

# THE CBW CONVENTIONS BULLETIN

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## PARADISE LOST: THE PSYCHO AGENTS

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*In the third Chapter of Sun-Tzu's military classic The Art of War<sup>1</sup> is conveyed the wisdom that preserving a nation, army, battalion, company, or squad is best, and destruction is second best. Later in his fifth Chapter it is stated that a commander engages with the orthodox and garners victory through the unorthodox. To these ends the utility of chemical warfare led to the invention of the psycho agents.*

After the First World War, advocates of chemical warfare put forth the notion of its humanitarian aspects. They defined humanitarian as an avoidance of death, followed by practical complete recovery. There was some merit to the claims comparing the plight of chemical casualties with those from mechanical injuries of bullets, shrapnel, and explosives. Ernst Friedrich's pictorial classic *War Against War!* (1924) is pivotal to reaching an understanding of this point. Unfortunately, the plight of chemical casualties at the time relied on questionable statistical evidence. Pacifists and humanitarians did not embrace war by any means, even if it had no permanently debilitating consequences.

The soldiers that molded the character of the United States Army Chemical Warfare Service believed they were proprietors of an awesome weapon with yet unrealized potentials. The problem was technical. It was not until after the Second World War, with a revolution in the pharmaceutical industry, that a realistic potential of chemical warfare without fatalities seemed to become a possibility.

Prior to this point there were only two classes of chemical warfare agents: those safe enough for training and riot control use (harassing agents), and the mass casualty agents for general war that were likely to result in death or permanent injury (lethal agents). A new class of chemical agents needed to be invented – the incapacitating agents.

The harassing agents did not require medical intervention, and had fleeting effects lasting only minutes or hours. Lethal agents necessitated medical intervention, and hospitalization in excess of a few days. The emerging incapacitating agents could, it was thought, assure casualties for a day or more and medical intervention was not needed in order to avoid death or permanent injury. A division in incapacitating agents soon became apparent between those affecting the mental faculties (psycho agents), and those that affected the physiological processes of the body, e.g. temporary paralysis. Only the psycho agents seemed sufficiently safe and logistically feasible to warrant standardization by the United States Army Chemical Corps.

### **Psycho agents**

The psycho agents consisted of central nervous system (CNS) stimulants, such as Lysergic Acid Diethylamide (LSD), and CNS depressants, such as Agents SN, BZ, and EA3834. In a publicity effort, the Chemical Corps showed the potential of incapacitants (K Agents)<sup>2</sup> with animal experiments that proclaimed the new agents as 'fear gas' or 'war without death'. Infamous at the time, and a celebrity within the Chemical Corps, was the cat exposed to an aerosol of LSD that became frightened of a mouse (figures 1 and 2). The cat later had a healthy litter of kittens.

The psycho agents incapacitated primarily by interfering with cognitive mental abilities and produced delirium or hallucinations. The produced spectrum of mental aberrations ranged from colourful mental sensation-confusing states (CNS stimulants - hallucinations) to black and white dream-like scurrility (CNS depressants - deliriums).

The CNS depressants dominated the Chemical Corps' psychochemical programme into its weaponization phase. The first agent to be standardized was Agent SN, followed by the preferred Agent BZ. Then later, EA3834 became BZ's prime replacement candidate. Interest in the incapacitating agents remains throughout the world in the current search for 'nonlethals' for purposes such as law enforcement.

For a lung effect, the principle anatomic barrier is the lung-blood barrier. Psycho agents have an additional blood-brain barrier to circumvent. The CNS depressants, though chemically different, typically relied on a tertiary amine to

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penetrate the blood-brain barrier and depress the synaptic activities of the brain. Furthermore, the psycho agents are generally anticholinergic, having a pharmacological action similar to the nerve agent antidote Atropine.

With such a specific site of action, the dose-response curve for these agents is steep. The degree of incapacitation and hence the requisite dose was always a matter of debate. Disruption of cognitive abilities could be produced at relatively low doses, comparable to the incapacitating doses of the G-series nerve agents. Rendering a person incapable of functioning within their environment often required doses around those of the lethal index for the G-series nerve agents, and incapacitation from ataxia or a coma-like state required quantities approaching those of the lethal index of First World War chemical agents.

Also, like designer drugs, modifying the chemical structure of the psycho agents - by changing functional groups, lengthening hydrocarbon chains, or replacing phenyl with thienyl rings - greatly modified the duration, degree, and type of incapacitation. For example, a lengthened hydrocarbon chain on the quinuclidine group of Agent BZ displaces its incapacitation budget into increased ataxia.<sup>3</sup>

### **Agent SN (Sernyl)**

First synthesized in 1926, it was not until the 1950s that the chemical phencyclidine attracted medical interest. The Parke-Davis Company hoped that its candidate Sernyl, named for its intended somnolent effect, would be highly valued among the surgical anesthetics because of its uncommon cardiovascular and respiratory stimulation. However, clinical trials in 1957 demonstrated a disturbing dissociative effect, with post-operative thought disturbances and agitation. By 1965, Parke-Davis had discontinued its interest in Sernyl, though they later promoted it in a salt formulation for use as a veterinary immobilizing agent (Sernylan).

The Chemical Corps was alerted to the potential of Sernyl as an incapacitant in 1959, and investigated its potential at Edgewood Arsenal, renaming it EA 2148. A limited number of *per oral* and aerosol laboratory studies using human subjects before 1960 demonstrated a high degree of variability in its effects.<sup>4</sup> Nonetheless, the manufacturing process for Sernyl was well established and the United States approved its adoption for chemical weapons as Agent SN under Project NEWYEAR, a program that sought to deliver incapacitating munitions by 1960.<sup>5</sup> The British were unimpressed with the decision, believing that the dosage requirements were unattainable in the field.

The envelope-of-action for SN is a 30 minute to one hour onset, with duration-of-effect lasting 8 to 24 hours. At 25 – 50 mg·min/m<sup>3</sup> SN is anesthetic, and dosages over 100 mg·min/m<sup>3</sup> begin to be incapacitating with mental disturbances. The United States and British believed that the IC<sub>50</sub> for employment needed to be around 1,000 mg·min/m<sup>3</sup>, a dosage producing marked ataxia and verging on a coma-like state. Dosages approaching 3,000 mg·min/m<sup>3</sup> had been survived without convulsions or adverse sequelae, resulting in a duration-of-action of 1 – 2 days.

Agent SN had a reasonable margin of safety, with *per oral* ID<sub>50</sub> and LD<sub>50</sub> estimates being 10-20 mg/man and 100 mg/man respectively. Death, if it ensued, followed a coma-like state and resulted from cardiovascular and respiratory failure.

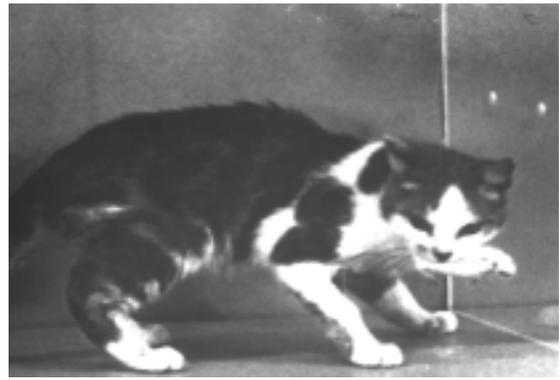


Fig 1: Cat not on LSD treating a mouse as cats do

Sernyl is more commonly known as PCP, or the illicit drug 'Angel Dust'. As such, Sernyl has the distinction of being the only drug that non-human primates will self-inject. Its illicit recreational use in US 'markets' started in the mid-1960s, peaked about 1980, and was replaced by other drugs in the mid-1980s. The erratic and violent behavior produced by PCP is well known today: it makes criminals seemingly invulnerable because of their inability to sense pain while remaining fully mobile. If Agent SN had been used under combat conditions, the results may well have not been the 'sommolence' envisioned, but more like something out of the movie *Night of the Living Dead*. Though approved, Agent SN munitions were never produced.

### **Agent BZ (Buzz)**

Hoffmann-La Roche Inc invented 3-quinuclidinyl benzilate in 1951, while they were investigating antispasmodic agents resembling Tropine for the treatment of gastrointestinal conditions.<sup>6</sup> Interest in the drug as a potential chemical warfare agent followed a screening program that took place in about 1959 at the University of Chicago College of Medicine, in cooperation with an outside commercial firm.<sup>7</sup> Edgewood Arsenal soon investigated it under the name EA 2277, and it became the single most important agent under consideration. Originally given the military symbol TK, it was standardized for use in chemical munitions in 1961 under the name of Agent BZ. But the unofficial name for the agent emerged as 'Buzz', because of the mental aberrations it purportedly caused.

Millmaster Chemical manufactured 100,000 lbs of BZ for

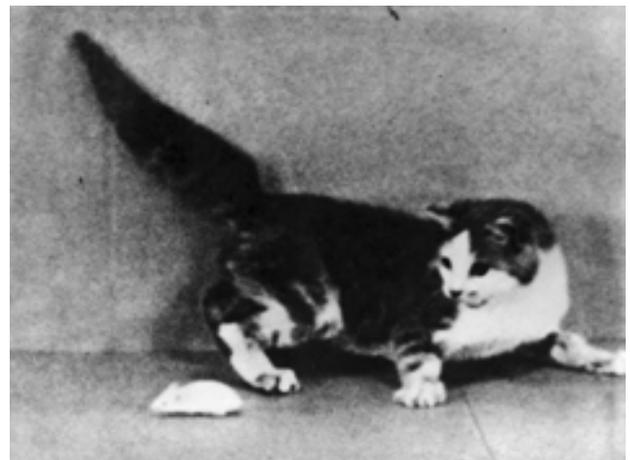


Fig 2: Cat on LSD terrified of mouse

the US Army in 1963 – 1964, and shipped it by rail in 16-gallon drums to Pine Bluff Arsenal for filling into munitions.<sup>8</sup> Given the  $Q_{50}$  for BZ, this signified a quantity adequate for a single action on a Brigade or town-sized target (15 km<sup>2</sup>). 10,000 lbs of BZ would be used through the 1960s for weapons development and field trials. There was consideration of numerous weapon systems, ranging from small-arm grenades and MARS smoke generators to aerial spray tanks and ballistic missile warheads (notably the Padeye and CBU-16A/A dispensers). However, only two weapon systems attained significant standardization:<sup>9</sup>

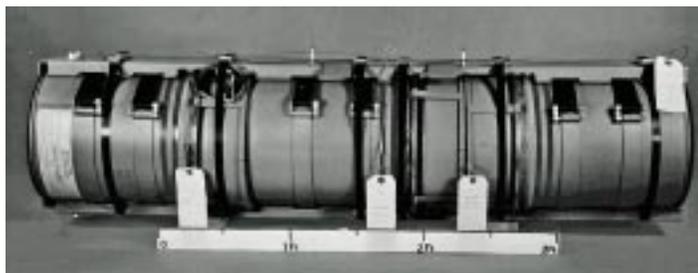


Fig 3: 175-lb generator cluster (M44 or E154)

- The 175-lb generator cluster (M44 or E154) - for delivery by light aircraft used for observation and spotting in tactical combat. It was composed of three 50-lb thermal generators (M16) that resembled the standard US floating smoke pot filled with thermal canisters and a chute attachment dropped from a hard-back assembly (figure 3).<sup>10</sup>

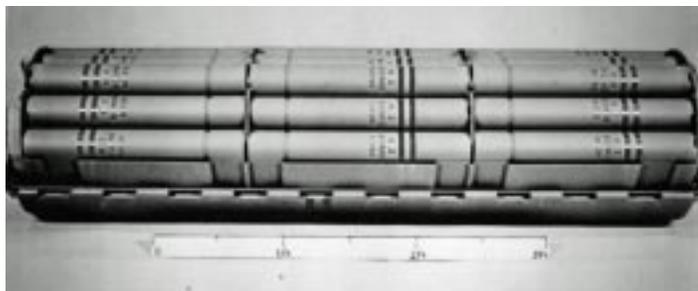


Fig 4: 750-lb bomb cluster (M43 or E153)

- The 750-lb bomb cluster (M43 or E153) - also for subsonic aircraft delivery, using a standard cluster adapter that could be adapted for high-speed delivery by adding aerodynamic tail fairing. It was composed of 57 M138 thermal bomblets that resembled the standard US 10-lb smoke bomblet (figure 4).

These weapon systems were intended only to cover targets of about 0.11 to 0.88 hectares respectively – used against squad- to company-sized targets; they were to be used for special operations against hard targets of intelligence value, hostage/prisoner rescue, or in cases where friendly and threat forces were intermingled.<sup>11</sup> Only about 1,500 of these munitions were stockpiled. There were also other employment concepts envisioned, based on the low-intensity conflict experiences in Algeria and Berlin. But the Chemical Corps formulated its employment doctrine in a vacuum; other military branches never furnished end-user requirements.

BZ was a complex agent to synthesize, and rather expensive. At \$40/kg at the time of its manufacture, it was probably the single most expensive chemical agent standardized by the US.<sup>12</sup> The quantity purchased by the US indicates that large-area employment of BZ was not practical, and that it was reserved for more-or-less critical point situations (i.e. landing zones, special operations, and fortified positions).

Its weaponization also presented a manufacturing problem. BZ was to be disseminated by thermal munitions in a 50:50 pyrotechnic mixture. Prior to the adoption of BZ, thermal munitions were ‘dry-pressed’. Accidental ignition would occasionally occur in production lines, but as with signal smokes or tear agents, such accidents had only a transient impact on productivity. With BZ, the potential casualty effect necessitated the use of a ‘wet-pressed’ method to avoid these sorts of mishaps. The solvent used (acetone) had a deleterious effect on many of the plastics used in standard weapon systems.<sup>13</sup>

The eventual doses for BZ were somewhat higher than originally anticipated, after it was discerned that the lungs only retained 45% of the inspired agent instead of the 50% originally believed.<sup>14</sup> For a person at rest, the  $IC_{t50}$  is 170 mg·min/m<sup>3</sup>. For mild activity this dosage drops to 110 mg·min/m<sup>3</sup>. In either case, the incapacitating doses are comparable to the lethal index of the G-series nerve agents. The  $LC_{t50}$  is believed to be 200,000 mg·min/m<sup>3</sup> based on animal studies. Agent BZ was far superior to Agent SN in terms of casualty effect and safety margin.

But the operational problems that BZ presented were numerous. Its visible white agent cloud warned of its presence. Improvised masks, such as several layers of folded cloth over the nose and mouth could defeat it.<sup>15</sup> Its envelope-of-action was less than ideal. The rate-of-action was delayed (5% within 2 hours, 50% within 4.5 hours, and 95% within 9.5 hours), and the duration-of-action was variable from 36 to 96 hours.<sup>16</sup> Additionally, 50% to 80% of the casualties required restraint to prevent self-injury, and paranoia and mania were common personality traits during recovery. These uncertainties made BZ unattractive to military planners.

### EA 3834

Doubling the dosage of BZ increased the duration-of-action by an additional 40 hours. This meant burdening exploitation forces with restraining casualties well after employment. Towards the end of the 1960s Edgewood Arsenal started considering 1-methyl-4-piperidyl isopropylphenylglycolate, or EA 3834, as a replacement for BZ.

EA 3834A, a hydrochloride salt, had greater absorption for a lung effect than the base, with an  $IC_{t50}$  of 73.4 mg·min/m<sup>3</sup> (mild activity). This was somewhat better than that for BZ. The envelope-of-action was also more predictable. At the  $IC_{t50}$  the rate-of-action was 35 minutes, with duration-of-action of 10 to 15 hours. At three-times the  $IC_{t50}$ , the rate-of-action dropped to 10 minutes, with a duration-of-action that was still under 24 hours. The superior envelope-of-action to that of BZ meant that it would not be necessary for victims to be interned for a week after a 1-day combat action.

Concerns that EA3834 could produce hematuria delayed its adoption.<sup>17</sup> A human subject developed hematuria that persisted intermittently over a year. Subsequent animal studies were conducted and concluded that hematuria was possible from EA 3834, BZ, and atropine. The results were disputed

and believed to be the result of improper animal handling. No other cases of hematuria were discovered in human or animal studies, nor were there any signs of renal toxicity or pathologic lesions. It was approved, being interchangeable with CS in munitions; nonetheless, with the marginalization of the US Army Chemical Corps by the time the hematuria issue had been resolved (circa 1973) EA3834 never replaced BZ.

## Epilogue

In 1977 the United States Army declared Agent BZ obsolete. Congress funded an incinerator at Pine Bluff Arsenal in 1984, and the remaining 90,000 lbs of BZ in bulk and munitions was destroyed by 1990.<sup>18</sup> By the time the US signed the Chemical Weapons Convention, its offensive chemical program had ended, and had been laid away by agreement with the Soviet Union in 1990.

However, just as the United States declared BZ obsolete, the Soviet Union made it a priority to devise an antidote for the drug. Soviet research termed BZ as Agent 78. Iraq, prior to 1990, had also had an interest in the psycho agents and investigated what it called Agent 15 that had properties similar to the known CNS depressants. Also exemplifying the diaspora of chemical warfare that emerged from the end of the Cold War, there was a report that Yugoslavian forces had BZ-CS munitions and may have used them on opposing forces in the Balkans in the 1990s.<sup>19</sup>

Though the US had been the progenitor of the psycho agents, international interest persists. In the early 1960s, after the US had made its publicity over LSD, China was rumored to have acquired 400-million doses of LSD.<sup>20</sup> If true, it represented one of the largest commercial purchases of LSD, and incidentally amounted to a Q<sub>50</sub> for a square kilometer.

In 2001 when terrorists seized a playhouse in Moscow, a fentanyl-based agent was employed to ‘knock-out’ the terrorists and their hostages. While the subsequent assault successfully overwhelmed the terrorists, 129 hostages also perished from this ‘nonlethal’ chemical. Reminiscent of the US concern over handling BZ casualties, the Russian example serves as a case-in-point of the operational problems of the ‘nonlethals’. It demonstrated that a relatively capable special assault force was rather incapable of effectively using chemical weapons. The force was not adequately trained in handling comatose casualties, with a good number of casualties having suffocated on their own vomit. Furthermore, military surgeons were not present with their unique agent-casualty knowledge and antidotes to support civil medical responders in the cases of over-dosing. Not unique to chemical warfare, the core problem reflects the sort of issue operations researchers see repeatedly with employing highly secret weapons that lack a well-communicated doctrinal base.

## Notes

<sup>1</sup> Now popular in the West, a well-balanced rendition of this text that puts it in context with the Chinese military scholar tradition, is Ralph Sawyer, *The Seven Military Classics of Ancient China*, Westview Press, 1993.

<sup>2</sup> Some officials referred to K as a specific dis-coordinating agent (See Memorandum: *Discussion at the 435<sup>th</sup> Meeting of the National Security Council*, Thursday 18 February 1960).

<sup>3</sup> Sommer, Harold Z. *Hydroxyquinuclidine Derivatives*, US Pat.

3,919,241 (11 November 1975).

<sup>4</sup> National Research Council. *Possible Long-Term Health Effects of Short-Term Exposure to Chemical Agents: Volume 2, Cholinesterase Reactivators, Psychochemicals, and Irritants and Vesicants*, National Academies Press, 1984. pp 52 – 59.

<sup>5</sup> United States Army Chemical Corps Historical Office. *Summary of Major Events and problems: United States Army Chemical Corps Fiscal Year 1960*, Army Chemical Center, p 113.

<sup>6</sup> Sternbach, L H and S Kaiser. “Antispasmodics: Bicyclic Basic Alcohols” and “Antispasmodics: Esters of Basic Bicyclic Alcohols”, *Journal of the American Chemical Society*, vol 74 (1952), pp 2215 and 2219.

<sup>7</sup> Abood, L G, *et al*, “Structure-activity relationships of 3-piperidyl benzilates with psychotogenic properties”, *Archives Internationales de Pharmacodynamie et de Thérapie* vol 120 (1959), pp 186ff.

<sup>8</sup> “A Plan to Destroy an Old Weapon”, *Chemical Weekly*, 14 July 1982, pp 13 – 14.

<sup>9</sup> There was also the Padeye and CBU-16/A. Both of these munitions were extensively experimented with, but they did not end up as part of the eventual stockpile slated for destruction.

<sup>10</sup> The drums could be opened and the individual thermal generators used as BZ hand grenades if needed.

<sup>11</sup> *Joint CB Technical Data Source Book: Volume II Riot Control and Incapacitating Agents, Part Three: Agent BZ*, Desert Test Center, Fort Douglas, Utah, (February 1972. [AD 519455])

<sup>12</sup> Evidently, BZ was less expensive to produce than LSD, which, in his book *Tomorrow's Weapons* (1961), BG(R) Rothschild noted as not being adopted principally due to its cost. There was also a problem in that the Chemical Corps was employing LSD without a license from the rightful patent holders.

<sup>13</sup> Spurbeck, King. *BLU-30/B (Nonhazardous) Bomblet*, Honeywell Inc Hopkins Minnesota Ordnance Division, July 1968. [AD501759]

<sup>14</sup> Rosenblatt, David, Jack Dacre, Ropnald Shiotsuka, and Carl Rowlett. *Problem Definition Studies on the Potential Environmental Pollutants VIII. Chemistry and Toxicology of BZ (3-Quinuclidinyl Benzinlate)*, TR 7710, US Army Medical Bioengineering Research and Development Laboratory, Fort Detrick, MD (August 1977). [ADB030349]

<sup>15</sup> The standard North Vietnamese protective mask was a shower cap with gauze over a breathing hole – suitable protection against BZ.

