parties [see 20-24 Oct 03].

On the second day of the meeting, the OPCW and the General Secretariat of the Andean Community (CAN) conclude a Memorandum of Agreement, the aim of which is to promote the aims and objectives of the CWC and to promote peace and security in the region generally. The objective of CAN – comprising Bolivia, Colombia, Ecuador, Peru and Venezuela – is to increase economic and social development among its members through integration and co-operation.

22 April The Colombian-US effort of spraying coca crops with the herbicides glyphosate and cosmo-flux does “not present a significant risk for human health” or the environment, according the results of a study by an agency of the Organisation of American States (OAS) [see 23-24 Sep 04]. Reuters news agency states that the study by the Inter-American Drug Abuse Control Commission is the first major international study into the health effects of spraying, although, it says, that investigations in Colombia had drawn similar conclusions [see also 22 Mar 04]. Responding to news of the study, Colombian Interior Minister Sabas says: “This scientific study shows us the way. We are doing the right thing and we are going to continue the spraying program.”

22 April The US Government Accountability Office transmits to Congress *Agent Orange: Limited Information is Available on the Number of Civilians Exposed in Vietnam and*

Their Workers' Compensation Claims. It states: “For the 32 civilian workers' compensation claims for diseases associated with Agent Orange exposure identified, we found that claimants faced many obstacles and that to date, most of the claims have been denied... [The Department of] Labor should enhance its processing and management of claims.”

22-23 April In FÜRIGEN, Switzerland, there is a conference on *Meeting the Challenges of Bioterrorism: Assessing the Threat and Designing Biodefense Strategies*. The aim of the conference – organized by the Center for Security Studies at the Swiss Federal Institute of Technology (ETH) – is to assess the threat from bio-terrorism, identify various biological threat perceptions, and explore the status of the current debate on biological defence.

23-27 April In Muscat, Oman, an advanced training course for response teams takes place, organized jointly by the government of Oman and the OPCW. The course involves both the practical and theoretical aspects of protection against a chemical weapons attack.

24 April *The (London) Independent on Sunday* reports that *Iraq's Weapons of Mass Destruction: The Assessment of the British Government* [see 24 Sep 02] contained, in the Arabic translation also published by Downing Street, “significant deletions and changes in text that substantially altered its meaning”. A translation of the Arabic version of the dossier, commissioned by the newspaper had also reveals such alterations as “biological agents” becoming “nuclear agents”.

25 April In Brussels, there is another meeting [see 050125] of the Bioterrorism Reporting Group of the New Defence Agenda (NDA), this time on *Countering Bioterrorism: How Can Europe and the United States Work Together?* The group comes up with six recommendations that it proposes “be put forth to policymakers in the EU and beyond”.

25 April The US Iraq Survey Group (ISG) releases a 92-page addendum to its *Comprehensive Report of the Special Advisor to the DCI on Iraq's WMD* [see 6 Oct 04]. In the addendum, Head of the ISG Charles Duelfer says: “After more than 18 months, the WMD investigation and debriefing of the WMD-related detainees has been exhausted... Based on the evidence available at present, ISG judged that it was unlikely that an official transfer of WMD material from Iraq to Syria took place. However, ISG was unable to rule out unofficial movement of limited WMD-related materials... ISG has not found evidence to indicate that Iraq did not destroy its BW weapons or bulk agents. However, even if biological agents from the former program do remain they probably have significantly decreased pathogenicity because Iraq never successfully formulated its biological agents for long-term storage... ISG judges that Iraq's remaining chemical and biological physical infrastructure does not pose a proliferation concern. The effects of sanctions, war, and looting have destroyed, displaced, or severely degraded much of Iraq's dual-use equipment. However, the missing equipment could contribute to insurgent or terrorist production of chemical or biological agents.” In a note accompanying the addendum, Duelfer says: “For now, this report is the best picture that could be drawn concerning the events, programs, policies, and underlying dynamics of the relationship of the former Regime to WMD over the last three decades... Given the access to individuals involved in these programs, it would seem probable that someone would have given some concrete indication of surviving or undeclared capability.”