<sup>16</sup> United States Army Field Manual FM 3-10B, *Employment of Chemical Agents*, 1966, pp 4 – 5, and 47.

<sup>17</sup> Davis, Sherman (historian). *Notes Taken at Edgewood Arsenal Commander's Conference, Dr. Seymour D. Silver Research Labs*, 28 January 1970.

<sup>18</sup> The demilitarization project office stated the operation was conducted without any accidents. Discussion with a former facility employee revealed that accidents did occur, but employees failed to report them to avoid work related conflicts, opting to call in sick instead.

<sup>19</sup> Human Rights Watch, *Chemical Warfare in Bosnia?: The Strange Experiences of the Srebrenica Survivors*, (<http://www.hrw.org/reports98/bosniacw/Bosni98o-02.htm>), viewed

20 March 2006. The US had also originally considered employing BZ in combination with the Tear Agent CS to mask the intent and modify envelope-of-action to be a bit quicker in casualty effect, (see CCTC Item 3960, *Classification of Cluster, Bomb, Incapacitating BZ, 750-lb., M43 (E153); Cluster, Generator, Incapacitating BZ, 175-lb., M44 (154) and Incapacitating Agent, BZ as Standard-B Types*, 26

February 1962). The concept remained in US thinking with EA 5302, a 1/3 mixture of EA 3834 in the liquid Tear Agent EA 4923.

<sup>20</sup> Harris, Robert, and Jeremy Paxman, *A Higher Form of Killing: The Secret Story of Chemical and Biological Warfare*, New York: Hill & Wang, 1982, p 188.

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## The Summer of '76

### Ian Kenyon

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**Editors' Note:** Ian Kenyon was Executive Secretary of the OPCW Preparatory Commission during the Commission's whole existence. The editors contemplate running in future issues of the Bulletin a series of personal reflections by other individuals who have been closely involved in the origins and development of the CBW conventions. Please let us know your views on this idea.

They say it is a sign of old age when memories of long past summers seem fresher than yesterday but I have particular reasons to remember fondly that summer thirty years ago. I arrived in Geneva in April 1976 after only eighteen months in the Foreign Office - which I had joined in my middle thirties as the result of an advertisement in a newspaper - to join the United Kingdom delegation to the Conference of the Committee on Disarmament. I knew nothing of disarmament, or why some preferred to talk of arms control whilst this term was anathema to representatives of what I learned to call the 'non-aligned'. Little did I realise that these subjects were to take up the greater part of the remainder of my working life!

In those days life for a disarmament diplomat was decidedly gentlemanly. The CCD met on Tuesdays and Thursdays at a somewhat notional 10 am in one of the nicer rooms in the Palais de Nations (the council chamber with its gloomy sepia murals was being refurbished) and we listened to one or two formal speeches before returning to our offices in good time for lunch. When I first arrived there were additional meetings to complete the draft of the Convention on the Prohibition of Military or any other Hostile Use of Environmental Modification Techniques but this piece of diplomatic make-work was soon finished. As the junior member of the delegation I was informed that it was my task to prepare for publication an annual government White Paper entitled "Documents on Disarmament". I was shown previous examples and told to get to work on the issue covering 1975, including the work of the CCD, the UN First Committee and the first Nuclear non-Proliferation Treaty Review Conference. The required work included a descriptive summary of the work of these bodies, texts of treaty drafts (if any), UN resolutions (of which there were a large number) and a selection of verbatim texts of speeches, all those made on behalf of the United Kingdom and the most significant of those made by others. I protested that I was completely new to the subject matter and had not been present at any of the meetings to be described. I was told to read the files, bring a fresh mind to the issues and to remember that the document I was to prepare would be unclassified. I could read what had gone on behind closed doors at the NPT meeting but only describe the public outcome. The task certainly kept me occu-

ried but I am not sure that you could say that it kept me out of mischief

I in fact acquired the most thorough 'reading in' to the current state of play in disarmament diplomacy and being young and enthusiastic I decided that my elders and betters had got it all wrong. My attention was particularly caught by the problem of chemical weapons. One of the issues of 1975 had been the entry into force of the Biological Weapons Convention, with its Article IX undertaking to continue negotiations in good faith on a Chemical Weapons Convention, another had been reaction to the introduction in the CCD by Japan in 1974 of a working paper with a proposed treaty text<sup>1</sup>. Three years before, the USSR and its Eastern European group allies had also introduced a draft treaty<sup>2</sup> which had merely taken the BWC and replaced the references to biological weapons with equivalent references to chemical weapons. I decided to try my hand at treaty drafting on the basis of my three months experience in the business.

The basis of my proposal was confidence building. It was clear that the 1925 Geneva Protocol was only inhibiting first use of chemical weapons and that neither side in the Cold War would be prepared to give up the deterrent effect of a prepared stockpile and the ability to retaliate in kind to a chemical attack unless they were persuaded that the other side was genuinely prepared to act similarly and at the same time. I therefore proposed a staged approach:

- First, the treaty would be opened for signature and all signatories would declare whether they possessed chemical weapons, if so how much, and their willingness to destroy them;
- States parties would then assess the information provided and, if satisfied that the right states were prepared to join the treaty and had provided believable declarations, would ratify ;
- When the required number of ratifications were received the treaty would enter into force and verification and other procedures would start; but
- If the required ratifications were not forthcoming within a fixed period of time, the treaty would be null and void and any party which had signed or ratified would be released from any obligation.

I asked our legal adviser in London if such an approach was valid in international law. He replied that it had not been done before but that was no reason why it could not be done. Arms Control and Disarmament department in the FCO decided they liked the idea, made sure the draft also included current Western group ideas on verification etc, and made the new draft one of the central themes of the annual speech to the CCD by the Minister for Disarmament, Lord Goronwy Roberts, in August 1976.

I have been fascinated to discover recently that the US draft CWC<sup>3</sup>, launched by then Vice President Bush in 1984 contains in its Annex III, 'Document regarding Action Prior to Entry into Force of the Convention', the proposal:

*1. When signing the Convention, every State should declare whether chemical weapons stocks or chemical weapons production facilities are under its control anywhere or located within its territory.*

Reviewing the text of the UK draft thirty years on it is fascinating how many of the features of the CWC, completed sixteen years later, are prefigured in the draft<sup>4</sup>:

- prohibitions based on a general purpose criterion;
- declaration of possession (or not) of chemical weapon stocks (including types and quantities);
- information on all production facilities capable of producing CW agents;
- information on types and quantities produced for "protective or other peaceful purposes";
- "which national organisation or authority is charged with collecting the information" supplied and with ensuring that public and private agencies comply with the convention;

- creation of a Consultative Committee to oversee the working of the Convention, including inspecting destruction, and routine inspection of relevant civil production facilities;
- non-transfer provisions;
- right to access to chemicals and technology for peaceful purposes; and
- a provision for "special investigation which may involve on-site inspection" if any State Party suspects that another is acting in breach of its obligations.

It is also clear that confidence building, through the US/USSR bilateral process, including public disclosure of possession and size of stockpiles, and public acceptance of the idea of verification, including intrusive inspection, was critical to ultimate success. I remain convinced that the UK draft, introduced that summer, was a factor in the renewal of the bilateral process as the two superpowers moved to regain the high ground in the debate on arms control and disarmament, with its vital impact on strategic stability in that troubled era.

### Notes

- <sup>1</sup> Japan, Conference of the Committee on Disarmament, CCD/420, 30 April 1974.
- <sup>2</sup> Bulgaria, Czechoslovakia, Hungary, Mongolia, Poland, Romania, USSR, Conference of the Committee on Disarmament CCD/361, 28 March 1972.
- <sup>3</sup> United States of America, CCD/500, 18 April 1984.
- <sup>4</sup> United Kingdom, Conference of the Committee on Disarmament, CCD/512, 6 Aug. 1976.

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*Report from Geneva*

*Review no 25*

## The Preparatory Committee for the Sixth BWC Review Conference

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As reported in *Bulletin 69+70* (September/December 2005), the Meeting of States Parties of the Biological and Toxin Weapons Convention (BWC) on 5 to 9 December 2005 had included in its Final Report (BWC/MSP/2005/3 dated 14 December 2005 – this and other official BWC documentation is available at <http://www.opbw.org>) a paragraph which addressed the arrangements for the Review Conference in 2006. This stated that the Meeting of States Parties noted the nomination by the Group of Non-Aligned and Other States of Ambassador Masood Khan of Pakistan to be President of the Sixth Review Conference and Chairman of the Preparatory Committee. It was further agreed that the Preparatory Committee for the Sixth Review Conference would be held in Geneva from 26 to 28 April 2006, and that the Sixth Review Conference would be held in Geneva within the period of 20 November to 8 December 2006, with the precise dates of the Conference to be decided by the Preparatory Committee. In addition, it was noted that the cost estimates for the Preparatory Committee and the Sixth Review Conference, as contained in document BWC/MSP/2005/INF.1, were approved.

### **Preparatory Committee Meeting, 26 to 28 April 2006: Opening Plenary Session**

The Preparatory Committee Meeting was opened on Wednesday 26 April 2006 in plenary session by Mr T Caughley, Director of the Geneva Branch of the Department of Disarmament Affairs, who welcomed the representatives from the States Parties and said that it was important to comprehensively review the Biological and Toxin Weapons Convention.

78 States Parties participated in the Preparatory Committee Meeting of States Parties – Algeria, Argentina, Australia, Austria, Azerbaijan, Belarus, Belgium, Benin, Bhutan, Bosnia and Herzegovina, Brazil, Bulgaria, Canada, Chile, China, Croatia, Cuba, Cyprus, Czech Republic, Denmark, Estonia, Ethiopia, Finland, France, Germany, Ghana, Greece, Guatemala, the Holy See, Hungary, India, Indonesia, Iran, Iraq, Ireland, Italy, Japan, Jordan, Kenya, Kuwait, Latvia, Lebanon, Lesotho, Libyan Arab Jamahiriya, Lithuania, Malaysia, Malta, Mexico, Morocco, Netherlands, New Zealand, Nigeria, Norway, Pakistan, Peru, Philippines, Poland, Portugal, Qatar, Republic of Korea, Romania, Russian Federation, Saudi Arabia, Slovakia, Slovenia, South Africa,

Spain, Sri Lanka, Sudan, Sweden, Switzerland, Turkey, Ukraine, United Kingdom of Great Britain and Northern Ireland, United States of America, Venezuela, Viet Nam and Yemen – ten more than at the Preparatory Committee in April 2001 for the Fifth Review Conference, as twenty states (Algeria, Azerbaijan, Belarus, Benin, Bhutan, Bosnia and Herzegovina, Estonia, Ethiopia, Ghana, Holy See, Kenya, Latvia, Lebanon, Lesotho, Morocco, Nigeria, Portugal, Qatar, Sudan, and Yemen) participated, whilst ten States (Albania, Bahrain, Bangladesh, Bolivia, Mongolia, Oman, Panama, Thailand, The Former Republic of Yugoslavia of Macedonia) did not.

Six Signatory States participated: Egypt, Madagascar, Myanmar, Nepal, Syrian Arab Republic and United Arab Emirates, four more than at the Preparatory Committee Meeting in April 2001, as five States participated (Madagascar, Myanmar, Nepal, Syrian Arab Republic and United Arab Emirates) and one then Signatory State did not (Morocco). One State neither Party nor Signatory (Israel) was granted Observer status; the same as in 2001 when the Former State of Yugoslavia participated as an observer. The Convention continues to have 155 States Parties and 16 Signatory States (see BWC/MSP/2005/MX/INF.5).

No intergovernmental organizations participated as observers, although UNDDA and UNIDIR did, as did also eleven NGOs (BWPP, CSIS, CESIM, Harvard Sussex Program, SIPRI, LSE, the Sunshine Project, the University of Bradford, the University of Hamburg, VERTIC, and the Women's International League for Peace and Freedom). Over 270 individuals from States Parties participated, of whom about 100 had come from capitals. No comparable information was provided in the report of the Preparatory Committee in April 2001 for the Fifth Review Convention (see BWC/CONF.V/PC/1 dated 1 May 2001).

In the opening formalities, in accordance with the provisional agenda (BWC/CONF.VI/PC/1) Mr T Caughley, Director of the Geneva Branch of the UNDDA, noted that item 2 was the election of the Chairman, and said that Ambassador Masood Khan of Pakistan had been nominated by the NAM Group as Chairman of the Preparatory Committee and went on to say that it was so decided. He then congratulated Ambassador Khan on his election and invited him to take the Chair.

Ambassador Khan then took the **Chair** and gave some introductory remarks in which he thanked States Parties for electing him. He then went on to say:

*Let me assure you, that inspired by high ideals and guided by a spirit of cooperation, we shall succeed together. Leadership is a collective endeavour.*

*For more than 30 years, the Biological Weapons Convention has underpinned international efforts to prevent the development, production, stockpiling, proliferation and use of biological and toxin weapons, and to ensure that the extraordinary advances in biological and medical sciences over the past few decades will be used only for the benefit of humankind.*

*While perhaps nothing can compare with the sheer destructive potential of nuclear weapons, the thought of states or non-state actors using diseases as weapons – diseases that medicine has struggled to contain for centuries – is particularly sobering and indeed frightening.*

*As the Preamble to this Convention so forcefully states, such use would be “repugnant to the conscience of mankind.”*

*With so many countries of the world struggling to control natural diseases – those affecting animals and plants as well as those affecting humans – it has become ever more imperative that strong, coordinated action by the international community is taken to ensure that the deliberate use of disease does not become a living nightmare for mankind.*

*The rapid advances in the life sciences and the worldwide growth of the biotechnology industry only add to the urgency of this task.*

*This, then, is our challenge. We are today beginning a process that we all hope will bring us to a thorough, comprehensive and constructive review of the Biological Weapons Convention, and consequently to a strengthened defense against the threat posed by biological weapons.*

*... We must do our best to build on our past achievements, as well as to move past differences and setbacks. I think it is clear that we, as States Parties, share a common objective. It is my sense that the territory of convergence is much wider than we think. Where differences may emerge we will try to bridge them. Differences can be managed and resolved and converted to agreement and common action.*

*We are very much aware of the wide range of issues which the Sixth Review Conference will have to deal with. As Chairman of the Preparatory Committee, it is my task to ensure that all these ideas are discussed and dealt with fully at the Review Conference, to the satisfaction of all States Parties. That will require preparation, and it will require making the most efficient use of our time, both over the three days of the Preparatory Committee and over the few short months available to us between now and the Review Conference in November.*

*The key task before us in the next three days is to agree on a provisional agenda for recommendation to the Review Conference. We are approaching this task with confidence and in a spirit of cooperation and flexibility. The Preparatory Committee will not prejudge the outcome of the Review Conference, but it will take a step in the right direction by agreeing on an agenda, so that we have the necessary basis and a salutary setting for taking sound decisions. At the end of our work, we should have an agenda that will facilitate a comprehensive review at the Conference, and a substantive outcome that carries the value and weight for all States Parties and which reflects their common aspirations.*

*Effective prevention of biological weapons is in the interest of all States Parties, for reasons of national security, for reasons of public health, and for reasons of agriculture, economics and development. We shall keep this in mind as we search for ways to reach agreement.*

*... My consultations with all of you, spread over months, give me solid confidence that we are determined to keep our overarching goal of a peaceful and secure world uppermost in our minds as we steer this process.*

The Chairman concluded his opening remarks by saying that he would like to move straight on with the election of the other officers of the Committee. The Preparatory Committee

then unanimously elected Ambassador Doru-Romulus Costea of Romania and Mr Knut Langeland of Norway as Vice-Chairmen of the Preparatory Committee. In addition, the Preparatory Committee authorized the Bureau to decide technical and other matters prior to the Review Conference.

The Preparatory Committee then moved on to consider its Agenda which followed the Agenda of the Preparatory Committee for the Fifth Review Conference in 2001. This was agreed, thus completing Agenda item 3.

The Chairman then said that if there were any Group statements on the procedural aspects, he would propose to take these between Agenda item 4 *Organization of work of the Preparatory Committee* and Agenda item 5 *Organization of the Review Conference*. If there were any statements by individual States Parties then it was proposed to take these prior to Agenda item 9.

The meeting went on to consider Agenda item 4 *Organization of work of the Preparatory Committee*, first agreeing that decision making would be, as traditionally, by consensus, then that the languages would be the six UN languages, and finally the participation of non-States Parties which agreed the participation of Signatory States and non-States Parties as recorded above. Consideration was then given to the participation of NGOs, which it was agreed should follow past practice: NGOs could attend public meetings and receive the documents, but not participate in discussion.

The Chairman then encouraged all delegations to register their participation. NGOs were asked to leave. However, during a short suspension, it became clear that Austria (on behalf of the EU) and Canada (on behalf of Australia, Canada and New Zealand) approached the Chair requesting that NGOs be permitted to be present during the Group statements. NGOs were subsequently invited back into the room. It later emerged that there was no indication in the records of the Preparatory Committee meeting in April 2001 as to when NGOs had been present and agreement had been reached that in April 2006, NGOs would be present for the first four Agenda items and then excluded until the penultimate Agenda item 8 *Report of the Preparatory Committee to the Review Committee*.

### Statements

Statements were then made by Malaysia (on behalf of the NAM and Other States), Austria (on behalf of the European Union and associated states), Argentina (on behalf of Argentina, Brazil, Colombia, Costa Rica, Chile, Ecuador, Guatemala, Mexico, Peru and Uruguay), Canada (on behalf of Australia, Canada and New Zealand), Republic of Korea, Russian Federation, China and Ukraine. These statements are, where available, posted on <http://www.opbw.org>.

The statement made by **Malaysia** (on behalf of the **NAM and Other States**) included the following points:

*The Group would like to reiterate its deep concern at the potential use and/or threats of use of biological agents and toxins as an instrument of war and terror. In light of this development, the Group feels that there is a greater necessity and urgency for the States Parties of the BWC to work towards strengthening and improving the effectiveness and implementation of this Convention so that together we can fully address this concern.*

*...The high importance the Group attaches to an*

*effective and verifiable BWC, implemented in a comprehensive manner, cannot be overemphasized. The members of the Group have consistently addressed this particular issue as a crucial element for regional and global peace and security.*

*...The Group would like to reaffirm our conviction that the BWC is essential for the maintenance of international and regional peace and security. We reaffirm our continued determination, for the sake of humankind, that the possibility of any use of bacteriological (biological) agents and toxins as weapons should be completely excluded, and the conviction that such use would be repugnant to the conscience of humankind.*

*...The Group further recognises the particular importance of strengthening the Convention through multilateral negotiations for a legally binding Protocol to the Convention. We believe that the effective contribution of the Convention to international and regional peace and security would be enhanced through universal adherence to the Convention. The Group stresses the particular importance of all States Parties to pursue the objectives that were set forth by the Fourth Review Conference in 1996, as we strongly believe that the only sustainable method of strengthening the Convention is through multilateral negotiations aimed at concluding a non-discriminatory legally binding agreement, dealing with all the Articles of the Convention in a balanced and comprehensive manner.*

The statement went on to say:

*...The Group is of the view that the general thrust of the Review Conference should be based on the review of the operation and implementation of all the Articles of the Convention, including consideration of the work of the 3 intersessional Meetings of Experts and States Parties in 2003, 2004 and 2005. The Review Conference will also have the task to consider future measures to further strengthen the effectiveness and improve the implementation of the Convention.*

*...We reaffirm that the 2003 - 2005 annual Meeting of Experts and the Meeting of States Parties had provided States Parties with an opportunity to exchange views and promote common understanding, taking into account national experiences, on the respective issues under consideration.*

*...The Group further reiterates that given the limited nature of the decision that was taken during the resumed session of the Fifth Review Conference and in light of the challenges and risks posed by rapid developments in the field of biological science, it will be pertinent for the forthcoming Review Conference to consider and decide on future measures that could further strengthen the effectiveness and improve the implementation of the Convention in its entirety.*

The statement made by **Austria** (on behalf of the **European Union** as well as **Bulgaria** and **Romania**, **Turkey**, **Croatia**, the former **Yugoslav Republic of Macedonia**, **Albania**, **Bosnia and Herzegovina**, **Serbia and Montenegro**, **Norway**, **Ukraine** and the **Republic of Moldova** – some 36 countries in all) included the following points:

*The EU considers it of paramount importance that all*

decisions will be taken by this session of the Preparatory Committee. This would allow maximum time for substantial preparations for the Review Conference.

...The EU attaches great importance to a thorough and full review of the operation of the BTWC in order to identify, discuss and agree on the measures to be taken to further strengthen the Convention. The EU continues to work towards identifying effective mechanisms to strengthen and verify compliance with the Convention in the longer term.

...As part of the review of the articles of the Convention States Parties should take account of the work undertaken in the intersessional programme from 2003-2005, as well as relevant international developments outside the BTWC. The agenda for the Review Conference should reflect the need for such a comprehensive approach.

...In order to facilitate such a full review process, the EU is of the opinion that sufficient time should be allowed for a thorough review. Therefore the Review Conference should have an appropriate and ample schedule of work. Finally, the EU favours decisions related to the other procedural matters to follow the custom developed over past Review Conferences.

The statement went on to say:

...As preparation to the 6th Review Conference of the Convention, the European Union has drawn up a Common Position outlining the areas of importance for the EU.

...On 27 February 2006 the European Union agreed on a Joint Action in respect of the BTWC with the objectives of promoting universality of the Convention and supporting implementation of the Convention by States Parties in order to ensure States Parties translate the international obligations of the Convention into their national legislation and administrative measures. And in parallel the European Union agreed an Action Plan in respect of the BTWC in which EU Member States undertook to submit Confidence Building Measure information to the United Nations and would like to set an example for other States Parties to follow.

...The EU intends to help building a consensus for a successful outcome to the 6th Review Conference, on the basis of the framework established by previous such Conferences, and will propose specific, practical and feasible proposals for the effective enhancement of the implementation of the Convention for the consideration of all States Parties.

...The BTWC is now 31 years old. It remains as relevant today as it was in the past. We believe that it is important that States Parties agree a substantive outcome at the Review Conference to strengthen the Convention and build a sound basis for future work. The EU looks forward to a successful Preparatory Committee this week so as to facilitate our Conference later this year. .... As to the EU's preparation to the Review Conference, there is work in progress to elaborate working papers on the basis of the Common Position and to submit them at the Review Conference.

The statement made by **Argentina** (on behalf of **Argentina, Brazil, Colombia, Costa Rica, Chile, Ecuador, Guatemala, Mexico, Peru and Uruguay**) included the

following points that these states would:

- Express their intention to examine measures that will reinforce the BWC in all its aspects, but in particular matters related to compliance, verification and the peaceful uses of biology for economic and technological development.

- Emphasize the importance of the universalization and the withdrawal of all reservations to the 1925 Geneva Protocol.

- Underline the importance of the universalization of the BWC and its full implementation. Both objectives require a constant effort.

- Share the view of the importance to provide the BWC with an adequate verification mechanism. In this regard, we are willing to develop with other delegations an incremental approach.

- Stress the importance of the ample participation of civil society, the private sector, the scientific community and pertinent international organizations in the work of the BWC.

- Propose that States Parties establish, during the Sixth Review Conference, an intersessional mechanism with a new, comprehensive and thematically structured mandate that will lead to the elaboration of recommendations and the adoption of concrete decisions.

- Express their commitment to present concrete proposals to the consideration of States Parties to the Sixth Review Conference, to be held in Geneva at the end of the year.

The statement made by **Canada** (on behalf of **Australia, Canada and New Zealand**) included the following points:

...[T]here has not been a complete review of the Convention since the 4th Review Conference in 1996, and this alone makes our work in 2006 critical. But in addition to this, the treaty itself is faced with new challenges, such as those stemming from new scientific and technological developments, including in biotechnology and genetic engineering, and the threat of terrorist acquisition and use of biological agents for malicious purposes, and we as States Parties need to come together to deal with these. As we do not have a great deal of time scheduled to discuss these issues prior to the Review Conference, we wanted to take this opportunity to share some of our views during this PrepCom.

On balance, the Convention itself has held up well in the thirty-plus years since it was first opened for signature. But as the BTWC ages, it becomes increasingly clear that there are elements where additional work may be needed to ensure its full implementation, and to strengthen its effectiveness. Underpinning this, in our view, is the need for States Parties to become more accountable to one another in how they implement the provisions of the Convention.

To this end, we should look at pragmatic steps that can achieve practical results. There are several areas where such an approach could be useful: national implementation, confidence building measures, implementation support and annual meetings.

On national implementation, the BTWC contains an obligation for States Parties to enact national legislation. Unfortunately, many have not yet done so, and we should

strive to rectify this situation.... At the same time, encouraging states to report on progress they are making towards enacting legislation could also help maintain focus on this issue, and clarify priority areas for further work.

BTWC CBMs are another area where improvements could be considered. We should ensure that the right information is being solicited and provided on an annual basis. To do this we need to have CBMs that are both comprehensive and relevant; we could also consider whether existing CBMs are sufficient, or if new ones - such as those proposed at the Fifth Review Conference - could be of use. We could also extract more value from CBMs by looking at the way the information is collected and distributed, perhaps tasking DDA to provide a disaggregated table of returns and a summary of trends or gaps. An increased rate of participation in reporting is essential to provide greater transparency to all States Parties....

Implementation of such practical measures to strengthen the treaty will ultimately depend on the efforts of states parties. But these efforts would be assisted usefully by a strengthened institutional capacity, operating under an outcomes-focussed mandate, would be a natural means of facilitating implementation and follow-up of BTWC obligations. Strengthened capacity would facilitate greater coordination with States Parties on national implementation, CBM reporting, and promotion of universalization. It could also safeguard the institutional memory of the BTWC, coordinate with other organizations, and provide background documentation/summaries of developments between BTWC meetings.

Building on the intersessional process, a more formalized meeting structure, with annual meetings combining expert-level working groups and a Meeting of States Parties, would provide much-needed continuity between Review Conferences. These annual meetings could combine pre-defined topics with an opportunity to address the range of issues currently facing the Convention and, where necessary, to take appropriate decisions.

The statement made by the **Republic of Korea** included the following points:

.... The BWC now faces new opportunities to revitalize itself through an overall review at the upcoming 6th Review Conference. In this regard, I would like to share with you our expectation on the forthcoming Review conference as follows :

1. We prefer a comprehensive review of the operations of the BTWC
2. We should set moderate and practically achievable goals by building upon past achievements
3. We prefer measures discussed under New Process to be addressed as part of article by article review
4. We are interested in discussing other issues judged to be effective in strengthening the regime such as holding of yearly meetings during the inter-sessional periods, strengthened CBMs and universality
5. We think that considerations of measures which have been taken outside the BTWC but evaluated as useful against BW related threats should also be addressed

in the upcoming Review conference as part of our efforts to strengthen the effectiveness and objective of the BTWC.

The statement made by the **Russian Federation** included the recognition that over more than 30 years of its operation, the Convention has demonstrated its viability, thereby successfully fulfilling the role of an effective instrument for preventing the proliferation of biological weapons. The Russian Federation went on to say that the Review Conferences, as envisaged under Article 12 of the BTWC, are of the greatest importance for successfully ensuring the operation of the Convention over the course of such a long period, as well as for its adherence. The statement went on to say that most of all, Russia considers that for a successful carrying out of the Review Conference, it is necessary to follow the previously successfully approved practice of an Article by Article review, as this will provide the opportunity for detailed discussion on separate aspects of the operation of the BTWC. Therefore, Russia believes that such an approach should, without fail, be reflected in the agenda for the Review Conference.

Russia went on to say that the continued explosive development of biotechnology in recent years once again compels consideration of the danger of the use of scientific achievements for hostile purposes. Part of this problem was considered when considering questions on the possibility of developing codes of conduct for biological researchers. Russia believes that the question of the risk of the use of scientific achievements in violation of the BTWC should be examined at the Review Conference. In regard to the intersessional programme of meetings, Russia considered that these discussions were entirely useful. It demonstrated the interest of the majority of BTWC States Parties in the work of strengthening the Convention. Russia believes that the experience of the intersessional meetings, where BTWC questions are discussed, should be continued after the Sixth Review Conference. In this regard, it will be necessary to elaborate at the Review Conference a further programme of work for future intersessional meetings.

The statement went on to say that Russia considered that it is extremely important that the Conference succeeds in agreeing a consensus final document that reflects, among other things, a general understanding of the States Parties understanding of the situation in which the BTWC currently finds itself. The programme for further work on strengthening the BTWC should be reflected in this document. Furthermore, Russia said that they believe, as do the European Union, the Non-Aligned Movement and others who have made statements, that questions on ensuring BTWC compliance should be addressed at the Review Conference.

The statement made by **China** included:

Since its establishment, the Biological Weapons Convention has unparalleled significance in eliminating the threat of and preventing proliferation of biological weapons. In face of the new challenges of the non-traditional security factors and the rapid development of biotechnology, the majorities of the international community calls on formulating concrete measures to further promote the universality and comprehensive and effective implementation of the Convention through multi-lateral framework.

Since the 5th Review Conference, the States Parties make use of the intersessional Meetings of Experts and States Parties to discuss the five issues to explore positively the measures to strengthen the effectiveness of the Convention. Under the current situation, it is a valuable attempt to maintain the multilateral process.

Establishing a good agenda is essential for the 6th Review Conference to achieve positive result. A good agenda should be balanced, pertinent, and practicable. China believes that reviewing the implementation of the Convention article by article, discussing the outcome of the Meetings of Experts and States Parties, establishing the future agenda of the multilateral process and measures to strengthen biological international cooperation should be the focus of the 6th Review Conference.

As for the other proposals for the agenda, China will join the discussion with an open, positive and constructive manner as long as they are helpful to promote multilateral process and strengthen the effectiveness of the Convention.

The statement made by **Ukraine** included:

*The Sixth Review Conference provides the States Parties with a real and more than acute opportunity to strengthen and increase the effectiveness of the BTWC regime. We will have an important task to sum up the past five-year period of operation of the Convention, with a view to ensure the world community in the steadfast implementation of all BTWC provisions.*

*Canada's proposals with respect to the Review Conference deserve particular attention. In this regard let me touch upon some matters of substance.*

*Universality of the Convention has always been one of the key prerequisites for its comprehensive implementation. Adherence to the BTWC makes an important contribution to international peace and security as well as global anti- terrorism efforts. In this regard we welcome the work by the EU on the Joint Action Plan to enhance the universality of the Convention through outreach activities and to help States Parties improve their national implementation by providing necessary assistance.*

*We consider this document as an important step forward and we believe that it should be approved at the Sixth Review Conference. Holding, within the Action Plan, regional and sub-regional conferences and seminars with participation of countries of Eastern and Central Africa, Middle East, Pacific region and South America that for the time being are not parties to the Convention should increase its membership.*

*Against the background of growing terrorist activities in various part of the world, the threat of 'biological terrorism' should not be underestimated. Therefore not only broader BTWC membership is essential, but its stricter national implementation is also crucially important in the international endeavours for a safer world.*

*The intersessional work programme had been very successful, filled with productive discussions aimed at joint search of concrete ways for improvement of the Convention's regime, taking into account new challenges and threats.*

*We share the view that further intersessional work*

*programme could comprise new topics, for example:*

- *strengthening of the effectiveness of the Confidence Building Measures;*
- *development of adequate measures for control over the BTWC compliance;*
- *introduction of national implementing legislation;*
- *new challenges and threats for the BTWC stemming from the latest scientific and technological developments in the spheres of biology and biotechnology;*
- *countering bio-terrorism.*

*Ukraine proceeds from the advisability to establish the international institutional mechanisms for more effective BTWC implementation. At the same time we are fully aware of the difficulties of the achieving the consensus over the ways for this idea practical realization.*

The meeting then went on to consider Agenda item 5 "Organization of the Review Conference" at which point the Secretariat advised NGOs that they should leave the room.

### **Lunchtime Presentations**

Lunchtime presentations were made on two days:

**Wednesday 26 April 2006** Seminar arranged by Department of Peace Studies, University of Bradford and the Quaker United Nations Office Geneva entitled *Successful Outcomes for the Review Conference*. Nicholas A Sims (LSE) and Graham S Pearson (Bradford) presented Bradford Review Conference Paper No 16, *Successful Outcomes for the BTWC Sixth Review Conference*, and this was followed by short statements by the representatives of three States parties which had already prepared non-papers for the Review Conference: Ambassador Paul Meyer (Canada), Ambassador François Rivasseau (France) and Ambassador Yoshiki Mine (Japan).

**Thursday 27 April 2006** Seminar arranged by the BioWeapons Prevention Project entitled *Civil Society Support for the BWC* in which three presentations were made: Daniel Feakes (Harvard Sussex Program) *Practical steps to accelerate BWC universality*; Angela Woodward (VERTIC) *Strengthening national implementation of the BWC*; and Nicholas Isla (The Hamburg Centre for Biological Arms Control) *Building transparency by improving the Confidence Building Measures*.

### **Outcome of the Preparatory Committee Meeting**

The Preparatory Committee Meeting held two public meetings – the first on the morning of the Wednesday 26 April 2006 and the second on the late morning of Friday 28 April 2006 – at which consideration was given to the agenda item 8 "Report of the Preparatory Committee to the Review Conference."

There was one working paper submitted by a State Party: that submitted by Canada (WP.1) *Towards the Sixth BTWC Review Conference: An Accountability Framework*.

At the final public plenary session on Friday 28 April 2006, the Preparatory Committee adopted its report as contained in BWC/CONF.VI/PC/2, as orally amended, to be issued as BWC/CONF.VI/2. This sets out in regard to the organization

of the Review Conference that the Preparatory Committee agreed to recommend to the Sixth Review Conference that Ambassador Masood Khan (Pakistan) preside over the Conference. The Preparatory Committee also agreed to recommend to the Sixth Review Conference the following distribution of posts of Vice-presidents of the Conference, and Chairmen and Vice-Chairmen of the subsidiary bodies, among the various Regional Groups:

Vice-presidents:

Ten from the Group of Non-Aligned and other States:  
Six from the Western Group  
Four from the Group of Eastern European States

Committee of the Whole:

Chairman: Group of Eastern European States  
Vice-Chairman: Group of Non-Aligned and other States  
Vice-Chairman: Western Group

Drafting Committee:

Chairman: Western Group  
Vice-Chairman: Group of Eastern European States  
Vice-Chairman: Group of Non-Aligned and other States

Credentials Committee:

Chairman: Group of Non-Aligned and other States  
Vice-Chairman: Western Group

In regard to date and duration, it was decided that the Sixth Review Conference would be held in Geneva from 20 November to 6 December 2006. The draft rules of procedure of the Fifth Review Conference (BWC/CONF.VI/PC/L.1) were agreed to be recommended to the Sixth Review Conference. In this connection, the Chairman noted that there was a matter relating to Rule 44 on participation. He went on to reiterate the standard understanding about the participation of NGOs, noting that, since the Fourth Review Conference, States Parties have agreed to an informal arrangement whereby the Conference is suspended for a short period, but delegates remain in their seats, and NGO representatives are given the opportunity to address States Parties. This arrangement has been used at the Fourth and Fifth Review Conferences, and also at Meetings of Experts and Meetings of States Parties over the past three years. The Chairman then asked if States Parties are content to continue with this informal arrangement and it was so decided. It was finally noted that this is an informal oral understanding, and as such would not be recorded in the formal report of the Preparatory Committee.

In regard to publicity, it was decided that the Secretariat should be asked to issue press releases for the meetings of the Review Conference. In regard to the final document(s) of the Review Conference it was decided to include an appropriate item in the provisional agenda of the Conference. On the appointment of a provisional Secretary-General for the Conference, it was decided to invite the Secretary-General of the United Nations to nominate an official to act as provisional Secretary-General of the Review Conference.

On the financial arrangements, it was noted that the estimated costs in BWC/MSP/2005/INF.1 had been approved by the Meeting of States Parties on 9 December 2005. The Preparatory Committee encouraged States Parties to pay their

assessed contributions without delay.

The provisional agenda took rather more time to be agreed. The States Parties were provided with a copy of the Provisional Agenda for the Fifth Review Conference (BWC/CONF.V/1 dated 31 October 2001) which had been adopted by the Fifth Review Conference as a starting point:

**PROVISIONAL AGENDA FOR THE FIFTH REVIEW CONFERENCE**

1. *Opening of the Conference by the Chairman of the Preparatory Committee*
2. *Election of the President*
3. *Adoption of the agenda*
4. *Submission of the final report of the Preparatory Committee*
5. *Adoption of the Rules of Procedure*
6. *Election of the Vice-Presidents of the Conference and Chairmen and Vice-Chairmen of the Committee of the Whole, the Drafting Committee and the Credentials Committee*
7. *Credentials of representatives to the Conference*
  - (a) *Appointment of the Credentials Committee*
  - (b) *Report of the Credentials Committee*
8. *Confirmation of the nomination of the Secretary-General*
9. *Programme of work*
10. *Review of the operation of the Convention as provided for in its Article XII*
  - (a) *General debate*
  - (b) *Articles I-XV*
  - (c) *Preambular paragraphs and purposes of the Convention*
11. *Consideration of issues identified in the review of Article XII contained in the Final Declaration of the Fourth Review Conference, and possible follow-up action*
12. *Work done to strengthen the Convention in accordance with the decision of the 1994 Special Conference*
13. *Other matters, including the question of future review of the Convention*
14. *Report of the Committee of the Whole*
15. *Report of the Drafting Committee*
16. *Preparation and adoption of the final document(s)*

There was quick agreement to agenda items 1 to 10 and also of items 13 to 16. As might be expected, agenda items 11 and 12 required further consideration. There were two points of divergence; the first related to how best to include the further consideration of the intersessional topics considered in 2003 to 2005 in the Article by Article review of the Convention and the second related to how best might reference back to the decisions of the Fourth Review Conference and previous Agenda item 12 be addressed. As the intersessional topics all relate to one or more Articles of the Convention, these topics can be addressed in the Article by Article review. The second point of divergence was more difficult to resolve. The Chairman circulated a draft proposal on the morning of Thursday 27 April 2006 in which he proposed the following replacement item for agenda items 11 and 12:

11. *Consideration of issues identified pursuant to Article*

*XII to strengthen the Convention and improve its implementation in accordance with the decisions of the previous Conferences, especially the Fourth and Fifth Review Conferences, and possible follow-up action.*

There were consultations throughout Thursday 27 April 2006 which led to a further draft proposal from the Chairman circulated to delegations late in the afternoon reading as follows:

*11. Consideration of issues identified in the review of the operation of the Convention as provided for in its Article XII and any possible consensus follow up action.*

It was understood that the States Parties which had most difficulties with the proposed Agenda item 11 were Iran and the USA, and that they were urged to accept the compromise proposed late on Thursday afternoon. It became clear on the Friday morning that the compromise was acceptable.

The agreement on background documentation also took a little time. The Secretariat had circulated a note to States Parties on Thursday 27 April 2006 in which the language agreed by the Preparatory Committee to the Fifth Review Conference was reproduced from BWC/CONF.V/PC/1:

*21. The Preparatory Committee decided to request the United Nations Secretary-General to prepare a background information document providing, in summary tabular form, data on the participation of States Parties in the agreed confidence-building measures since the last Review Conference.*

*22. The Preparatory Committee decided to request the Secretariat to compile a background information document on compliance by States Parties with all their obligations under the Convention. For the purpose of compiling this document, the Secretariat would request States Parties to provide information regarding compliance with all the provisions of the Convention. The Preparatory Committee also decided to invite States Parties that wished to do so, including the Depositary Governments, to submit to the Secretariat information on new scientific and technological developments relevant to the Convention. This information should cover the applications being made of such developments and their relevance to various aspects of the Convention.*

*23. The Preparatory Committee also decided that all background documentation should be circulated not later than four weeks before the opening of the Conference.*

and suggestions made for the Sixth Review Conference as follows:

*The Preparatory Committee decided to request the Secretariat to prepare five background information documents as follows:*

*(a) A background information document on the history and operation of the confidence-building measures agreed at the Second Review Conference and revised*

*at the Third Review Conference. The document should include a summary of the development of the confidence-building measures, an overview of the role of the United Nations Department for Disarmament Affairs in administering the measures, and data in summary tabular form on the participation of States Parties in the measures since the last Review Conference;*

*(b) A background information document on compliance by States Parties with all their obligations under the Convention. For the purpose of compiling this document the Secretariat would request States Parties to provide information regarding compliance with all the provisions of the Convention, including any actions taken following the Meetings of Experts and Meetings of States Parties held from 2003-2005;*

*(c) A background information document on new scientific and technological developments relevant to the Convention, to be compiled from information submitted by States Parties as well as from information provided by relevant international organisations and research carried out by the Secretariat;*

*(d) A background information document on developments since the last Review Conference in other international forums which may be relevant to the Convention, including the revised International Health Regulations of the World Health Organization, and Security Council Resolution 1540.*

*(e) A background information document showing the additional understandings and agreements reached by previous Review Conferences relating to each article of the Convention, extracted from the respective Final Declarations of these conferences.*

*The Preparatory Committee also decided that all background documentation should be circulated not later than four weeks before the opening of the Conference.*

These proposals were amended as follows:

*(a) A background information document on the history and operation of the confidence-building measures agreed at the Second Review Conference and revised at the Third Review Conference. The document should include data in summary tabular form on the participation of States Parties in the measures since the last Review Conference;*

The agreed version omitted the words originally proposed to include “a summary of the development of the confidence-building measures, an overview of the role of the United Nations Department for Disarmament Affairs in administering the measures.”

*(b) A background information document on compliance by States Parties with all their obligations under the Convention. For the purpose of compiling this document, the Secretariat would request States Parties to provide information regarding compliance with all the provisions of the Convention;*

The agreed version omitted the words originally proposed to

include “any actions taken following the Meetings of Experts and Meetings of States Parties held from 2003-2005”.

(c) A background information document on new scientific and technological developments relevant to the Convention, to be compiled from information submitted by States Parties as well as from information provided by relevant international organizations;

The agreed version omitted the words originally proposed to include information from “research carried out by the Secretariat”.

(d) A background information document on developments since the last Review Conference in other international organizations which may be relevant to the Convention.