27 April In the UK, the British Broadcasting Corporation (BBC) publishes extracts of the hitherto confidential advice from the Attorney-General to the Prime Minister regarding the legality of the war against Iraq. The next day, the government publishes Lord Goldsmith's advice of 7 March 2003 in full. The advice states: "[T]he language of resolution 1441 leaves the position unclear and the statements made on adoption of the resolution suggest that there were differences of view within the Council as to the legal effect of the resolution... In these circumstances, I remain of the opinion that the safest legal course would be to secure the adoption of a further resolution to authorise the use of force... Nevertheless, having regard to the information on the negotiating history which I have been given and to the arguments of the US Administration which I heard in Washington, I accept that a reasonable case can be made that resolution 1441 is capable in principle of reviving the authorisation in [resolution] 678 without a further resolution... However, the argument that resolution 1441 alone has revived the authorisation to use force in resolution 678 will only be sustainable if there are strong factual grounds for concluding that Iraq has failed to take the final opportunity... In other words, we would need to be able to demonstrate hard evidence of non-compliance and non-cooperation. Given the structure of the resolution as a whole, the views of UNMOVIC and the IAEA will be highly significant in this respect... In the light of the latest reporting by UNMOVIC, you will need to consider very carefully whether the evidence of non-cooperation and non-compliance by Iraq is sufficiently compelling to justify the conclusion that Iraq has failed to take its final opportunity... In reaching my conclusion, I have taken account of the fact that on a number of previous occasions ... UK forces have participated in military action on the basis of advice from my predecessors that the legality of the action under international law was no more than reasonably arguable. But a 'reasonable case' does not mean that if the matter ever came before a court I would be confident that the court would agree with the view... I do not believe that there is any basis in law for arguing that there is an implied condition of reasonableness which can be read into the power of veto conferred on the permanent members of the Security Council by the UN Charter. So there are no grounds for arguing that an 'unreasonable veto' would entitle us to proceed on the basis of a presumed Security Council authorisation. In any event, if the majority of world opinion remains opposed to military action, it is likely to be difficult on the facts to categorise a French veto as 'unreasonable'... If we fail to achieve the adoption of a second resolution we would need to consider urgently at that stage the strength of our legal case in the light of circumstances at the time."

In a television interview, Foreign Secretary Jack Straw says that between 7 and 17 March 2003 "circumstances" changed, which affected Goldsmith's advice [see also 7 Mar 04]. On 17 March 2003, in response to a question, in the House of Lords, asking him for his view on the legality of the war, Goldsmith had removed the caveats from his advice. He said: "A material breach of Resolution 687 revives the authority to use force under Resolution 678... It is plain that Iraq has failed so to comply and therefore Iraq was at the time of Resolution 1441 and continues to be in material breach. Thus, the authority to use force under Resolution 678 has revived and so continues today. Resolution 1441 would in terms have provided that a further decision of the Security Council to sanction force was required if that had been intended. Thus, all that Resolution 1441 requires is reporting to and discussion by the Security Council of Iraq's failures, but not an express further decision to authorise force."

27 April In the US Senate, the Committee on Homeland Security and Governmental Affairs holds a hearing on *Chemical Attack on America: How Vulnerable Are We?* The aim of the hearing is to determine whether the risk of a terrorist attack on the chemical industry warrants a legislative solution, and, if so, what that solution should be. Those testifying include Government Accountability Office Director of Natural Resources and Environment John B Stephenson [see also 28 Mar].

27 April The US National Research Council publishes a committee report on *Effects of Nuclear Earth-Penetrator and Other Weapons*. The report concludes that using an earth-penetrating nuclear weapon to destroy a fortified bunker housing a chemical weapons facility would cause more civilian deaths from the blast than the resulting dispersal of chemical agents. "Using an earth-penetrating weapon to destroy a target 250 meters deep – the typical depth for most underground facilities – potentially could kill a devastatingly large number of people," says head of the committee John Ahearn.

27 April In Alabama, the Anniston chemdemil facility commences destruction of its stockpile of 155mm shells filled with the nerve agent sarin. The operation is expected to last for two months [see also 12 Oct 04].

28 April *The (London) Guardian* reproduces a copy of a report, dated 15 March 2003, released by UK Foreign Secretary Jack Straw on Iraqi non-compliance with UN Security Council Resolution 1441. The report, reproduced in the Butler Inquiry [see 14 Jul 04], states: "Outstanding issues that were not resolved in Iraq's 7-8 December Declaration include... Amount of mustard gas unaccounted for is at least 80 tonnes (in 550 shells and 450 aerial bombs) - but 'based on a document recently received from Iraq, this quantity could be substantially higher' (Unresolved Disarmament issues, 6 March)... 'Given Iraq's history of concealment with respect to its VX programme, it cannot be excluded that it has retained some capability with regard to VX' that could still be viable today. There are significant discrepancies in accounting for all key VX precursors. Iraq said it never weaponised VX - but UNSCOM found evidence to contradict this. (Unresolved Disarmament Issues, 6 March). It was not until 15 March - over three months after the specified date for the Declaration - that Iraq provided a further document which it claimed contained additional information (although this remains unconfirmed)... 'It seems highly probable that destruction of bulk agent, including anthrax, stated by Iraq to be at Al Hakam in July/August 1991, did not occur. Based on all the available evidence, the strong presumption is that about 10,000 litres of anthrax was not destroyed and may still exist'. (Unresolved Disarmament Issues, 6 March) Failure to account for all of the aircraft associated with the L-29/Al-Ba'aa remotely piloted vehicle (RPV) programme. Furthermore, there is no explanation of 27 June 2002 RPV flight of 500kms (the proscribed limit is 150kms)... Failure to account for material unaccounted for when UNSCOM were forced to withdraw from Iraq in 1998: for example, what happened to up to 3,000 tonnes of precursor chemicals, including 300 tonnes unique (in the Iraqi programme) to the production of VX nerve agent? UNSCOM estimated that quantities of undeclared growth media could have produced: 3-11,000 litres of botulinum toxin; 6-16,000 litres of anthrax, and 5,600 litres of clostridium perfringens. (Amorim and Butler reports, 1999)."