The agreed version changed the word “forums” to “organizations” and omitted the words originally proposed “including the revised International Health Regulations of the World Health Organization, and Security Council Resolution 1540”.

(e) A background information document showing the additional understandings and agreements reached by previous Review Conferences relating to each article of the Convention, extracted from the respective Final Declarations of these conferences;

This was agreed as proposed.

(f) A background information document on the status of universalization of the Convention.

This is for an additional background document.

This agreement that the Secretariat should prepare six background documents was a significant step forward and should help to ensure that the States Parties are better prepared at the Sixth Review Conference. Although the agreed versions deleted some words, these are unlikely to harm the background documents. For example, the omission of the specific reference in background document (b) to actions taken following the intersessional meetings in 2003 to 2005 is unlikely to actually change the information provided by States Parties for this background document, as many States Parties have agreed to report on actions they have taken to the Review Conference. In a second example, the omission of the specific reference in background document (d) to the revised International Health Regulations and to SCR 1540 will still be included as both the WHO and the United Nations are “international organizations”. Likewise the omission in background document (c) to research carried out by the Secretariat will have little effect, as the Secretariat has to carry out research to prepare the background documents.

The final plenary session on Friday 28 April 2006 saw consideration of the draft report, BWC/CONF.VI/PC/CRP.1, which had been circulated to all delegations. The Chairman pointed out that this followed the form and format of previous Preparatory Committee reports. He then went through the draft report paragraph by paragraph, noting that in paragraph

19 two additional paragraphs, 19bis and 19ter had been added in regard to rules of procedure: these two added paragraphs were identical to those in the Preparatory Committee report in May 2001. Replacement paragraphs 20 and 21 were added in regard to the background documents. Whilst there were queries raised by a few States Parties, there were no substantive changes to the draft. There would be three Annexes: the *Provisional Agenda for the Sixth Review Conference*, the *Draft Rules of Procedure* and a *List of Documents of the Preparatory Committee*. The draft report was agreed.

Ambassador Don Mahley of the United States then asked for the floor. He said that it had been a very successful Preparatory Committee meeting and he wished everyone the best of luck in the carrying out of the Sixth Review Conference. Ambassador Mahley said that he had asked for the floor on his own behalf rather than on behalf of the United States as this would be the last meeting he would attend as Head of the US Delegation. He had been engaged in these meetings in Geneva over the past 15 years and considered it was important to continue doing this very important work to make the world more secure. He considered that a strong Convention and a strong norm had now reached the point where civilization (let alone the norm and the legal obligations) would result in a massive reaction if any State or non-State actor were to use biological weapons. He wished all his colleagues well in their future meetings.

The Chairman responded saying that he was sorry that Ambassador Mahley would no longer be Head of the US Delegation as he appreciated his professionalism and the forthright candid approach that is the hallmark of Ambassador Mahley.

The Chairman then went on to make a closing statement. He noted that with the adoption of the report the work of the Preparatory Committee had been concluded. It had been a productive three days that would provide a smooth start for the Sixth Review Conference. All States Parties could take pride in that achievement and look back with some satisfaction. It would be important to take the best foot forward and States Parties must now begin to construct on the foundation that has been made, working hard to build consensus and convert divergences to convergences. The Chairman pointed out the success of the Review Conference depends on the efforts of the States Parties and he felt that, through their efforts to reach compromise and understanding, he could be optimistic of a successful outcome to the Review Conference. Whilst there are challenges to be overcome, these could be achieved through a spirit of cooperation. There was every reason to expect success. The Chairman went on to say that he would be writing to all States Parties to set out his plans. He intended to consult widely with regional groups and individual delegations.

### **Reflections**

The atmosphere at the Preparatory Committee Meeting in preparation for the Sixth Review Conference was positive. Many of the group statements and individual statements by States parties emphasized the importance of successfully carrying out a comprehensive article by article review of the Convention at the Sixth Review Conference. There was ready agreement on a three-week duration for the Review

Conference from 20 November to 8 December 2006. Although there were divergences between Iran and the USA on the wording of draft Agenda item 11 – which replaced Agenda items 11 and 12 in the Agenda adopted by the Fifth Review Conference – a successful compromise was found. There was a significant step forward in the agreement to request six background documents. The new background document showing the additional understandings and agreements reached by previous Review Conferences is particularly welcome, as it will be up to the Sixth Review Conference to consider how to further extend these understandings and agreements, thereby strengthening the

Convention. Equally welcome was another new background document on developments since the last Review Conference in other international organizations, as it has become increasingly clear during the past few years that there are initiatives being taken by other international organizations that are relevant to the Convention, and that the Sixth Review Conference needs to take stock of these developments.

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

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## News Chronology

## November 2005 through January 2006

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*What follows is taken from issue 71 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 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.*

**November** From the USA, *Military Medicine* publishes the results of a study that show there to be “no statistically significant differences with respect to bed days, activity limitations, clinic visits, or hospital visits” between 1991 Gulf War veterans notified of potential exposure to chemical warfare agents at Khamisiyah and those not notified [see also 25 Jul]. The purpose of the study was to examine the association of notification of potential exposure to chemical warfare agents with subsequent self-reported morbidity. The study sample included 1,056 deployed Army Gulf War veterans who responded to a 1995 National Health Survey of 1991 Gulf War veterans and who were surveyed again in 2000. Only half of the subjects had been notified of potential exposure to chemical warfare agents. Among 71 self-reported medical conditions and symptoms, there were five statistically significant differences, four of which were for lower rates of illness among notified subjects. The team of four researchers from the Institute of Medicine and the Department of Veterans Affairs say that the findings contradict the prevailing notion that perceived exposure to chemical warfare agents should be considered an important cause of morbidity among Gulf War veterans.

**1 November** In Washington, DC, Senator Richard Lugar and Senator Barack Obama speak on non-proliferation activities in Russia and the Ukraine at a Council on Foreign Relations session on *Challenges Ahead for Cooperative Threat Reduction*. Amongst other things, Lugar and Obama review their joint visit to Russia, Ukraine and Azerbaijan made three months previously [see 29 Aug].

**1-2 November** In Moscow, there is a national dialogue forum on *Russian Implementation of the Chemical Weapons Convention (CWC): Status and Perspectives as of Year-End 2005*, organized by Green Cross Russia. Discussions focus on assessing the status of Russian chemdemil efforts, including the issues of funding, technological solutions, public support of the programme, as well as its ecological and safety aspects. There are over a hundred participants, including governmental officials, representatives of international organizations and non-governmental organizations and academics.

**2 November** From Japan, a team of researchers report that a comparison of the components of “yellow shells” with mustard gas shells recovered in both Japan and China have shown a difference in the impurities between the chemical warfare agents produced by the Japanese Imperial Navy and the Imperial Army. Using an external calibration method they performed a quantitative analysis to show that both mustard and lewisite remained as the major components of the shells, the former amounting to 43 per cent, the latter to 55 per cent. The viscous material recovered is, however, mostly an oligomer of mustard. Yellow shells, which were only employed by Japan during the Second World War and also produced in the Soviet Union during that time, generally contained a 1:1 mixture of mustard and lewisite (known as Yellow agents). The team says that its research, published in the *Journal of Chromatography*, will help to unearth and recover the shells and detoxify the contents safely.

**2 November** In Washington, DC, in a presentation made at the Center for Strategic and International Security, Director of Department of Homeland Security (DHS) Office of Research and Development Maureen McCarthy says that the highest bioterrorism priority of the DHS is developing defences against longer-term threats that could cause “national scale” devastation even though such attacks would be “generally really hard [for terrorists] to do.” She continues: “We cannot be beguiled by the risks of events that have happened in the past... But we have to be concentrating our efforts on understanding new and emerging threats, things that may be threats to this nation in the future, not just six months from now, or two years from now, but out five, 10, 20 years in the future. That’s a driving factor of what sets up our programs.”

**3 November** Russian Deputy Federal Industry Agency Chairman Viktor Kholstov says: “[I]n 2009 all seven [chemdemil] sites needed in Russia to destroy chemical weapons within the relevant international convention will start to operate... The [Kambarka] facility will be put into operation before the end of the year... [I]n 2007, within the framework of the second stage of implementing the convention, Russia

should destroy 8,000 tons of chemical weapons, about 20 per cent of the amount accumulated.” Kholstov says that Russia will have destroyed all of its 40,000 tonnes of chemical weapons by 2012.

**3 November** *The (Toronto) Globe and Mail* reports the release of the *Canadian Persian Gulf War Cohort Study*, sponsored by the Department of National Defence, which casts doubt on the existence of Gulf War syndrome. The purpose of the study was to determine whether Canadian veterans of the war had a higher risk of death or cancer when compared to non-deployed veterans of the same era, or to members of the general population. The authors of the study conclude thus: “The causes of what are now known as Gulf War illnesses remain controversial... Attention initially focused on a broad range of vaccines, medications, and chemical agents that the veterans were exposed to. However, to date, there has been no consistent association between illness and exposure to these substances... These results are consistent with those of other larger studies on the health of Gulf War veterans of other countries.” The study, which commenced in 2001, drew its research from the national mortality and cancer registries in Canada, comparing 5,117 deployed veterans to another 6,093 veterans who were eligible, but were not deployed to the Persian Gulf.

**3 November** In the US House of Representatives, the Homeland Security Subcommittee on Prevention of Nuclear and Biological Attack holds a hearing on *Bioscience and the Intelligence Community*. Testifying are David Relman of Stanford University, David Franz of the Midwest Research Institute and Michael Hopmeier of Unconventional Concepts Inc.

**4 November** In Washington, DC, at the twenty-fifth anniversary symposium of the National Academy of Sciences Committee on International Security and Arms Control (CISAC) on *Shaping the Agenda for the Next 25 Years*, one of the four panel discussions is on the subject of ‘biological threats’.

**4 November** US Senator Carl Levin refers to a newly declassified February 2002 Defense Intelligence Agency (DIA) report which states that an alleged leading member of al-Qai’da, whose statements the Bush administration used to claim that Iraq trained al-Qai’da members to use biological and chemical weapons, “was intentionally misleading the debriefers” and that he “may be describing scenarios to the debriefers that he knows will retain their interest”. Ibn al-Shaykh al-Libi, who was captured in Pakistan at the end of 2001, retracted his claims in January 2004. Speaking at a news conference in Washington, DC, Levin says: “The newly declassified information provides additional dramatic evidence that the administration’s prewar statements regarding links between Saddam Hussein and al Qaeda represents an incredible deception.” Levin refers, amongst others, to the speech made by former Secretary of State Colin Powell to the UN Security Council one month prior to the invasion of Iraq, in which he referred to “the story of a senior terrorist operative telling how Iraq provided training in these weapons to al Qaeda” [see 5 Feb 03]. The report further states: “Saddam’s regime is intensely secular and wary of Islamic revolutionary movements. Moreover, Baghdad is unlikely to provide assistance to a group it cannot control.” Levin says he is not aware whether the Senate Select Committee on Intelligence – which did not have the document when it completed its first-phase investigation on Iraqi WMD [see 9 Jul 04] – on which he also serves, has the document. The Committee is currently conducting its second-phase investigation of the use of Iraq intelligence, a part of which is to compare pre-war public statements by officials and members of Congress with the information known at the time. Neither

the Committee’s report nor another issued by the September 11 Commission [see 22 Jul 04] made any reference to the DIA report. The DIA supplies intelligence to military commanders and national security policy makers.

One month later, *The New York Times* reports unidentified “current and former government officials” as saying that al-Libi provided his most specific and elaborate accounts about ties between Iraq and al-Qai’da only after he was secretly handed over to Egypt by the USA in January 2002 and that he fabricated them to avoid “harsh treatment”. The *Times* says that it is the first time that “officials” have acknowledged either that al-Libi made his statements in foreign custody or that his statements had been coerced.

**5-6 November** At OPCW headquarters, the seventh annual meeting of CWC national authorities takes place. The purpose of the meeting is to help CWC parties to facilitate the exchange of information and experiences regarding the implementation of the CWC; promote cooperation amongst national authorities; identify common implementation problems that can be resolved through co-operation between parties and the Secretariat; and contribute to greater self-sufficiency as regards national-implementation capacities. The meeting is attended by 142 representatives from 92 parties, and three states not yet parties, i.e. Democratic Republic of the Congo [see 12 Oct], Comoros and Djibouti.

**7-8 November** In Washington, DC, in his keynote address to the 2005 Carnegie International Non-Proliferation Conference, *Sixty Years Later*, US Under-Secretary for Arms Control and International Security Robert G Joseph says: “Over 70 states now support [the Proliferation Security Initiative] and the number is steadily increasing. Participants are applying laws already on the books in innovative ways and cooperating as never before to interdict shipments, to disrupt proliferation networks, and to hold accountable the front companies that support them.”

**7-11 November** In Zemianske Kostolany and Slovenská L’upca, Slovakia, there is an advanced laboratory training course for Qatari analytical specialists in chemical weapons to assist them to prepare for the Asian Games 2006. The course, which is organized by the Slovakian government, offers practical training on detection and analysis of scheduled, highly toxic chemicals and exchanged knowledge and experience with the Slovak specialists.

**7-11 November** In The Hague, the tenth Conference of the States Parties to the CWC takes place. José Antonio Arróspide, the permanent representative of Peru, is elected as Chairman until the next regular session in 2006.

The Conference unanimously supports the renewed appointment of Rogelio Pfliter as Director-General of the OPCW for a further term of four years, beginning on 25 July 2006 and ending on 24 July 2010.

The Conference reviews and approves the programme of work and budget for 2006. Over half of the total budget of EUR 75,614,241 is allocated to the verification of the CWC, in such areas as destruction of chemical weapons stockpiles, the elimination of chemical weapons production capacity and the non-proliferation of chemical weapons. The programme of work foresees a total of 180 inspections in the course of 2006: sixteen Schedule 1 inspections, forty-six Schedule 2 inspections, twenty-eight Schedule 3, and ninety other CWPF inspections.

The Conference authorizes the Executive Council to establish specific dates for the intermediate deadlines with regard to Libya’s chemdemil – agreeing therefore in principle to extensions – and to report on its actions to the Conference at its eleventh session.

The Conference notes a report by the Technical Secretariat on the plan of action regarding the implementation of Article VII obligations. The report says that, as of 17 October 2005, 147 parties (84 per cent) had designated or established a national authority. It says that 105 parties (60 per cent) had adopted legislative and administrative implementation measures in accordance with paragraph 5 of Article VII. Of these, 102 parties (59 per cent) had enacted prohibitions related to Article I undertakings. A total of 88 (51 per cent) had based their prohibitions on the definition of 'chemical weapons' as set out under Article II, i.e. covering all prohibited activities which involve any toxic chemical or precursor. The report states that the legislation of only 59 (34 per cent) parties covered all key areas of implementation. The Conference undertakes to further review the status of national implementation measures at its eleventh session and to consider and decide on any appropriate measures to be taken, if necessary, in order to ensure fulfilment by parties of their obligations.

Regarding the universality action plan, the Conference calls upon all states not party to the Convention to become parties without delay and urges all parties and the Technical Secretariat to intensify their efforts with a view to increasing the number of parties to at least 180 by the end of 2006 and to achieving the universality of the CWC ten years after its entry into force. The Conference decides to review the implementation of the plan at its eleventh and twelfth session and take any decision it deems necessary, in particular addressing the status of those States not party whose non-adherence to the Convention is a cause for serious concern.

The Conference recommends that the Executive Council establish an *ad-hoc*, open-ended working group to examine a proposal to establish an OPCW Office in Africa.

The Conference urges all parties that have not yet done so to elect one or more measures of assistance to be offered if any party is threatened by chemical attack or should suffer such an attack. It recommends the use of guidance in the form of a questionnaire to formulate, specify or renew offers of assistance.

**8 November** In Fallujah, Iraq, US forces used white phosphorus bombs against civilian targets during the attack on the city last year [see 10 Nov 04], according to a documentary *Fallujah: the Hidden Massacre* broadcast by Italian state television, Rai. The documentary shows a series of photographs of reportedly burnt corpses with clothes still intact, which it claims is consistent with the use of white phosphorus. It further alleges that the US administration has systematically attempted to destroy filmed evidence of the alleged use of the agent on civilians in the city. Former US soldier Jeff Englehart, who served in Fallujah, says: "I heard the order to pay attention because they were going to use white phosphorus on Fallujah. In military jargon it's known as Willy Pete... Phosphorus burns bodies, in fact it melts the flesh all the way down to the bone ... I saw the burned bodies of women and children. Phosphorus explodes and forms a cloud. Anyone within a radius of 150 metres is done for." US Department of Defense (DoD) spokesman Todd Vician, however, rejects the allegation thus: "The US categorically denies the use of chemical weapons at any stage in Iraq... People seeking to discredit the US find it useful to invent the false accusation that the US is using weapons of this sort... Even though we haven't seen this documentary, we have seen similar unfounded accusations in the past."

A week later, DoD spokesman Barry Venables admits that US forces did indeed use white phosphorus in the city in order to obscure troop deployments and also to "fire at the enemy". He adds: "It burns ... It's an incendiary weapon. That is what it does." However, he says that he can "categorically deny" the claim that the weapon was used against civilians, and

that it is not outlawed or banned by any convention. Venables refers to a written account of the military operation at Fallujah, by three US soldiers who participated. Writing in the March-April edition of *Field Artillery*, they said: "WP proved to be an effective and versatile munition. We used it for screening missions ... and, later in the fight, as a potent psychological weapon against insurgents in trench lines and spider holes ... We fired 'shake and bake' missions at the insurgents using WP to flush them out and high explosive shells (HE) to take them out."

[Note: The USA is not a party to Protocol III of Convention on Certain Conventional Weapons 1980. The Protocol states: "It is prohibited in all circumstances to make the civilian population as such, individual civilians or civilian objects, the object of attack by incendiary weapons."]

**8 November** In the US Senate, Nevada Senator John Ensign introduces an amendment the 2006 Defense Authorization Act the purpose of which is "to restate United States policy on the use of riot control agents by members of the Armed Forces, and for other purposes" [see 21 Jul]. The amendment reads thus: "It is the policy of the United States that riot control agents are not chemical weapons and that the president may authorize their use as legitimate, legal, and non-lethal alternatives to the use of force that, as provided in Executive Order 11850 ... and consistent with the resolution of ratification of the Chemical Weapons convention, may be employed by members of the Armed Forces in war in defensive military modes to save lives, including the illustrative purposes cited in Executive Order 11850... This amendment will allow our soldiers and marines to more effectively carry out their mission on the ground in Iraq and Afghanistan, while saving both military and civilian lives... Under current policy, our military is banned from using tear gas on the battlefield... This restriction on the use of tear gas is the direct result of the bureaucracy's faulty interpretation of the 1997 Chemical Weapons Convention, an interpretation made by arms control advocates in Brussels and The Hague and regrettably at our own State Department... The use of riot control agents in combat for defensive purposes to save lives is wholly consistent with the US Obligations under the laws of land warfare and of our treaty obligations. Retaining this capability was so important to our military leaders that the Senate included a condition in the 1997 Chemical Weapons Convention that preserved our right to use tear gas in conflict... My amendment seeks merely to reaffirm the policy of the United States since 1975, and the Senate's view on this issue from 1997, by stating that it is the policy of the United States that Riot Control Agents are not chemical weapons but are legitimate, legal, and non-lethal alternatives to the use of lethal force. It adds that these tools may be employed by members of the Armed Forces in defensive military modes to save lives. My amendment further requires the President to submit a one-time report to Congress on the availability and use of Riot Control Agents by our fighting men and women. It includes reporting language that prods the State Department to speak about and advocate the US view on this important life-saving tool in multilateral forums. Finally, my amendment presses the Pentagon to develop this capability, which has languished in our training regimens, our doctrine, and our tactics through lack of use."

The next day, the Senate adopts the Ensign amendment – as quoted above – by a vote of 98-1, but only after Ensign provides repeated assurances that he is not attempting to change current US policy.

**9 November** Head of the German foreign intelligence agency (BND) August Hanning says evidence is mounting that terrorist groups are trying to make chemical, biological weapons or a dirty bomb. In an interview on German ARD

television Hanning says: "From the questioning of al Qaeda members it has become more and more clear that al Qaeda has tried to recruit scientists... And we were greatly disturbed to see that a Malaysian biologist was hired with the aim of assembling production facilities for anthrax in Afghanistan... We are watching experiments, training efforts and the fact that building instructions are passed on via the Internet."

**9 November** In The Hague, there is a panel discussion on *Incapacitating Chemical Weapons: Debating the Pros and Cons*. On the panel are Adolf von Wagner, former Chairman of CWC negotiating committee, George Fenton, former Director US Joint Non-Lethal Weapons Directorate, John Alexander, US government consultant, and Mark Wheelis, University of California-Davis. The event is organized by the Center for Arms Control and Non-Proliferation, Washington, DC, and sponsored by the Scientists Working Group on CBW.

**9-11 November** In Massachusetts, between 100 and 200 scientists and health experts participate in an international conference on biological weapons hosted by the Albany Medical Center.

**12 November** Head of the Russian armed forces' radiation, chemical and biological protection troops Vladimir Filippov says the troops have investigated and ruled out the possibility that the outbreaks of bird flu result from the intentional release of the virus. In the interview published by the *Krasnaya Zvezda*, Filippov says that since July a total of more than 200 biological samples from 12 regions in Russia have been tested.

**13 November** In Copenhagen, on the third day of the 51<sup>st</sup> annual session of the NATO Parliamentary Assembly, the Science and Technology Committee considers a report by Canadian Senator Pierre Claude Nolin on *The Security of WMD Related Material in Russia*, which concludes that the major problem is that samples of biological agents in the former Soviet Union are not adequately protected against theft.

**13-24 November** In Doha, Qatar, in preparation for the Asian Games in 2006, there is an advanced training course relating to the Qatari national response capacity against the threat or actual use of chemical weapons. The course is organized by the OPCW. [See also 7-11 Nov]

**14 November** In the UK House of Commons, responding to a written question addressed to the Defence Secretary as to what research the Ministry of Defence is carrying out to establish whether the combination of immunisations against chemical and biological weapons given to service personnel before and during the 1990-91 Gulf War was medically harmful; and what the findings of the research have been to date, Parliamentary Under-Secretary of State for Defence Don Touhig says: "The core study ... has been undertaken at Defence Science and Technology Laboratory (Dstl), Porton Down and involved monitoring for a range of effects in marmosets for up to 18 months following the administration of vaccines and/or pyridostigmine bromide (the active ingredient in nerve agent pre-treatment tablets). Interim results ... showed no apparent adverse health consequences. Final results are expected to be submitted for peer-reviewed publication shortly... A second study has investigated the specific combination of anthrax and pertussis vaccines. This work was carried out by the National Institute for Biological Standards and Control [see 14 Jul]... In mice, pertussis vaccine, vaccine combinations, or aluminium salt caused illness; anthrax vaccine produced little effect; diluted vaccine combinations produced less serious side effects of shorter duration. As the researchers

pointed out, caution should be exercised in applying these results to humans because of the relatively high dosage used in the tests and the very different sensitivity to these vaccines in mice and humans... A third study has examined whether staff from Dstl Porton Down who received multiple vaccinations, including anti-biological warfare vaccinations, in the course of their duties have higher levels of recorded sick leave than their unvaccinated colleagues. The results of this study will also be submitted for publication shortly."

**14 November** The Canadian military uncovered a stash of chemical munitions on the ocean floor off the west coast of Vancouver Island in June following a review of military archives, according to Canada Broadcasting Corporation (CBC). Chris Hough, head of the chemical and biological weapons disposal project at the Department of National Defence, says the dump site is in deep water about 160 kilometres off the coast of British Columbia and is unlikely to pose a threat to human health. "We're still looking into that site to determine what the issue is there, if there is a risk", he says. Canada and the USA dumped explosives, mustard gas and other chemical agents off both coasts of North America following the Second World War. "Whether or not they came from an American source in the very beginning, or if they are strictly Canadian, we can't say emphatically if that is the case," says Hough.

**14 November** The US National Research Council Board on Army Science and Technology releases *Interim Design Assessment for the Blue Grass Chemical Agent Destruction Pilot Plant*. The report states that the design of the Blue Grass pilot chemdemil facility includes all the steps required for safe and effective destruction of the weapons, but these steps have yet to be integrated and tested. It also states that some operational issues also need to be addressed and that in order to save time and money, large amounts of wastes that are uncontaminated by chemical agents should be disposed of off-site at qualified waste-disposal facilities. Some of the techniques that will be used to destroy the rockets containing the chemical agents must be improved, the report says. For example, the machine that will be used to initially cut each rocket should be altered to avoid the possibility of igniting the propellant inside. In July 2004 the Bechtel Parsons Blue Grass team – a joint venture of Bechtel National Inc. and Parsons Infrastructure and Technology Group – submitted a design plan to the US Army, at the latter's request, for a pilot facility capable of safely and effectively destroying the stored chemical munitions. Destruction of the munitions at the facility is expected to start in 2008 using a 'neutralization' process which uses a sodium hydroxide solution followed by oxidation in water under very high temperature and pressure.

**14-16 November** In Timonium, Maryland, the *2005 Scientific Conference on Chemical and Biological Defense Research* is scheduled to take place. The conference, which is sponsored by the Joint Science and Technology Office, is organized into a panel discussion of 'How Public Policies Impact the Science of Chemical and Biological Defense', and a half-day workshop on the topic of 'Biological Agent Risk Assessment'. The workshop brings together experts in microbiology, infectious disease, quantitative risk assessment and modelling/simulation to develop suggested collaborations and projects that will explore the issue with an aim toward guiding a research investment. The topics covered during the conference are: chemical and biological detection and diagnostics; medical surveillance; battlespace management; hazard characterization; threat agents and simulants; prophylaxis; physical protection; decontamination; and medical countermeasures.

**14-18 November** In Spiez, Switzerland, the ninth Swiss Emergency Field Laboratory (SEF-LAB) training course takes place at the NBC Training Centre. On this occasion the course is provided solely for Qatari participants as a contribution of the Swiss government and the OPCW, who are jointly organizing it, to ensure the safe conduct of the forthcoming Asian Games 2006 in Doha [see also 13-24 Nov]. The course provides training on the proper use of individual protective equipment, monitoring and detection techniques, decontamination techniques, and sampling and detection methods by the mobile field laboratory during field exercises.

**15 November** In Russia, a command and staff exercise simulating a terrorist attack takes place at the Kambarka chemdemil facility. It involves units of the Emergencies Ministry, Interior Ministry, Federal Security Service FSB and the Federal Agency for Safe Storage and Elimination of Chemical Weapons, as well as bodies of local self-government. The purpose of the exercise is to improve interaction between executive authorities and the military in case of a terror threat to a chemical storage facility. Destruction of around 6,300 tonnes of lewisite stored at the Kambarka facility will commence in mid-2006 and will take around three and a half years to complete. Following the exercise, chairman of the government Yuri Ptikevich says that the reporting system organized in Kambarka is the best in Russia. [See also 3 Nov]

**15 November** In Ravensburg, Germany, a farmer has been questioned in relation to the contamination of the drinking water supplied to around four million people living in Baden-Württemberg with canisters of herbicide, so reports Süd West Deutscher Rundfunk (SWR) radio. On 18 October, the Bodensee water company (BWV) received a letter from the perpetrator – who claims to have been treated unfairly by the justice system and the authorities – stating that he had a limitless supply of herbicide and that two opened five-litre canisters of atrazine had been placed in the vicinity of an extraction-uptake point. BWV has since received further letters threatening attacks on the water supply though they only contain a demand that the press be informed of the incident.

**15 November** In the US House of Representatives, the Government Reform Subcommittee on National Security, Emerging Threats, and International Relations there is a hearing on *Examining VA [Department of Veterans Affairs] Implementation of the Persian Gulf War Veterans Act of 1998*. The purpose of the hearing is to examine the extent to which VA has met the legal mandate to consider research data from animal studies in making determinations about Gulf War-related illnesses in veterans. According to Subcommittee Chairman Christopher Shays the purpose of the law is “to give sick veterans the benefit of the doubt about whether wartime service caused subsequent illnesses”.

**16 November** In Islamabad, there is a seminar on Pakistani implementation of the CWC, organized by the Pakistani national authority. In his keynote speech at the opening of the seminar, OPCW Director-General Rogelio Pfirter gives an overview of the status of implementation of the CWC and stresses the importance of achieving universality and full national implementation. The seminar is attended by officials of several Pakistani government ministries as well as a number of foreign diplomats attending courses at the Foreign Service Academy of Pakistan.

**17 November** In Buffalo, USA, a federal court has ordered that a university professor who is awaiting trial on charges relating to telephone and postal fraud for having received bacteria from a scientist to use in a performance art

exhibit on biotechnology [see 8 Jul 04] be released from pre-trial supervision despite strong objections from the US Department of Justice, so reports the Critical Art Ensemble (CAE) Defense Fund. Until last week Professor Steven Kurtz had been subject to random house searches, drug tests, his freedom to travel had been limited, and he had to report regularly to a probation officer.

**17-19 November** In Ieper, Belgium, there is an international conference *1915: Innocence Slaughtered*, which is organized and hosted by the Flanders Field Museum. The purpose of the conference is to commemorate the first large-scale use of poison gas which occurred during the First World War at Ieper. Presentations made include: Olivier Lepick, Fondation pour la Recherche Stratégique, Paris, ‘22 April 1915, The first chemical attack or the debut of a weapon of mass destruction?’; Margit Szöllösi-Janze, Universität zu Köln, ‘The scientist as expert: Fritz Haber and German chemical warfare during the First World War’; Dominiek Dendooven, Flanders Fields Museum, ‘Overview: 22 April 1915 - Eyewitness accounts of the first gas attack’; Julian Putkowski, London, ‘Toxic shock: British reaction to the use of poison gas in 1915’; Luc Van de Weyer, Belgian Army Museum, Brussels, ‘The reaction of the Belgian Army to the introduction of chemical warfare’; Nathan M Greenfield, Ontario, ‘The Canadian army and the second battle of Ypres’; David Omissi, Hull University, UK, ‘The Indian Army Corps and the second battle of Ypres’; Nick Lloyd, Centre for First World War Studies, Birmingham, UK, ‘The first British gas attack, Loos, 25 September 1915’; Peter Van den Dungen, Bradford University, UK, ‘Civil resistance to chemical warfare during the First World War’; Wolfgang Wietzker, Universität Düsseldorf, ‘Chemical weapons and German newspapers’; Bert Heyvaert, Flanders Fields Museum, ‘Minor actions in the Ypres salient in 1915’; Gery Oram, Open University, UK, ‘British morale in 1915’; Leo Van Bergen, Vrije Universiteit, Amsterdam, ‘“Gas is a humane weapon”. Medical and humanitarian-judicial discourse on poison-gas during and after the First World War’; Annette Becker, Université Charles de Gaulle, Lille III, and Centre de recherche de l’Historial de la Grande Guerre, Péronne, France, ‘La mémoire du gaz dans l’après guerre’; Glenn Nollet, Belgian Army Ammunition Disposal Unit DOVO, ‘Chemical ammunition disposal in Flanders’; and Jean-Pascal Zanders, BioWeapons Prevention Project, Geneva, ‘Ypres, 22 April 2015: Can It Be Avoided?’

**18 November** In Rome, representatives of the G7 industrialized nations and the World Health Organization convene for the sixth [see 9-10 Dec 04] ministerial meeting on the *Global Health Security Initiative* to discuss, amongst other things, chemical, biological and radiological threats. A statement released following the meeting reads thus: “We noted with particular satisfaction the World Health Assembly’s adoption of the International Health Regulations (IHRs) [see 16-25 May]... We will apply the revised IHRs with the understanding that the regulations apply to all such health threats – chemical, biological, and radiological – and all causes and modes of events – regardless of whether they are naturally occurring, accidental, or deliberate. Although the official implementation of the IHRs will not commence until June of 2007, we agreed to immediate voluntary compliance with applicable articles, and we urge other Nations to do the same.”

**18 November** The US military has gaps in its ability to counter attacks involving chemical and biological weapons, according to *Aerospace Daily*, quoting the Associate Director for Joint Force Application in the Office of the Defense. Mike Novak says: “We would like to be able to better hold chemical and biological and radiological-type devices at risk ... If you blow up something chemical, you don’t always destroy

it all. If you do something to a bio stockpile, you might spread it as much as destroy some of it.”

**20 November** The Canadian military plans to spend more than \$250 million on the purchase of detection and response equipment against the threat of chemical, biological and nuclear weapons, thus far its largest acquisition of such equipment, so reports the CanWest News Service. Over a period of five years it will invest in such things as chemical and biological agent sensors, protective gear for soldiers, and computer software that can track the spread of contamination in the event of a terrorist attack.

**20 November** The *Los Angeles Times* reports that its investigation into claims made by the White House and the CIA that Iraq was operating a biological weapons programme, which were based primarily on the source known as ‘Curveball’ [see 28 Mar 04 and 31 Mar 05], shows that mistakes in the case were far worse than previously reported. In an interview with the *Times*, a “senior” German intelligence official who questioned Curveball says the information provided by him “was not substantial evidence” and that they made it clear they “could not verify the things he said”. The official who supervised Curveball’s case said the informant had mental difficulties. “He is not a stable, psychologically stable guy,” the official is quoted as saying. Another unidentified German official is quoted as saying that “his information to us was very vague”. In his State of the Union speech two years ago President George Bush said Iraq had “mobile biological weapons labs” that could produce “germ warfare agents” [see 28 Jan 03]. However, the *Times* says that Curveball told German intelligence officials that he had helped put together only one truck and had heard of others and was unable to say what the equipment did. Curveball’s German supervisor says he was surprised to hear former US Secretary of State Colin Powell say that the trucks could produce enough biological agents “in a single month to kill thousands upon thousands of people” when addressing the UN Security Council a month before the US-led invasion of Iraq [see 5 Feb 03]. The unidentified official is reported as saying: “We were shocked... Mein Gott! We had always told them it was not proven.”

**21 November** In The Hague, the trial commences of a Dutch businessman charged with supplying raw materials for chemical weapons used in the 1980-1988 war against Iran and against Iraqi Kurds [see 18 Mar]. The Prosecution alleges that Frans van Anraat continued to supply industrial chemicals to Iraq after an export ban in 1984 and that he supplied Iraq with chemicals used in the mustard gas attack on Halabja [see 18 Mar 88]. He also faces charges connected to chemical attacks in two additional Iraqi villages, and seven Iranian villages from 1986 to 1988. Van Anraat denies that he knew what the chemicals would be used for.

The next day, the court rejects an appeal by van Anraat that he be released on the grounds that only Iraqi courts have jurisdiction to hear the case.

One month later, van Anraat is found guilty of complicity in war crimes and sentenced to fifteen years imprisonment. The court first determined that the gassing of Kurds constituted genocide and that the chemicals supplied by van Anraat were essential to the making of the weapons. However, it found that van Anraat “must be acquitted of complicity in genocide” since the chemicals were delivered to Iraq prior to the attacks. According to Public Prosecutor Digna van Boetzelaer, to win a conviction on the genocide charge, it would have to have been proved that van Anraat knew his supplies would be used to commit mass murder.

**21 November** In Bethesda, Maryland, the second

[see 30 Jun – 1 Jul] meeting of the National Science Advisory Board for Biosecurity (NSABB) takes place. During the meeting presentations are given on the following topics: ‘Progress Report: Criteria for Identifying Dual Use Research and Results’; ‘Progress Report: Codes of Conduct’; ‘Working Group on Communication of Dual Use Research Results, Methods, and Technologies’; and ‘Progress Report: Working Group on International Collaboration’.

**21-22 November** In New York, the UNMOVIC College of Commissioners convenes for its twenty-first [see 24-25 Aug] regular session. As on previous occasions, there are observers from the OPCW and the IAEA.

**21-23 November** In Cape Town, more than 90 delegates from 41 countries, including police chiefs and their representatives, the health, scientific and academic communities, as well as observers from international and non-governmental organizations convene for an *Interpol African Regional Bioterrorism Prevention Workshop* [see also 1-2 Mar]. Speaking on the first day of the workshop Interpol Secretary General Ronald Noble says: “Al-Qaeda’s global network, its proven capabilities, its deadly history, its desire to do the unthinkable and the evidence collected about its bioterrorist ambitions, ominously portend a clear and present danger of the highest order.” Delegates acknowledge the importance of enhancing partnership, working and co-ordination between police, health and other appropriate agencies locally, nationally and internationally: to secure information from the widest range of sources to enable regular threat and risk assessments to be made; to ensure preparedness in terms of establishing appropriate national legislation, inter-agency protocols, joint working procedures, early warning systems, equipment and regular training; to enable the implementation of the necessary measures to prevent, respond to and investigate bioterrorism. In this regard it is agreed that the assistance of the Southern African Regional Police Chiefs Cooperation Organisation (SARPCCO), the East African Police Chiefs Committee (EAPCCO), the West African Police Chiefs Committee (WAPCCO) and the Central African Police Chiefs Organisation (CAPCO) to ensure such communication is maintained would be sought where appropriate.

**24-26 November** In Hamburg, there is a Proliferation Security Initiative (PSI) operational experts group meeting. The meeting, organized by the German Ministry of Foreign Affairs, is the biggest PSI event to date, bringing together around 200 officials from over 35 countries, including defence and foreign ministry officials and export controls, customs and intelligence specialists. The meeting is followed by an exercise at the container terminal to demonstrate the interdiction and search of a suspect container.

**28 November** In the UK House of Lords, responding to questions to the government relating to the alleged use of chemical weapons by Burmese forces [see 21 Apr], Lord Triesman says: “Experts in the UK have examined all the available information on the alleged attack and we have discussed it with our international partners. Their view is that at the moment the evidence of what chemicals were deployed and so forth is not adequate. We are not in a position to make a definitive statement on the matter. We are considering any further evidence we can gather, such as soil samples. If we are going to make an announcement on this we had better be right, rather than find that what we say can be readily dismissed by the military thugs who run Burma.”

**28-29 November** In Rodney Bay, St Lucia, there is a workshop on the *Chemical Weapons Convention*, the purpose

of which is to increase awareness of the CWC and its related obligations among parties of the Organisation of Eastern Caribbean States (OECS), as well as Caribbean States that have not joined the CWC. Delegates from the following OPCW parties participate: Dominica, Grenada, St. Kitts and Nevis, St. Lucia and St. Vincent and the Grenadines. Also attending are delegates from the Bahamas, the Dominican Republic, and Haiti. Participants discuss strategies to achieve universal and effective application of the CWC in the Caribbean, the benefits of adherence thereto, and experiences encountered in national implementation. The workshop is jointly organized by the OPCW and funded by the European Union joint action in support of OPCW activities [see 22 Nov 04].

**29 November** German magazine *Focus* reports a suspected Iraqi terrorist as testifying behind closed doors to the Munich Higher Regional Court on experiments with chemical and biological weapons in connection with Abu Musab al-Zarqawi and his connections with at least sixty potential attackers in Germany. Prior to his arrest two years ago, "Lokman A" is reported to have worked from Munich for Ansar al-Islam as a human trafficker.

**29 November** At UN headquarters, Secretary-General Kofi Annan transmits to the Security Council the twenty-third [see 30 Aug] quarterly report on the activities of UNMOVIC, for the period 1 September to 30 November 2005. The report says "work continues on some parts of the compendium of Iraq's proscribed weapons and programmes" [see 28 Feb and 27 May]. An annex to the report, which is "an extract" containing the procurement section of the summary of the compendium, states: "The successful procurement of dual-use foreign technology, equipment, items and materials was crucial for Iraq's development of all of its proscribed weapons programmes... In the area of chemical weapons, most of the production plants and units constructed and used by Iraq to manufacture chemical warfare agents were designed by foreign contractors (but not as dedicated chemical weapons agent production plants). The vast majority of the chemical processing equipment came from foreign suppliers, and about 95 per cent of all precursor chemicals used for the production of chemical warfare agents was procured outside Iraq... In the area of biological weapons, equipment used for biological warfare research and development, most equipment used in the production of biological warfare agents and bacterial isolates and other items, such as bacterial growth media, were also procured from foreign suppliers. In contrast to chemical weapons, for which specific equipment was procured directly for their production, because of the problems involved with imports during the late 1980s, the equipment used for the production of biological warfare agents was largely taken from facilities that had earlier acquired the equipment for legitimate purposes. In addition, Iraq utilized civilian facilities, including a plant constructed by a foreign contractor to produce vaccine against foot-and-mouth disease, for the production of biological warfare agents." Appended to the annex are three charts: 'Mechanics of Iraq's procurement'; 'Iraq's procurement through brokers and middlemen'; and 'Iraq's procurement through governmental and private trading companies'.

**December** The Swedish Defence Research Agency (FOI) releases *Israel and WMD: Incentives and Capabilities*. The report states: "Israel does not stockpile or produce BW in large-scale today. However, we assess that Israel has a breakout capability for biological weapons and also CW, i.e. the knowledge needed to implement theoretical knowledge into the practical management of production and deployment of CBW. The knowledge base would be the one that was built during the 1950s and 1960s where today's advanced re-

search can be used to upgrade potential BW and CW agents and their behaviour in the environment. We have not found any conclusive evidence that show that Israel's offensive programs still remain active today... The establishment in Ness Ziona with all the secrecy around that facility clearly indicates that activities were going on in the past that was not supposed to be transparent for the public. The great reluctance to talk about the establishment still exists and scientists from Israel do barely want to touch on the subject at international scientific meetings. Our assessment is that the main portion of the biological research performed in Ness Ziona today is for BW protection... We assess that Israel does not have an active production of "traditional" CW agents today. However, as stated above many indications exist that Israel has had an advanced CW program in the past, including nerve agents. Chemical agents and weapons produced within this program could very well still be functional and stockpiled today. If such stockpiles exist depends on the quality and type of agents and weapons produced in the past program. The advanced CW program could very well have been developing binary nerve agents which are very suitable for long-time storage. However, no hard evidence exists that can confirm this type of agents. The potential Israeli CW stockpiles would not be deployed at military installations, such as airfields, but rather centrally stored ready to be transported to suitable locations if needed... Israel has the scientific know-how and the industrial infrastructure to *de novo* produce and deploy militarily significant CBW rapidly if so desired. In our view, the focus of the Israeli chemical and biological capacity today is to develop agents for small-scale covert use, i.e. a so called 'dirty tricks' program."