28 April In the US Senate, the Committee on

Appropriations, Homeland Security Subcommittee holds a hearing on *Bioterrorism and Bioshield*. Among those testifying are Assistant Secretary Science and Technology Directorate, Department of Homeland Security, Penrose Albright, and Assistant Secretary Public Health Emergency Preparedness, Department of Health and Human Services Stewart Simonson.

30 April In Paris, a meeting takes place in support of the Vietnamese claimants who recently had their claim for compensation, for exposure to Agent Orange during the Viet Nam War, dismissed by a US district court [see 10 Mar]. The conference is organized by the Vietnam-Dioxin Association,

a Paris-based non-governmental organization founded in May 2004 with the mission of disseminating information on the consequences of the use of the dioxin during the war on the Vietnamese people. [See also 11-12 Mar]

This Chronology was compiled by Nicholas Dragffy from information supplied through HSP's network of correspondents and literature scanners.

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The Future of the Bulletin, 2

In a box on the back of our December 2004 issue, CBWCB 66, we asked readers for their advice on the future of our publication: "Times have changed greatly since 1988 when we began publishing this quarterly Bulletin. Yet its type of content, underlying philosophy and basic format have remained largely unchanged. Moreover, CBW has become a more prominent subject in national and international politics, and developments affecting its future seem to be becoming more frequent. So HSP has had to put more of its resources, which are increasingly limited, into monitoring what is happening in order to ensure that the Bulletin continues to provide a reliable systematic record. The time has thus come for HSP to consider radical changes in the Bulletin."

We are grateful to the few percent of our readers who responded. In all cases the responses were thoughtful and constructive, and they all urged continued publication on the grounds that the Bulletin is unique and fulfils several needs. That the responses were also, in their detail, contradictory is unsurprising, for it reflects our own uncertainty about where emphases should in future be placed. Some valued the *News Chronology* above all else; others said they rarely read it. Some appreciated *Progress in The Hague* and *Report from Geneva*; others recommended summary accounts or web-posting only. Some (to our slight surprise) saw pressing value in the *Recent*

Publications feature. Some wanted more emphasis on invited articles, others less. Some urged greater resort to electronic publication, while others stated a strong preference for paper copies (in fact the printing and mailing costs are a minor part of the overall costs of the Bulletin, which, because of our over-riding stress upon quality and accuracy, are dominated by salary and infrastructure costs). Our reaction, in this issue of the Bulletin, has been to stop *Progress in The Hague*, not least because of the way the OPCW's own *Chemical Disarmament* has been developing, and to expand the invited articles, but otherwise to keep things much the same.

Whether this is an acceptable or a regrettable reaction, or whether we should choose some other course, we invite you, our readers, to tell us. In that same vein, we would also ask those of you who have not yet responded to our original request to do so now. The charitable grant-making foundations that support the Harvard Sussex Program and thereby subsidize the Bulletin so heavily are observing our efforts at engaging your help. Our present funding situation makes closure of the Bulletin a distinct possibility, meaning that unresponsiveness can only militate against continued publication.

So please send your comments to Julian Perry Robinson at HSP, University of Sussex, preferably by e-mail to j.p.p.robinson@sussex.ac.uk. Thank you!

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Editors

Matthew Meselson
Department of Molecular and Cellular Biology
Harvard University
7 Divinity Avenue
Cambridge, Massachusetts, 02138
United States of America
[Tel: 617-495-2264. Fax: 617-496-2444]

Julian Perry Robinson
SPRU - Science and Technology Policy Research
University of Sussex
Brighton BN1 9QE
England
[Tel: 01273-678172. Fax: 01273-685865]

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