**1 December** Chinese Vice Foreign Minister Wu Dawei says that, in accordance with the CWC, China is prepared to grant Japan a five-year extension, i.e. to 2012, to remove the weapons abandoned by the Japanese Imperial Army at the end of the Second World War, so reports the Jiji Press Ticker Service.

Six days later, Kyodo news agency quotes unidentified "Japanese government sources" as saying that the deadline is to be put back due to a delay in bilateral work to build "essential facilities". The facilities are planned to be constructed in Dunhua in the north-eastern Jilin province.

**1 December** In Kambarka, Russia, the second Russian chemdemil facility enters into service. The facility, which has the capacity to destroy 2,500 tons of lewisite per year, is scheduled to destroy 6,349 tons of lewisite by the end of 2007. [See also 15 Nov]

**1 December** In Chechnya, Russia, documents showing how to create chemical, biological and radioactive weapons have been uncovered, according to Chief of the Russian General Staff Army Yuri Baluyevski. He says that it is therefore essential that Russia takes preventive steps to improve its security against such weapons.

**1 December** In Washington, DC, the Justice Department argues before a federal appeals court that it should be permitted to resume mandatory anthrax vaccinations of military personnel. It is appealing a decision made last year by District Judge Emmet Sullivan that the mandatory vaccinations be suspended as a consequence of an error made by the Food and Drug Administration in approving the drug [see 27 Oct 04].

**3 December** Japan and China will jointly establish an organization to oversee the operations of the chemdemil facility to be built in Jilin Province, northeastern China, to destroy

chemical weapons abandoned by the Japanese Imperial Army, according to a Japanese Cabinet Office official. Hisashi Michigami says that the organization will be “a positive development for the relations between the two countries”.

**5 December** In Geneva, the Department of Peace Studies, University of Bradford, and the Quaker United Nations Office, Geneva, host a seminar to coincide with the opening day of the Meeting of States Parties to the BWC on codes of conduct for scientists. The following three papers are presented: ‘Raising Awareness: A Hippocratic Oath for Life Scientists’, Malcolm Dando, University of Bradford; ‘Education, Outreach and Codes of Conduct: OPCW and IUPAC Activity’, Graham Pearson, University of Bradford; and ‘The BTWC Sixth Review Conference in 2006’, Nicholas Sims, London School of Economics.

**5-6 December** At OPCW headquarters, the Executive Council convenes for its forty-third [see 27-30 Sep] session, which is chaired by Ambassador Alfonso Dastis of Spain.

The Council approves a detailed plan for verification of and the destruction of chemical weapons at the US Recovered Chemical Weapons Destruction Facility and approves a facility agreement between the OPCW and the USA regarding on-site inspections at the facility. It also approves a facility agreement with Norway regarding on-site inspections at a Schedule 1 protective purposes facility. In addition, it approves corrections to the detailed plans for conversion and verification for the Russian CWPF in Dzerzhinsk.

The Council decides – in accordance with the recommendation of the tenth Conference of States Parties [see 7-11 Nov 05] – to establish an open-ended working group to examine the administrative, financial, and legal aspects of a proposal to establish an OPCW office in Africa. Malik Azhar Ellahi of Pakistan is appointed to coordinate the activities of the group.

In accordance with the recommendation of the tenth Conference of States Parties [see 7-11 Nov 05], the Council decides to establish an open-ended working group to begin, in cooperation with the Secretariat, preparations for the Second CWC Review Conference. It requests the chairman – having consulted with the regional groups – to nominate a facilitator to coordinate the activities of the group.

**5-7 December** In Cardiff, UK, there is the eighth International Conference on Chemical Hazards, Poisons and Sustainable Communities, which is jointly sponsored by the UK Department of Health, the UK Department for Environment, Food and Rural Affairs, the Welsh Assembly and the World Health Organization. It focuses on national and international developments in identifying key threats to public health such as ‘alert and response’ systems, environmental tracking of hazards, exposures and health effects, engaging with the public, assessing risk and giving advice.

**5-9 December** In Geneva, there is a Meeting of States Parties to the BWC on the subject of “the content, promulgation, and adoption of codes of conduct for scientists”. The meeting, which brings together eighty-seven States Parties, follows the final Meeting of Experts of the States Parties [see 13-24 Jun]. The final report of the meeting states that codes should be “voluntarily adopted” by scientists and complement measures taken by the state-parties themselves, “including national legislation.” It states:

“On the mandate to discuss and promote common understanding and effective action on the content, promulgation and adoption of codes of conduct for scientists, the States Parties recognised that:

a) while the primary responsibility for implementing the Convention rests with States Parties, codes of conduct, vol-

untarily adopted, for scientists in the fields relevant to the Convention can support the object and purpose of the Convention by making a significant and effective contribution, in conjunction with other measures including national legislation, to combating the present and future threats posed by biological and toxin weapons, as well as by raising awareness of the Convention, and by helping relevant actors to fulfil their legal, regulatory and professional obligations and ethical principles;

- b) codes of conduct should reflect the provisions of the Convention and contribute to national implementation measures;
- c) a range of different approaches exist to develop codes of conduct in view of differences in national requirements and circumstances;
- d) codes of conduct should avoid impeding scientific discovery, placing undue constraints on research or international cooperation and exchange for peaceful purposes;
- e) science should be used for peaceful purposes only but has the potential to be misused in ways that are prohibited by the Convention, and therefore codes of conduct should require and enable relevant actors to have a clear understanding of the content, purpose and reasonably foreseeable consequences of their activities, and of the need to abide by the obligations contained in the Convention.

“The States Parties recognised that all those with a responsibility for, or legitimate interest in, codes of conduct should be involved in their development, promulgation and adoption. The States Parties agreed on the value of codes of conduct applying not just to scientists, but to all those involved in scientific activity, including managers and technical and ancillary staff.

“On the content of codes of conduct ... the States Parties agreed on the importance of codes of conduct being:

- a) compatible with national legislation and regulatory controls and contributing to national implementation measures;
- b) simple, clear and easily understandable both to scientists and to wider civil society;
- c) relevant, helpful and effective for guiding relevant actors in making decisions and taking action in accordance with the purposes and objectives of the Convention;
- d) sufficiently broad in scope;
- e) regularly reviewed, evaluated for effectiveness, and revised as necessary.

On the adoption of codes of conduct, recognising that it is important to build on and coordinate with existing efforts and avoid imposing burdensome and duplicative measures, the States Parties agreed on the value of:

- a) demonstrating the benefits of codes and encouraging relevant actors to develop codes themselves;
- b) using existing codes, mechanisms, frameworks and bodies as far as possible; and
- c) tailoring adoption strategies according to the needs of each relevant sector.

“On the promulgation of codes of conduct, recognising that codes of conduct will be most effective if they, and the principles underlying them are widely known and understood, the States Parties agreed on the value of continuous efforts on promulgation through appropriate channels.”

**6 December** In Washington, DC, a group of twenty Vietnam-War veterans request an appeals court to reinstate its lawsuit against the Department of Defense (DoD) for having been exposed to harmful agents as part of a series of tests under the Shipboard Hazard and Decontamination (SHAD) in 1963 and 1964. The veterans are seeking damages from the DoD for violation of their constitutional rights and for denying them benefit payments. Earlier this year, a federal judge dismissed the case, saying the veterans could not prove they

had been misled from the time that the tests were conducted.

**6 December** Trust for America's Health releases *Ready or Not?: Protecting the Public's Health from Diseases, Disasters, and Bioterrorism – 2005*. The report states that the vast majority of US states are not prepared to distribute federally stockpiled drugs and to test human samples for chemical agents in the event of a terrorist attack. It says: "While considerable progress has been achieved in improving America's health-emergency preparedness, the nation is still not adequately prepared for the range of serious threats we face."

**7 December** Australian Foreign Minister Alexander Downer says it is only a "matter of time before determined terrorist groups join forces with unscrupulous proliferators" to obtain chemical, biological or nuclear weapons and that all states should therefore strengthen pertinent multilateral treaties and prevent the supply of dual-use materials to states with "troubling" arms programs.

**7 December** US Assistant Secretary of State for International Security and Nonproliferation Stephen Rademaker says that "over seventy states now support the [Proliferation Security Initiative] PSI, and the number is steadily increasing". He repeats the statement made by US Secretary of State Condoleezza Rice on the second anniversary of the PSI [see 31 May] that since the PSI was launched [see 31 May 03] "PSI partners quietly cooperated on eleven successful efforts". However, he does not specify which materials the interdictions related to. Rademaker makes the statement in Jakarta during the fifth General Conference of the Council for Security Cooperation in the Asia Pacific (CSCAP).

**7 December** Former US Deputy Defense Secretary Paul Wolfowitz says that the US-led invasion of Iraq might not have occurred had the USA known there were no WMD in Iraq. Speaking at the National Press Club, Wolfowitz says: "I'm not sure based on the evidence we know now that we could have been absolutely convinced that there was no danger, absolutely no danger... If somebody could have given you a Lloyd's of London guarantee that weapons of mass destruction would not possibly be used, one would have contemplated much more support for internal Iraqi opposition and not having the United States take the job on the way we did... It was a sense that the greatest danger in taking this man on would be that he would use them... If you could have given us a guarantee that they wouldn't have been used, there would have been policy options available probably."

**7 December** The *Journal of the American Medical Association* reports that in a recent campaign to vaccinate first responders against smallpox, rigorous screening and educational programs appeared to result in low rates of preventable life-threatening adverse reactions. The study, led by Christine Casey of the Center for Disease Control and Prevention (CDC), National Immunization Program, reviewed data from the Vaccine Adverse Event Reporting System (VAERS) regarding the detection of cases of myopericarditis and cardiac ischemia. A total of 38,885 smallpox vaccinations were administered, following which the VAERS receive 822 reports of adverse events. All but 100 were considered not to be serious, reflecting mild and self-limited local reactions. There were no preventable life-threatening adverse reactions, contact transmissions, or adverse reactions that required treatment with vaccinia immune globulin. The serious adverse events included 21 cases of myopericarditis and 10 ischemic cardiac events. There were also two cases of generalized vaccinia and one case of postvaccinial encephalitis.

In a second study in the journal, James Sejvar (also with

the CDC) and colleagues investigated the neurologic events associated with smallpox vaccination between December 2002 and March 2004. The study involved the identification of neurological complications, involving data on approximately 665,000 civilians and military personnel. These, they note, "were generally mild and self-limited, and no neurologic syndrome was identified at a rate above baseline estimates". There were 214 neurologic reports to the VAERS and headaches were the most common occurrence. The researchers considered 39 events to be serious. These included cases of suspected aseptic meningitis, suspected encephalitis or myelitis, Bell palsy, seizures, and Guillain-Barre syndrome. However, they conclude that neurologic adverse events are generally self-limited and "not associated with severe morbidity or mortality when screening defers persons with high-risk conditions".

**7-8 December** In Brussels, there is a conference on *Strengthening European Action on Non-Proliferation and Disarmament of Weapons and Materials of Mass Destruction, Small Arms/Light Weapons (SALW) and Explosive Remnants of War (ERW)*. The United Nations Institute for Disarmament Research (UNIDIR) and the Stockholm International Peace Research Institute (SIPRI) were commissioned by the European Commission and the UK government to conduct pilot projects, the purpose of which was to survey the current scope of European actions against the proliferation of WMD, SALW/ERW and to provide independent recommendations for possible Community-funded programmes to come in support of CFSP actions in the field. The main purpose of the Conference is to present the research findings and recommendations of UNIDIR and SIPRI to representatives of EU member states and members of the European Parliament, as well as to experts from G8 countries, relevant international organizations and non-governmental organizations. The first day includes a series of working group meeting which have the purpose of focusing on the substance of the reports, including ones on chemical, biological and nuclear weapons and WMD export control/border management. On the second day there is a debate at the European Parliament involving both its members and representatives from national parliaments.

**8 December** At UN headquarters, the General Assembly adopts four resolutions pertaining to weapons of mass destruction [see also 3 Dec 04].

The resolution on *Measures to Prevent Terrorists from Acquiring Weapons of Mass Destruction* states: "[The General Assembly] calls upon all Member States to support international efforts to prevent terrorists from acquiring weapons of mass destruction and their means of delivery... [It] urges all Member States to take and strengthen national measures, as appropriate, to prevent terrorists from acquiring weapons of mass destruction, their means of delivery and materials and technologies related to their manufacture, and invites them to inform the Secretary-General, on a voluntary basis, of the measures taken in this regard ... [It] encourages cooperation among and between Member States and relevant regional and international organizations for strengthening national capacities in this regard...[It] requests the Secretary-General to compile a report on measures already taken by international organizations on issues relating to the linkage between the fight against terrorism and the proliferation of weapons of mass destruction, to seek the views of Member States on additional relevant measures for tackling the global threat posed by the acquisition by terrorists of weapons of mass destruction and to report to the General Assembly at its sixty-first session..."

The resolution on the *Prohibition of the Development and Manufacture of New Types of Weapons of Mass Destruction and New Systems of Such Weapons: Report of the Conference on Disarmament* states: "[The General Assembly] reaffirms

firms that effective measures should be taken to prevent the emergence of new types of weapons of mass destruction... [It] requests the Conference on Disarmament, without prejudice to further overview of its agenda, to keep the matter under review, as appropriate, with a view to making, when necessary, recommendations on undertaking specific negotiations on identified types of such weapons... [It] calls upon all States, immediately following any recommendations of the Conference on Disarmament, to give favourable consideration to those recommendations..."

The resolution on the *Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction* states: "[The General Assembly] notes with satisfaction the increase in the number of States parties to the [BWC], reaffirms the call upon all signatory States that have not yet ratified the Convention to do so without delay, and calls upon those States that have not signed the Convention to become parties thereto at an early date, thus contributing to the achievement of universal adherence to the Convention... [It] welcomes the information and data provided to date, and reiterates its call upon all States parties to the Convention to participate in the exchange of information and data agreed to in the Final Declaration of the Third Review Conference of the Parties to the Convention... [It] welcomes the significant participation of the States parties at the meetings of States parties and meetings of experts to date and the constructive and useful exchange of information achieved, and welcomes also the discussion and the promotion of common understanding and effective action on agreed topics..."

The resolution on the *Implementation of the Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction* states: "[The General Assembly] emphasizes that the universality of the [CWC] is fundamental to the achievement of its objective and purpose and acknowledges progress made in the implementation of the action plan for the universality of the Convention, and calls upon all States that have not yet done so to become parties to the Convention without delay... [It] stresses that the full and effective implementation of all provisions of the Convention, including those on national implementation (article VII) and assistance and protection against chemical weapons (article X), constitutes an important contribution to the efforts of the United Nations in the global fight against terrorism in all its forms and manifestations... [It] also stresses the importance to the Convention that all possessors of chemical weapons, chemical weapons production facilities or chemical weapons development facilities, including previously declared possessor States, should be among the States parties to the Convention, and welcomes progress to that end... [It] urges all States parties to the Convention to meet in full and on time their obligations under the Convention and to support the [OPCW] in its implementation activities... [It] welcomes progress made in the implementation of the action plan on the implementation of article VII obligations and commends the States parties and the Technical Secretariat for assisting other States parties, on request, with the implementation of their article VII obligations, and urges States parties that have not fulfilled their obligations under article VII to do so without further delay, in accordance with their constitutional processes... [It] reaffirms the importance of article XI provisions relating to the economic and technological development of States parties and recalls that the full, effective and non-discriminatory implementation of those provisions contributes to universality, and also reaffirms the undertaking of the States parties to foster international cooperation for peaceful purposes in the field of chemical activities of the States parties and the importance of that cooperation and its contribution to the promotion of the Convention as a whole..."

**9 December** The Russian government press service announces that Prime Minister Mikhail Fradkov has signed an order to approve plans to establish an 87-square kilometre protection zone around the Kambarka chemdemil facilities. The zone includes the town of Kambarka itself, where around 15,000 people live, as well as the settlement of Kama and the village of Balaki. [See also 1 Dec]

**9 December** From the USA, *Bioorganic & Medicinal Chemistry Letters* reports a research team as discovering a potent and selective lethal factor inhibitor called Compound 40 which, when used in combination with ciprofloxacin, significantly increases the survival rate of mice and rabbits treated with anthrax as compared to the use of antibiotic monotherapy. The research team – from a Merck Research Laboratories, US Army Medical Research Institute of Infectious Diseases, and the Department of Biology, Massachusetts Institute of Technology – state that Compound 40 has accordingly been selected as a candidate for clinical studies and drug development.

**12 December** Sweden and the UK sign a memorandum of understanding on their cooperation to support Russian chemdemil under the framework of the agreement they signed four years previously. Sweden will provide the UK with a grant of 5.5 million Swedish Kronor to fund elements of the electricity supply for the facility [see 21 Oct]. The agreement is signed under Global Partnership against the Spread of Weapons and Materials of Mass Destruction [see 26-27 Jun 02].

Meanwhile, an OPCW press release states that the Czech Republic has recently made a third contribution, of two million Czech Crowns, towards the construction of the Shchuch'ye facility [see 22 Oct 04]. The contribution is made under the agreement signed between the Czech Republic and the UK in 2001.

**12 December** In Brussels, the Council of the European Union adopts a Joint Action on Support for OPCW Activities in the Framework of the Implementation of the EU Strategy against Proliferation of Weapons of Mass Destruction, in continuation of the same Joint Action adopted last year [see 22 Nov 04], which expired on 22 November this year. The Joint Action states: "For the purpose of giving immediate and practical application to some elements of the EU Strategy [see 13 Dec 03], the European Union shall support activities of the OPCW, with the following objectives: promotion of universality of the CWC; support for full implementation of the CWC by States Parties; international cooperation in the field of chemical activities, as accompanying measures to the implementation of the CWC... The projects of the OPCW, corresponding to measures of the EU Strategy, shall be the projects which aim at strengthening: promotion of the CWC by carrying out activities, including regional and sub-regional workshops and seminars, designed to increase the membership of the OPCW; provision of sustained technical support to States Parties that request it for the establishment and effective functioning of National Authorities and the enactment of national implementation measures as envisaged in the CWC; international cooperation in the field of chemical activities through the exchange of scientific and technical information, chemicals and equipment for purposes not prohibited under the CWC, in order to contribute to the development of the States Parties capacities to implement the CWC... The financial reference amount for the three projects [listed above] shall be EUR 1,697,000, to be funded from the 2006 general budget of the European Union."

**13 December** Former Israeli Chief of Staff of the Israel Defense Force, from July 2002 to June 2005, Moshe

Yaalon says that Iraq “transferred [its] chemical agents from Iraq to Syria” six weeks before the US-led invasion of Iraq [see 20 Mar 03], so reports *The New York Sun*. Last year Yaalon made similar, but more speculative, remarks that attracted little notice in America; at that time he was quoted as saying of the Iraqi weapons, “Perhaps they transferred them to another country, such as Syria” [see 10 Apr 04].

**13 December** In Brussels, ministers of the member states of the European Union approve a compromise version of legislation – Registration, Evaluation and Authorisation of Chemicals (REACH) – to control the use of toxic chemicals, which was passed last month by the European Parliament. The legislation, the agreement of which took two years of negotiation, requires companies to register all chemicals they use, and to obtain authorization to use toxic substances [see 29 Oct 03]. The chemical industry has protested that the legislation will add unnecessary bureaucracy, while environmentalists argue it is too weak.

**13 December** From Brussels, NATO releases a report which finds that whilst the G-8 Global Partnership Against the Spread of Weapons and Materials of Mass Destruction [see 26-27 Jun 02] has given submarine dismantlement and chemdemil ample attention, Russia must provide adequate assurances that it has completely eliminated its biological weapons. The report, by Canadian Senator and NATO general rapporteur Pierre Claude Nolin, also says that the issue of Russian tactical nuclear weapons needs greater attention.

**13 December** In Ottawa, the Centre for Treaty Compliance at Carleton University releases its report *A Standing United Nations WMD Verification Body: Necessary and Feasible*. Drawing on the experience of UNMOVIC, director of the centre Trevor Findlay examines the options for establishing a standing UN verification body to deal with matters pertaining to weapons of mass destruction. The report concludes that the ideal option would be to transform UNMOVIC into a permanent body to undertake a wide variety of monitoring and inspections not currently provided for under the UN system. The study was carried out in cooperation with the Verification Research, Training and Information Centre (VERTIC), London. [See also 14 Oct]

**13-14 December** In Vienna there is the eleventh plenary meeting of the Wassenaar Arrangement on Export Controls for Conventional Arms and Dual-Use Goods and Technologies [see 11-12 Jul 96]. Six states (Croatia, Estonia, Latvia, Lithuania, Malta and Slovenia) participate for the first time, joining the 33 states (Argentina, Australia, Austria, Belgium, Bulgaria, Canada, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Poland, Portugal, the Republic of Korea, Romania, the Russian Federation, Slovakia, Spain, Sweden, Switzerland, Turkey, Ukraine, the UK and the USA) that established the Arrangement in July 1996. A decision is taken to admit South Africa also. The public statement issued at the close of the plenary reaffirms that “the WA is open, on a global and non-discriminatory basis, to prospective adherents that comply with the agreed criteria, and noted that membership applications would continue to be examined on a case-by-case basis”. The public statement also says: “The plenary agreed to a number of amendments to the control lists, including in relation to items of potential interest to terrorists”.

These amendments to the various WA control lists include several changes to the chemical-warfare-related items on the Munitions List. Among them is the addition of two more chemicals to the four already present under ML7d (Riot Control

Agents), namely adamsite and N-nonanoylmorpholine (MPA). [Note: otherwise known as pelargonic acid morpholide, MPA is among the riot-control agents that have been declared by CWC member states to the OPCW. Wikipedia states that MPA mixed with agent CS is the active ingredient of *Teren-4M*, a pepper spray used by Ukrainian police.]

**13-15 December** In Phnom Penh, there is a workshop on the national implementation of the CWC in Cambodia, which is jointly organized by the government of Cambodia and the government of Australia. Included among the eighty participants are experts from the Australian Department of Foreign Affairs and Trade, the OPCW and Japan. Following the workshop, meetings between experts and participants are held in parallel sessions. One group drafts national implementing legislation; another group draws up a national action plan to meet Cambodia’s obligations under the CWC and to help identify and report activities such as import and export of relevant chemical agents.

**14 December** US President George Bush accepts responsibility for faulty intelligence in the period leading up to the US-led invasion of Iraq [see 20 Mar 03]. During a speech in Washington, DC, he says: “It is true that much of the intelligence turned out to be wrong. As president I am responsible for the decision to go into Iraq. And I’m also responsible for fixing what went wrong by reforming our intelligence capabilities. And we’re doing just that.”

**15-16 December** In Sanremo, Italy, there is a seminar on *International Humanitarian Law and Chemical Weapons*, which is organized by the International Institute of Humanitarian Law and sponsored by the Italian government. Participants discuss a number of current legal challenges to the CWC and beyond. By the end of the session a list of ten recommendations for improving the regime against chemical weapons is formulated, which the Institute says will be forwarded to the OPCW.

Four months later, a follow-up seminar takes place, which again is sponsored by the Italian government. The purpose of the session is to further define the recommendations compiled on the previous occasion.

**16 December** In Starogladovsk, Chechnya, nineteen children and three adults are taken to hospital suffering from unconsciousness, comatose states, seizures, weakness, amnesia and asphyxia. All are female and were on the same floor of the local school when they fell ill. A governmental commission, comprising military specialists and chemical defence officers issues a report on the matter which states: “The source of the poisoning was located in the main school building, presumably on the second floor [where the ill teachers were working]. The primary route of intoxication could be the respiratory tract, though direct contact is not ruled out. The aggregate state of the toxic substance was probably a liquid or solid, which, under the effects of the environment, could separate into poisonous vapours. It is not possible to determine accurately the form of the toxic substance from only one clinical picture [the victims’ symptomology]. Recommended: in order to clarify what the toxic substance was, conduct toxicological testing of the victims and have this examined by toxicology specialists with the necessary equipment and reagents.” *The (London) Guardian* reports that the commission withdrew its report from circulation two days after releasing it, though not before *The Guardian* had obtained a copy. Two days after the incident the commission adopts the position that the illnesses resulted from mass psychosis due to stress. This was followed five days later by the chief narcologist of the Chechen Republic, Musa Dalsayev, saying

that it was a “pseudo-asthmatic syndrome of a psychogenic nature.

Ten days later, Chechen separatists envoy Akhmed Zakayev tells Ekho Moskvu radio that he had sent a letter to the Director-General of the OPCW in which he asked that the OPCW to investigate the matter.

Two weeks later, speaking on Radio Mayak, Russian Deputy Chief of the Federal Industry Agency Viktor Kholstov says: “[T]here is no [expert] confirmation to date that any chemical products were used in the emergence of this specific situation.” He says that although selective action, i.e. having different effects on males and females, is a known phenomenon in the pharmaceutical field, chemical products do not act in such manner.”

Six weeks previous to the events in Starogradovsk, Kavkaz-Tsentr news agency reported a number of Chechen children having been poisoned at Staroshchedrinskaya school in the Shelkovskiy district by “unidentified poisonous military substances (presumed to be nerve gas)”.

**16 December** Irish Secretary of Defence Willie O’Dea and his UK counterpart John Reid reach an agreement under which Ireland will contribute a further EUR 30,000 towards the construction of the Shchuch’ye chemdemil facility under the G8 Global Partnership [see 26-27 Jun 02]. On the subject Reid says: “I am delighted that Ireland is making a second contribution. I know that, along with contributions from the UK and our other partners, it will fund vital projects that will help destroy Cold War chemical weapons.” [See also 12 Dec]

**16 December** At UN headquarters, Mihnea Ioan Motoc, the Chairman of the Committee established pursuant to resolution 1540 [see 28 Apr 04], transmits to the Security Council a report on the activities undertaken and the results achieved during the period 1 January to 16 December 2005 by the Committee [see also 20 Jul]. The report states: “Letters requesting additional information and/or clarification have been prepared for all 124 States that submitted the first national reports... As of 16 December 2005, 42 States had responded to the Chairman’s letters requesting additional information [in the form of] an updated report ... in descriptive form.

**17 December** In Iraq, US forces release biological weapons scientists Huda Salih Mahdi Ammash and Rihab Taha from custody, after more than three years in detention, on the grounds that they no longer pose a security threat [see 22 Sep 04]. Announcing the release two days later, US military spokesman Barry Johnson says the two were among eight detainees who “were released as part of an ongoing process for many months in full consultation with the Iraqi government”. A statement released by US forces states: “We have had ongoing discussions over a 14-month period with the Iraqi government about releasing these detainees. The Iraqi government was informed that the US government could no longer hold these individuals. The decision to release them was based on law, not on politics or any other consideration.”

A week later, Iraqi National Security Adviser Mowaffak al-Rubbaie says that warrants have been issued for the arrest of Ammash and Taha for their responsibility for criminal acts committed under the former regime. A lawyer for Ammash dismisses the threat to re-arrest her, saying the Iraqi government had agreed to the release of the detainees on the condition that they left Iraq.

**18 December** In Abu Dhabi, on the eve of the twenty-sixth Gulf Cooperation Council (GCC) annual summit, GCC Secretary-General Abdul Rahman Al-Attiya calls on GCC states – together with Iran, Iraq and Yemen – to reach an accord that has as its objective making the Gulf region free of

weapons of mass destruction. Speaking at a press conference, Al-Attiya says: “An accord of this kind may be conducive to a comprehensive accord involving all Arab and non-Arab countries in the Middle East – by non-Arab countries I mean Israel.”

**18 December** US Senate and House of Representatives conferees agree to allocate \$416 million for Cooperative Threat Reduction programmes in the former Soviet Union under the FY 2006 Defense Authorization Bill; however, with a reduction of almost \$50 million, chemdemil is the only programme not be allocated an increase from FY 2005.

**19 December** The US Food and Drug Administration issues a final order, following a court-ordered review, “to categorize [Anthrax Vaccine Absorbed] AVA according to the evidence of its safety and effectiveness, thereby determining if it may remain licensed and on the market”. FDA spokeswoman Julie Zawisza says: “We believe the vaccine is safe and effective for intended use, which would include (prevention of) inhalation anthrax.” Last year, District Judge Emmet Sullivan suspended the mandatory vaccination programme after he found fault in the FDA’s process for approving the drug [see 27 Oct 04]. Several months later Sullivan said the Pentagon could resume giving vaccinations, but only to troops who volunteer for them [see 1 Apr]. The Justice Department recently requested a federal appeals court to reverse “on the merits” the earlier decision by Sullivan [see 1 Dec].

**19 December** The US Government Accountability Office transmits to Congress *Plum Island Animal Disease Center DHS and USDA: Are Successfully Coordinating Current Work, but Long-Term Plans Are Being Assessed*. The report examines the Department of Homeland Security (DHS) and Department of Agriculture (USDA) coordination of research and diagnostic activities; changes in research and diagnostic priorities since the transfer of the Plum Island facility from USDA to DHS [see 19 Sep 03]; and long-term objectives of joint USDA and DHS activities at the facility. The report recommends that DHS, in consultation with USDA, pursue opportunities to shift work that does not require the unique features of Plum Island to other institutions.

**20 December** In Spain, sixteen suspected members of al-Qai’da, including an individual from Belarus with expertise in chemical weapons, have been arrested in a series of special operations, so reports RIA Novosti news agency. Unidentified official sources say that Sergei Malyshev participated in militant operations in Chechnya, Afghanistan and Pakistan. Meanwhile, the Belarusian Foreign Ministry quotes a statement issued by the Belarusian Interpol bureau which says that “the identified individual is not wanted by Interpol and no information has been provided by the Spanish Interior Ministry”.

**20 December** In the UK House of Commons, responding to a written question asking whether government-funded research into the survivability of chemical and biological agents in bottled water and packaged food will be published, Home Secretary Charles Clarke says: “Information contained in this research could prove of value to individuals potentially wishing to tamper with food or drink products in order to pose a threat to the public for terrorist or other criminal purposes. Accordingly, it is not the intention of the Department to publish this research.”

**21 December** The UK Foreign Office, Department of Trade and Industry and Ministry of Defence release the third [see 16 Dec 04] annual report on *The Global Partnership* [see 26-27 Jun 02], which reviews the UK’s efforts in 2005 to

assist Russia and other former Soviet Union (FSU) countries to eliminate their chemical, biological and nuclear weapons legacies. The report states:

"The UK's assistance to Russia's [chemdemil] programme continues to be focused on supporting construction of the Shchuch'ye CWDF... The most significant development in this area has been Russia's decision to increase funding for its CWD programme by a very substantial amount. Russian funding in 2005 more than doubled to some \$400 million, and is set to increase further in 2006 to some \$600 million. This represents clear evidence of Russia's commitment to meeting the deadlines set by the CWC, and increases international confidence... The UK's second project, the procurement of equipment for the electricity substation supplying the Shchuch'ye CWDF, was completed on budget, and ahead of schedule, in November 2004. It was jointly funded by the UK, Norway, the EU and the Czech Republic, and managed by the MOD [Ministry of Defence], through its principal contractor, Bechtel. Russia and the US have agreed that the Shchuch'ye CWDF should be completed in mid-2007 and start operations in mid-2008. The UK's aim, working jointly with Canada, is to carry out further high priority infrastructure projects and to procure equipment for the second munitions destruction building, inside the CWDF, to match these timescales. Progress in some of these areas has been somewhat delayed, partly as a result of changes in Russian priorities for donor assistance at Shchuch'ye. The MOD has therefore thoroughly reviewed priorities, in close consultation with both Russia and Canada, and is now moving ahead with the planning or implementation of a number of projects [see also 16 Dec]. In doing so, the MOD has concluded that the priority for UK funding should be to complete essential infrastructure that supports the CWDF as a whole, rather than procurement of equipment for the second munitions destruction building... Procurement of one major equipment for the second munitions destruction building (the metal parts furnace) is now well advanced, with funding from the UK and The Netherlands. Procurement of further equipment, funded by Canada, is planned to start by about the end of the year. A number of important infrastructure projects, including in particular further elements of the electricity supply, are at an advanced stage of planning... Full implementation is due to start at around the end of 2005, or early in 2006... MOD is funding [the Defence Science and Technology Laboratory collaborative] project at Urdmurtia State University, Russia, addressing risk assessments at a Russian CW destruction site. Other projects are under discussion.

"The MOD's first pilot biological redirection project, involving the Institute of Plant Immunity in Kobuleti, Georgia, is proceeding well following some early bureaucratic delays. It is being implemented as an ISTC Partner Project. The first annual review meeting was held in Georgia in September 2005, when the institute demonstrated significant progress, both scientifically and strategically... The institute has applied to extend the remit of the project and, following due consideration, MOD has agreed to include in the project an outstation, located in the Tsagveri Gorge region of Georgia. Additional financial allowance was also required in order to address the effects of the intermittent power supply on sensitive project equipment. Uninterruptible power supply equipment will be installed shortly... A second biological redirection project, at the G. Eliava Institute of Bacteriophage, Microbiology and Virology in Georgia, is planned to start early in 2006. This project is a paper-based study, reviewing the 'state of the art' in bacteriophage research in the FSU... Historically, the UK has not pursued research into the application of bacteriophages, whereas the FSU applied a significant level of research effort in this field... The UK will work with the US and other donors to develop our programme of redirection in the FSU, covering both the biological and chemical areas. The UK will aim to

complete redirection programmes in Libya and possibly Iraq."

**21 December** US Director of National Intelligence [DNI] John Negroponte announces the establishment of the National Counterproliferation Center (NCPC). He says that the move is "an essential and critical step forward for the IC [intelligence community] and the Nation to help prevent and deter the proliferation of weapons of mass destruction". According to a press release of the Office of the DNI, the NCPC "will coordinate strategic planning within the IC to enhance intelligence support to United States efforts to stem the proliferation of weapons of mass destruction and related delivery systems". Together with the IC it will "identify critical intelligence gaps or shortfalls in collection, analysis or exploitation, and develop solutions to ameliorate or close these gaps". Furthermore, it will also work with the IC "to identify long-term proliferation threats and requirements and develop strategies to ensure the IC is positioned to address these threats and issues".

**23 December** In Russia, the Gorny chemdemil facility completes the destruction of its stockpile of 1,143.2 tonnes of chemical weapons. During a visit to the facility, Deputy Head of the Federal Industry Agency (Rosprom) and former head of the disbanded Russian Munitions Agency Viktor Kholstov says: "This is an event of great international and foreign political significance... We said that in December 2002 we would begin the industrial destruction of CW at Gorny settlement, and this has been done. We also told the international community that all the stocks of CW kept in Gorny, amounting to 2.9 per cent, would have been destroyed by the end of 2005. Today we completed this pledge." Kholstov notes that next year the facility will commence the destruction and disposal of the reaction masses resulting from the elimination of mustard gas and lewisite – this process will continue until 2012.

**25 December** The Libyan Supreme Court quashes the death sentences imposed on five Bulgarian nurses and a Palestinian doctor and orders a retrial. Eighteen months previously, the six were sentenced to death by firing squad after having been found guilty of intentionally infecting more than four hundred children with HIV as part of an experiment to find a cure for AIDS [see 6 May 04]. Twenty-three of the children later died from AIDS. Libya had claimed that the operation had been part of a CIA and Israeli plot, but later retracted the accusation.

**26 December** In St Petersburg, a number of people are treated after an unknown gas is released in a shop in a shopping centre. The daily *Pravda* quotes unidentified officials from the Russian Emergency Ministry as saying that gas capsules with timers were found in three other shops in the Maksidom shopping centre. Sixty-six of the seventy-eight people given medical attention are hospitalized, though more than fifty are released shortly thereafter. Preliminary reports say the substance used was methyl mercaptan, which is a chemical with a strong smell and of low toxicity, often used as an odorant in natural gas. BBC News Online quotes an anonymous official from the Federal Security Service (FSU) as saying that "the security services are inclined to believe this to be an act of hooliganism because so far there is no information that this could be a terrorist act". Meanwhile, an unnamed police spokesman says that the Maksidom chain, which sells furnishings and hardware, had received letters threatening to disrupt sales during the holiday period.

**27 December** France has agreed to assist Russia over a five-year period to accelerate work on the construction

and operation of Russian chemdemil facilities, so reports Interfax news agency. Though no specific amount of financial assistance has been agreed, France has initially undertaken to contribute EUR 10 million, EUR 7 million of which has been allocated to the project to set up an ecological monitoring system at the Shchuch'ye chemdemil facility. The agreement is made under the G-8 Global Partnership Against the Proliferation of Weapons and Materials of Mass Destruction [see 26-27 Jun 02].

**27 December** The US Department of State (DoS) announces that it has imposed sanctions on nine companies – six in China, two in India, and one in Austria – for selling to Iran materials that could be used to produce WMD. The Chinese companies in question are: China National Aero-Technology Import and Export Corporation (CATIC), China North Industries Corporation (NORINCO), Zibo Chemet Equipment Company, Hongdu Aviation Industry Group, Ounion International Economic and Technical Cooperative, and Limmt Metallurgy and Minerals Company. Erel describes NORINCO as a “serial offender”. The two Indian chemical companies are: Sabero Organics Gujarat Ltd and Sandhya Organic Chemicals Pvt Ltd. The Austrian company affected is the arms manufacturer Steyr-Mannlicher GmbH. The sanctions prohibit the companies from doing business with the US government and from receiving export licenses required to buy certain US technologies. More than forty entities and individuals have been sanctioned under the Iran Nonproliferation Act since 2001 [see 3 Jan]. Speaking to reporters, DoS Deputy Spokesman Adam Erel says that the sanctions, which took effect four days previously, were imposed on the basis of “credible information” that the companies had transferred equipment or technology in violation of the Iran Nonproliferation Act 2000.

Two days later, Chinese Foreign Ministry spokesman Qin Gang says the sanctions are “not beneficial to Sino-US cooperation in the non-proliferation field”. Speaking at a press conference in Beijing, he says: “We are strongly dissatisfied with, and firmly oppose, the sanctions... We urge the US Government to rectify its wrong action.” The six Chinese companies also voice their disapproval of the sanctions.

**January** From New York, Simon & Schuster publish *State of War: The Secret History of the CIA and the Bush Administration* by New York Times reporter James Risen. In the book, Risen makes the following reference to Curveball [see 20 Nov 05]: “The Germans claimed that Curveball would refuse to talk to the Americans and so they would only provide reports based on their own debriefings of the Iraqi... What was worse for the CIA, the agency wasn't even receiving the reports directly from the Germans. Instead, Berlin provided Curveball debriefing reports to a US military intelligence unit, the Defense HUMINT Service, which then circulated the reports throughout the US intelligence community. Defense HUMINT distributed the reports without any vetting of Curveball's information... [In Autumn 2002 Washington chief of the German intelligence service told the chief of the Directorate of Operations, European Division, Tyler Drumheller] that his service wasn't sure that Curveball was telling the truth, and worse, that there were questions about his mental stability and reliability, particularly since he had suffered a nervous breakdown.”

**2 January** In Lubbock, Texas, Professor Thomas Butler is scheduled to be released from a half-way house where he has been serving his remaining time after spending most of his two-year sentence at the Federal Medical Center Fort Worth. Butler was convicted on 47 of 69 charges relating to fraud committed against Texas Tech's health sciences center [see 1 Dec 03 and 10 Mar 04]. Three months ago, an appeal court upheld the convictions [see 25 Oct 05].

**4 January** *The (London) Guardian* reports having obtained a new assessment from “a leading EU intelligence service” that warns that middlemen, front companies and scholars working for Iran, Pakistan and Syria have extracted information about WMD technologies from Western European engineering firms, laboratories and academic institutions. The 55-page “confidential ‘early warning’ intelligence assessment” states that Western Europe is the top location for illegal acquisitions of WMD technologies, while the former Soviet Union is used to supply unemployed former weapons scientists. It also warns that Syria for years has been importing materials and expertise in an effort to build a self-sufficient WMD programme. Damascus “has recently strengthened cooperation in the [arms] sector, particularly with Iran”. Much of the document focuses on Iranian activities – not only in the nuclear field, but in bio-chemical and conventional weapons, notably its “very ambitious” missile programmes. The document lists more than 200 Iranian companies, institutes, government offices and academic outfits said to be engaged in weapons research, development and procurement, and mostly subordinate to the defence ministry in Tehran's armed forces logistics department. The assessment lists hundreds of companies and institutions from Pyongyang to Beijing to Sofia said to be in the WMD business, often using front companies in Dubai to disguise their true dealings. The aim is to “name and shame”, to warn off EU companies from doing business with the listed organisations. What the intelligence assessment does not include are the names of the west European firms and scholars believed to be profiting handsomely from the trade in military knowhow and components.

**4-5 January** In Orumiyeh, Iran, a military exercise relating to defence against chemical, biological and nuclear weapons takes place. The exercise, the objective of which is to prepare the Basij forces against such threats, involves the participation of 380 personnel undertaking rescue and relief activities.

**12 January** Russian State Duma defence committee member Nikolai Bezborodov says, in an interview published by *Nezavisimoye Voyennoye Obozreniye*, that the deadline for constructing a chemdemil facility at Shchuch'ye has been missed because the USA “froze financial assistance between 1999 and 2002” for Russian chemdemil activities, which “wrecked the schedule”. He continues: “The deal was that Russia would put up 60 per cent of the cost of the project and the USA 40 per cent. But there is a long way to go from the declaration to the reality... The US Congress only had one complaint that was justified, that Russia should spend at least 25m dollars a year on its chemical weapons destruction programme.” Bezborodov says there are also problems with financing promised by other western partners with the total amount of aid pledged being around \$1.8 billion, but work to the value of only \$264.8 million having been carried out. “The UK pledged over 120m dollars and has paid only 8m. Germany 244.7m and 80.6m respectively; Italy 464.2m and 6.8m; Canada 31m and 2.9m; and the USA 819.2m and 139.3m... Only three out of seven destruction facilities are being built with western help. And at two of those, that help accounts for no more than one third of all spending. At Gornyy (Saratov Region), for example, it is 24 per cent. At Kambarka (Udmurt Republic) it is 27 per cent and at Shchuch'ye the foreign component is, or rather should be, 40 per cent.” He says that by not keeping their funding pledges, the western partners were making it more difficult to plan and carry out long-term chemdemil programmes.

**12 January** Russian State Duma Deputy Speaker Vladimir Zhirinovskiy says the bird flu outbreak in Turkey could

be a “biological weapon” launched by the USA against Russia. In an interview on Ekho Moskv radio, he says that viruses such as mad cow disease and SARS were “ethnic biological weapons” planted in certain locations by “mainly US security services” and “NATO structures”. He adds: “Now they have launched (a virus) against Russia... In spring migrating birds from Turkey will fly to Russia and we will have an epidemic among birds. We will be forced to destroy all our poultry and buy chicken legs from the US. This is an economic attack... This is a fight against Russia. Their aim is to depopulate it.”

**12 January** In the southern Baltic Sea, chemical munitions dumped at the end of the Second World War might be moved so that a natural gas pipeline can be laid between Russia and Germany, so reports the Baltic News Service. However, a Finnish Defense Ministry official says: “It would come cheaper to map out the route and lay the pipeline so that there would be no need for it to pass over weapons.” Four months ago, Russia and Germany signed a deal to construct a \$5 billion gas pipeline running 1,200 km under the Baltic from Vyborg near St Petersburg to Greifswald on Germany’s north-eastern coast. The pipeline’s projected route passes close to two of Tershkov’s dumps, in the Gotland and Bornholm basins.

**12-13 January** In Tempe, Arizona, the Center for the Study of Law, Science and Technology, Arizona State University College of Law, is scheduled to host a conference on *Forbidding Science? Balancing Freedom, Security, Innovation, & Precaution*. The first day of the conference provides an overview of the issues and discuss the legal and policy context and the limitations of the right to conduct scientific research; the second day focuses on three case studies that specifically address current or emerging controversies about whether certain types of science should be restricted.

**13 January** The *Seattle Post-Intelligencer* reports a resident of Washington state as being charged, amongst other things, with threatening President George Bush with biological weapons. Steven Baldwin allegedly sent a package to the White House in July 2005 with “Biological Weapons Enclosed” written on it.

**16 January** In the UK House of Commons, responding to a written question addressed to the Foreign Secretary as to what investigations have been carried out as a result of the statement by South African Deputy Defence Minister Ronnie Kasrils that Wouter Basson obtained information from the UK in support of South Africa’s chemical and biological weapons programme, Minister of State for the Foreign Office Kim Howells says: “Following allegations that the Government was involved in providing information to personnel connected to South Africa’s Chemical and Biological Weapons programme, the Government conducted full investigations into the allegations made. There was no evidence to suggest UK Government officials knowingly provided assistance to any South African Chemical and Biological Weapons programme.” In response to a follow-up question regarding the reasons behind each of the three démarches made by and on behalf of the UK Government to (a) President Mandela and (b) the South African Government in respect of Wouter Basson, Howells says: “Démarches were made to the South African Government to highlight the Government’s concerns about the onward proliferation risk of any remaining records or expertise relating to offensive Chemical and Biological Weapons programmes, and to encourage South Africa to submit a confidence building measure return to the United Nations in respect of the Biological and Toxin Weapons Convention.”

Two days later, also in the House of Commons, Howells replies as follows to another written question from the same

questioner regarding when the government became aware of Project Coast: “The Government was aware of the existence of legitimate South African chemical and biological defence programmes from the 1980s. Initial reports indicating offensive chemical biological weapons activities (later known as “Project Coast”) were not received until 1993, but they were inconclusive, although there were unsubstantiated claims of chemical weapon use by South African forces in Angola, Mozambique and Zimbabwe in the 1980–90s. More detailed evidence of previous offensive activities was received in the years leading up to the Truth and Reconciliation Commission hearings in 1998, when further details of the offensive activities emerged. In 1994, we understood that the South African Government had terminated offensive chemical and biological weapon activities.”

**17 January** US Department of State Head of Counter-Terrorism Henry Crumpton says that biological weapons pose a more serious long-term terrorist threat to the West than nuclear weapons and that “it is simply a question of time” before terrorist groups acquire weapons of mass destruction and use them in attacks. In an interview with *The (London) Daily Telegraph*, Crumpton says: “We are talking about micro targets such as al-Qa’eda which, when combined with WMD, have a macro impact. I rate the probability of terror groups using WMD [to attack Western targets] as very high... If anything, the biological threat is going to grow... As catastrophic as a nuclear attack would be, it would be self-contained. But if you look at a worst-case scenario for a biological attack, it would be difficult to determine whether or not it was a terrorist attack, and it would be far more difficult to contain.”

**17-26 January** In the UK, a basic course for personnel of national authorities involved in the national implementation of the CWC takes place at the Royal Military Academy of Science in Shrivenham. It is organized jointly by the OPCW and the UK Foreign Office, Department of Trade and Industry and the Ministry of Defence. Attending the course are participants from seventeen national authorities and two representatives of Iraq, which has announced its intention to accede to the Convention. The objective of the course is to fulfil the objectives set out under the Article VII action plan [see 20-24 Oct 03] and more generally to help parties comply with their obligations under the CWC. It is primarily intended for personnel of national authorities who have little or no previous involvement in the implementation of the Convention.

**20-21 January** In Livermore, California, the Center for Global Studies (CGS) holds two back-to-back conferences with the Lawrence Livermore National Laboratory’s Center for Global Strategic Research (CSGR) on the subject of *New Perspectives on Regimes to Control WMD*. The first conference focuses on ‘WMD latency’; the second, on multilateral approaches to block or at least constrain proliferation. CGS, a unit of International Programs and Studies at the University of Illinois, is designated a National Resource Center for the study of globalization by the US Department of Education. The CSGR is an outreach effort of the Lawrence Livermore National Laboratory, which is operated by the University of California for the US Department of Energy.

**22 January** Timor Leste Foreign Minister José Ramos-Horta describes, in an interview with CNN, as “very accurate” a report that alleges, amongst other things, that the Indonesian military used napalm and chemical weapons in Timor Leste during the 24-year period of occupation by Indonesia. The report follows a three-year investigation by the Commission for Reception, Truth and Reconciliation into Indonesian military activities during the period of occupation. The Commission

submitted its report to Timor Leste President Xanana Gusmao three months ago. Gusmao forwarded it on to UN Secretary-General Kofi Annan two days ago. According to CNN Indonesia has challenged the accuracy of the report.

**23 January** In Japan, Public Security Examination Commission spokesman Noboru Matsui says the Japanese Ministry of Justice has approved a second three-year extension of a surveillance order on the Aleph group, formerly Aum Shinrikyo, which was behind the sarin gas attacks in Matsumoto [see 28 Jun 1994] and on the Tokyo subway [see 20 Mar 95]. The Associated Press reports the Japanese authorities as believing founder Shoko Asahara [see 20 Dec 04] and twelve other former members of Aum Shinrikyo still hold influence in the group. According to figures from the Ministry of Justice Aleph currently has around 1,650 members in Japan.

**23 January** In Karachi, former Chief Minister of the Pakistani Baluchistan province Sardar Akhtar Mengal claims that Pakistani forces are using chemical weapons in Baluchistan and refers to pictures of Baloch civilians who he said had been hit by chemical weapons. Speaking at a press conference, Mengal says: "Chemical weapons are being used [to resolve the crisis] and a large number of women and children have died as a result." He says that the pictures show blood coming out of people's mouths without any injury to their bodies, which indicates that poisonous gases have been used in the military operation. Baluchistan is home to Pakistan's main gas fields and local militants are fighting for more autonomy and control of these resources and greater autonomy.

Three weeks later, the Associated Press of Pakistan news agency reports an unidentified spokesman for the Pakistani government as rejecting the allegation of chemical weapons being employed. Moreover, he is reported as saying that there is no military action taking place in Baluchistan and that the Frontier Corps only responds in self-defence and target criminals.

Five weeks subsequently, in the Lower House of the Indian Parliament, Minister of State for External Affairs E Ahamed says that, following reports by the Pakistani media of the reported use of chemical weapons in Baluchistan, India is monitoring the situation on the grounds of national security.

**24 January** In Khartoum, on the second day of the sixth ordinary session of the summit of the African Union (AU), OPCW Director-General Rogelio Pflirter and Chairman of the AU Commission Alpha Oumar Konaré sign a memorandum of understanding which seeks to enhance cooperation between the OPCW and AU to implement the CWC and to achieve universality in Africa, in accordance with the decision adopted by the Heads of State and Government in Durban see 28 Jun – 10 Jul 02].

**24 January** South Korea agrees to provide "possible cooperation" with the Proliferation Security Initiative (PSI) and to send delegates to observe interdiction exercises. Describing South Korea's involvement in the PSI as a "sensitive" issue, Foreign Minister Ban Ki-moon says: "South Korea shares the purpose of PSI and will cooperate on a case-by-case basis, but is not considering formally joining" the effort.

**24 January** From the USA, the *Proceedings of the National Academy of Sciences* reports a team of researchers as having produced a vaccine against recombinant *Yersinia pestis*, which resulted in a near seventy-five per cent survival rate when used on guinea pigs in aerosol form. The research team – led by Luca Santi of the Biodesign Institute, Arizona State University – used tobacco leaves to demonstrate the

ability of a "rapid and highly scalable" plant expression system to produce a vaccine that generates an immune response against *Yersinia pestis*. The US Department of Defense funded the study.

**25 January** Djibouti deposits its instrument of ratification of the CWC with the UN Secretary-General. In thirty days Djibouti will become the 176<sup>th</sup> [see 12 Oct] party to the Convention.

**26 January** The Seoul High Court overrules a lower court decision and orders two US companies to pay \$62 million compensation to 6,800 South Korean military veterans affected by Agent Orange, which was used by the US military during the Vietnam War. The court says that the defoliant manufactured by Dow Chemical and Monsanto had higher than permitted levels of dioxin, which caused such illnesses as lymphoma, lung cancer and prostate cancer. It is the first time that a court in South Korea has made such a ruling. Last year a US court rejected claims for compensation by a group of Vietnamese claimants who said they suffered adverse health effects from the use of Agent Orange by the US military [see 10 Mar 05]

**26 January** In Washington, DC, former UNMOVIC Executive Chairman Hans Blix gives a keynote speech at a luncheon organized by the Arms Control Association.

**26 January** In Virginia, during a ceremony commemorating the opening of a new consolidated Defense Threat Reduction Center, Commander of the US Strategic Command (USSTRATCOM) James E Cartwright, announces the 'Initial Operating Capability' of the USSTRATCOM Center for Combating Weapons of Mass Destruction. The centre will plan, advocate and advise combatant commands on WMD-related matters, to include doctrine, organization, training, material, leadership, personnel and facilities. It will also provide recommendations to dissuade, deter and prevent the acquisition, development, transfer or use of WMD, associated technology and related materials. The Center will collaborate with US and foreign organizations with a view to increasing awareness of global threats from WMD, and will also provide critical planning expertise and develop recommendations to reduce vulnerabilities and improve the effectiveness of the Department of Defense in dealing with threats from WMD.

**28 January** In the USA, Georges Sada, formerly second in command of the Iraqi Air Force, says that during the first Gulf War Saddam Hussein ordered that ninety-six Russian fighter jets be armed with chemical weapons and sent to bomb Israel. Speaking during a tour to promote his book *Saddam's Secrets*, Sada says he convinced Hussein to abort the mission by telling him that the Iraqi pilots could not complete the mission with the equipment at their disposal, and that the Israelis had radar that could detect them before they reached their target.

Two days later, in an interview with Cybercast News Service, Sada repeats the assertion made in his book that in June 2002 Iraq transported WMD to Syria aboard several refitted commercial jets, under the pretence of conducting a humanitarian mission for flood victims. He says that two commercial jets were converted to cargo jets, in order to carry raw materials and equipment related to WMD projects. The passenger seats, galleys, toilets and storage compartments were removed and new flooring was installed. Hundreds of tons of chemicals were reportedly included in the cargo shipments. Sada says he obtained the information from two Iraq Airways captains who were reportedly flying the sorties. [See also 10 Apr 04]

**30 January** In the UK House of Commons, the European Scrutiny Committee releases a report that refers to the EU Council Joint Action in support of the BWC, in the framework of the EU Strategy against Proliferation of Weapons of Mass Destruction. It states: "Although the sums are small, the context is plainly of considerable, and growing, importance, and the project would seem to be a good example of how, in a modest and low-key way, the Common Foreign and Security Policy can support international endeavours to contain threats to global security. It is to be hoped that the [BWC] Review Conference later this year will be able to take the process forward, and particularly in the central area of effective verification. Given the interest in the House in both WMD non-proliferation and CFSP, we are drawing this to its attention... The Council Secretariat will supervise execution of the project, which will be carried out by the Graduate Institute of International Studies, Geneva. It will last for eighteen months. Funding is from the CFSP budget at an estimated cost of EUR 876,000 (£598,220), of which the UK currently contributes approximately 17%, i.e. EUR 148,920 (£101,697)." [Note: The technical implementation of the project will in fact be undertaken by the BioWeapons Prevention Project (BWPP)]

**31 January** The Munich *Focus* magazine reports the German Federal Office of Criminal Investigations and the Customs Office of Criminal Investigations (BKA, ZKA) as saying that Iranian universities have the "know-how" for "biological combat agent programmes" and that front companies of the Iranian intelligence services are trying to obtain "microbiological and biotechnological laboratory and production equipment". It also quotes the report as saying that Iran has stocks of mustard gas, tabun, prussic acid, sarin and VX. [See also Nov 04]

**31 January** In the USA, the National Research Council and the Institute of Medicine of the National Academies launch a report, *Globalization, Biosecurity, and the Future of Life Sciences*, prepared by a joint ad hoc committee, the Committee on Advances in Technology and the Prevention of their Application to Next Generation Biowarfare Threats, co-chaired by Stanley Lemon of the University of Texas Medical Branch at Galveston and David Relman of Stanford University. The report is a follow-up to the Fink Report of the National Research Council, *Biotechnology Research in an Age of Terrorism* [see 8 Oct 03]. It describes its scope thus:

"While many reading this report might hope to find a well defined, prioritized, list or set of lists of future threats, the pace of research discovery in the life sciences is such that the useful lifespan of any such list would likely be measured in months, not years. Instead, the Committee sought to define more broadly how continuing advances in life science technologies could contribute to the development of novel biological weapons, and to develop a logical framework for analysts to consider as they evaluate the evolving technology threat spectrum. The Committee concluded that there are classes or categories of advances that share important features that are relevant to their potential to contribute to the future development of new biological weapons. These shared characteristics are based on common purposes, common conceptual underpinnings, and common technical enabling platforms. Thinking of technologies within this framework should help in evaluating the potential they present for beneficial and destructive applications, or technological surprise(s).

"The Committee classified new technologies according to a scheme organized around four groupings: (1) technologies that seek to acquire novel biological or molecular diversity, (2) technologies that seek to generate novel but pre-deter-

mined and specific biological or molecular entities through directed design; (3) technologies that seek to understand and manipulate biological systems in a more comprehensive and effective manner; and (4) technologies that seek to enhance production, delivery, and "packaging" of biologically active materials. This classification scheme highlights commonalities among technologies and, by so doing, draws attention to critical enabling features; provides insight into some of the drivers behind life sciences-related technology; facilitates predictions about future emerging technologies; and lends insight into the basis for complementarities or synergies among technologies and, as such, facilitates the analysis of interactions that lead to either beneficial or potentially malevolent ends."

A solidly substantiated key observation in the report, from which its several recommendations partly depend, is this: "The increasing pace of scientific discovery abroad, and the fact that the United States may no longer hold a monopoly on these leading technologies means that we are as never before dependent on international collaboration".

The recommendations are of the following five main types: "[1] The Committee endorses and affirms policies and practices that, to the maximum extent possible, promote the free and open exchange of information in the life sciences; ...[2] recommends adopting a broader perspective on the 'threat spectrum'; ...[3] recommends strengthening and enhancing the scientific and technical expertise within and across the security communities; ...[4] recommends the adoption and promotion of a common culture of awareness and a shared sense of responsibility within the global community of life scientists; ... [5] recommends strengthening the public health infrastructure and existing response and recovery capabilities."

There is recurrent reference throughout the report to the BWC, the CWC and other elements of the international regime directed against "biowarfare threats". The report, in the part setting out and developing its recommendations, observes that these treaties may "serve as a basis for future international discussions and collaborative efforts to address and respond to the proliferation of biological threats. Important opportunities will arise when states parties conduct their next quinquennial reviews of the operation of the BWC (in 2006) and the CWC (in 2008)". This is an element of recommendation [4] above and continues: "The present report has several times noted that technologies are bringing chemistry and biology closer together. That toxins and synthetic biological agents, including bioregulators, immunoregulators and small interfering RNAs, fall within the scope of both treaties is one such linkable feature. These two review conferences will as always be dominated by political considerations, but, in view of the profound developments now under way in the life sciences, the Committee nevertheless draws attention to the possibilities held out by the 2008 conference for building upon the parallel or linkable features of the BWC and the CWC."

One further innovative element of recommendation [4] that the report develops in some detail envisages the establishment of "globally distributed, decentralized and adaptive mechanisms with the capacity for surveillance and intervention in the event of malevolent applications of tools and technologies derived from the life sciences."

Recommendation [3] includes an elaborated proposal for the creation by statute of "an independent science and tech-

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

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## Book Reviews

Ian Kenyon

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***The Problem of Biological Weapons***, Milton Leitenberg, Swedish National Defence College, Stockholm, 2004.

***Assessing the Biological Weapons and Bioterrorism Threat***, Milton Leitenberg, Strategic Studies Institute, US Army War College, Carlisle PA, December 2005.

***War of Nerves: Chemical Warfare from World War I to Al-Qaeda***, Jonathan B Tucker, Pantheon Books, New York, 2006.

Milton Leitenberg in both of these works guides his readers to two conclusions, which while both convincing sit uncomfortably together. On the one hand he documents the state programmes which have resulted in the capability to produce biological weapons of awesome power and on the other he argues that these same means of mass destruction are well beyond the reach of current non-state actors and that government assessments of the threat are overblown and are leading to diversion of resources better spent on public health responses to real problems which regularly cost thousands of lives annually. *The Problem of Biological Weapons* is essentially a collection of writings prepared for different purposes over the period 1999 to 2002 and brought together for publication, with some updating, in 2004. The author describes *Assessing the Biological Weapons and Bioterrorism Threat* as a sequel but it is in fact self contained, presents the arguments in a more logical sequence and carries his arguments perfectly well without entering the degree of detail in the earlier, longer book. For this reader, whilst much of the argumentation about the difficulty for terrorist groups to obtain an effective bioweapons capability is convincing, there still hangs over us the memory of the sophistication of the 'amerithrax' attacks of 2001. Can responsible governments afford to do other than take the threat of deliberate disease dissemination seriously, even whilst also anxiously watching the spread of H5N1?

Jonathan Tucker's subtitle seems to imply a comprehensive coverage of the subject matter through a sweep of ninety years. On one level he delivers this but, as his main title indicates, his real subject is the discovery, development, production, use and threat of use of the nerve agents, from the discovery of Tabun to the development of the Novichoks, from the avoidance of their use in World War II and the Cold War to their use by Iraq and Aum Shinrikyo, and the potential threat of their future use, even following the successful creation of the Chemical Weapons Convention, the destruction of the main stockpiles (apart from those assumed to remain in a tiny group of states) and the continuing vigilance of the OPCW. The other aspects, the history of the development and use of lung, blood and blister agents during and immediately after World War I and the continuing and ultimately successful attempts to find an arms control solution to the problem are deftly sketched in just sufficient detail to put the main story in context but without losing the main focus chosen by the author or making the work too long. The result is an extremely readable book, providing a wealth of information about the political and technical drives which led to some of the most dangerous perversions of science yet perpetrated by mankind and, as these things cannot be dis-invented, their worrying legacy.

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## Forthcoming Events

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### 18-21 June

Tampere, Finland

Sixth NBC Symposium on Chemical, Biological and Radiological Threats - *A Safety and Security Challenge*

Details: <http://virtual.vtt.fi/nbc/index1.htm>

### 29 -30 June

Santa Marta, Colombia

OPCW Second Regional Seminar on *The Role of the Chemical Industry in the Implementation of the CWC in Latin America and the Caribbean*.

Details: <http://www.opcw.org/>

### 4 - 7 July

OPCW Headquarters, The Hague

*46th Session of the OPCW Executive Council*

Details: <http://www.opcw.org/>

### 4 - 6 September

The Royal Society, London

Workshop jointly convened by the (UK) Royal Society, the International Council for Science, and the InterAcademy Panel, on *Scientific and Technological Developments Relevant to the BTWC*.

Details: [Nick.Green@royalsoc.ac.uk](mailto:Nick.Green@royalsoc.ac.uk) (email)

### 20 - 22 September

Moscow

*Biosecurity issues relating to the maintenance, use and supply of dangerous biological material*, Workshop jointly organised by the OECD and the Russian Federation.

### 29 September - 1 October

Wiston House, UK

Wilton Park conference WPS 06/7

Annual conference on CBW

Details: <http://www.wiltonpark.org.uk>

### 18-19 November

Geneva, Switzerland

25th Workshop of the Pugwash Study Group on Implementation of the CBW Conventions.

### 20 November - 8 December

Geneva, Switzerland

*Sixth Review Conference for the Biological Weapons Convention*

Details: <http://www.opcw.org>

### 5-8 December

OPCW Headquarters, The Hague

*11th session of the Conference of the States Parties to the CWC*.

Details: <http://www.opcw.org>

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