

THE CBW CONVENTIONS BULLETIN

News, Background and Comment on Chemical and Biological Weapons Issues

ISSUE NO. 54

DECEMBER 2001

Quarterly Journal of the Harvard Sussex Program on CBW Armament and Arms Limitation

INTERNATIONAL CRIMINAL LAW AND SANCTIONS TO REINFORCE THE BWC

Prospects for strengthening the Biological Weapons Convention any time soon appear to have faded still further since their setback in July, when the United States withdrew its support for the efforts of the Ad Hoc Group of States Parties to design a legally binding instrument to strengthen the Convention. It was then widely expected that the Bush Administration would present new proposals at the Convention's Fifth Review Conference, which took place in Geneva from 19 November to 7 December. However, as described in "Report from Geneva" in this issue of the *Bulletin*, what the US proposed was a set of mostly old ideas for voluntary measures by individual states, without any binding treaty commitment.

Chances that the US proposals, or any others, would be endorsed by the Conference were torpedoed when, near the end of the last day, the US delegation sought to include in the Conference's Final Declaration words that would terminate the Ad Hoc Group and its mandate to consider measures to strengthen the BWC, including verification measures, to be included in a legally binding instrument.

As it was well-known that such termination is opposed by the majority of delegations and as BWC review conferences normally adopt their final declarations by consensus, the US proposal was, in effect, a poison pill that forced immediate adjournment, with only an agreement to resume the Conference a year later. With no Final Declaration and therefore no international endorsement of any of its proposals, it is hard to see what the US was seeking to accomplish with its last-minute action. Rather, it appeared that the Administration was internally divided even as regards its own proposals put forward earlier during the Review Conference.

Opposed to verification measures that it fears might reveal biodefence and intelligence activities it hopes to keep secret; ill-disposed to multilateral arms-control measures generally; and yet deeply worried about the menace of biological weapons, the White House seems to have no integrated long-term strategy to keep the barriers against these weapons from eroding. In promising much but so far delivering only an adjourned BWC Review Conference, the US has dismayed governments elsewhere that share the same worry, including those of close allies.

What then can be done? One priority must be to lay the groundwork for a successful conclusion of the Fifth BWC Review Conference that will resume in November 2002. More generally, the time is right for a review of the entire

architecture of international measures to strengthen the BWC. Controls on access to dangerous pathogens and certain dual-use equipment can impede their acquisition by non-state actors and non-self-sufficient states seeking biological weapons. But the widespread natural occurrence of most pathogens that have been or can be developed as weapons, and the accelerating worldwide diffusion of biotechnology, make only temporary the effect of such controls on any nation or group determined to have the weapons.

Intent, more than denial, is the crucial element to be addressed in seeking to strengthen the Convention. To some extent, this can be done by propagating among scientists and others the humanitarian norm against biological weapons as abhorrent and illegal. But any effective system must include not only positive elements of cooperation and openness but also the element of deterrence that stems from a risk of violations being detected and credible sanctions if they are.

Deterrence is at the heart of the international system of declarations, on-site visits and challenge investigations that has been under discussion by the Ad Hoc Group. Properly designed, such a system can deprive states considering violation of the BWC of confidence that their attempts at deception and coverup will not arouse suspicion and trigger investigation and that their prohibited activities can be kept hidden. Indeed, even the minimally intrusive system envisaged in the latest draft BWC Protocol would help undermine confidence that such activities could be kept secret, as evidenced, for example, by US anxiety that implementation of such a scheme would risk disclosure of its own biodefence activities. The further design and evaluation of such a system could benefit from voluntary bilateral and multilateral field trials of transparency and compliance measures at biodefence and industrial facilities, beyond those few that have so far been carried out, possibly followed by their actual implementation on a regional basis.

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The ultimate goal, however, must be the implementation of such a system globally.

That leaves the problem of sanctions, without which detection of noncompliance lacks effect. As the *Bulletin* has long urged, the acquisition and use of biological and chemical weapons should be criminalized under international law, like aircraft hijacking and torture. A new international treaty is needed, one that would confront any individual who orders or knowingly renders substantial aid in the production or use of biological or chemical weapons with the risk of prosecution or extradition should that person be found in a state that supports the treaty. A draft of such a treaty, prepared by the Harvard Sussex Program with advice from international legal authorities, may be found on the HSP website at <www.fas.harvard.edu/~hsp/crim01.pdf>.

Enactment of national criminal legislation, as some states have already done pursuant to Article IV of the BWC, and enhancement of bilateral extradition agreements as proposed by the United States, while desirable are no substitute for international criminalization. Purely national statutes and bilateral extradition agreements present daunting problems of harmonizing their separate provisions regarding the definition of crimes, rights of the accused, dispute resolution, judicial assistance and other important matters. Neither does national criminal legislation convey the universal condem-

nation implicit in international criminal law. Moreover, purely national legislation would generally have no applicability, for example, in the case of an offender present in state A who has produced or ordered the production of biological weapons in state B, of which he or she is a national but which, for one reason or another, has no intention to take action. An international criminalization treaty, however, would subject such a person to the risk of prosecution or extradition should he or she be found in any state that supports the treaty. Some states are giving favourable consideration to international criminalization and some, notably Switzerland, have said so publicly.

Modern treaties now in force creating international criminal law have typically been elaborated within the Sixth (legal) Committee of the United Nations General Assembly. An alternative route would be to develop an agreed text within some other international group of states, either constituted ad hoc or based on an established regional grouping. In any case, the proposed treaty would be open to any state wishing to join.

Despite recent setbacks, the way remains open for strengthening the BWC. This can be done both in the further design, trial and implementation of verification and transparency measures and in the creation of international law criminalizing biological and chemical weapons.

Developments in the Organization for the Prohibition of Chemical Weapons

The period under review, from early September through 7 December 2001 was dominated by five main issues of concern for the continued implementation of the Chemical Weapons Convention (CWC) by the Organization for the Prohibition of Chemical Weapons (OPCW).

First, the financial shortfall that had plagued the Organization since the beginning of 2001 continued to impact programme delivery. Second, developments have occurred in the Russian effort to destroy its chemical weapons stockpile. Russia has submitted its revised programme of destruction to the OPCW and requested an extension of its final destruction deadline for Category 1 chemical weapons to 2012. By mid-November, Russia had completed destruction of its Category 3 chemical weapons stockpile, prior to the April 2002 deadline. Third, in the wake of the September terrorist attacks on the United States and heightened global awareness of the threat posed by both chemical and biological weapons, should they fall into the hands of terrorists, the role the OPCW can play in any global strategy to combat terrorism became the subject of a debate in the Executive Council. Fourth, preparations were proceeding apace for the first CWC review conference, to be convened in 2003. And fifth, universality of the CWC continued to be high on the OPCW's agenda, particularly with the ratification of the Convention by two states — Nauru and Uganda — from regions that are

underrepresented among the OPCW's members states: the South Pacific and Africa.

Executive Council

The Executive Council convened its twenty-sixth session during 25–28 September and its twenty-seventh session during 4–7 December. The schedule of Executive Council sessions for 2002 was agreed upon as follows: the twenty-eighth session would be held during 19–22 March, the twenty-ninth session during 25–28 June, the thirtieth session during 10–13 September, and the thirty-first session during 10–13 December. The Conference of the States Parties, its seventh session, would be held during 7–11 October 2002.

The Council met informally on 24 September and 3 December to discuss progress in the destruction of chemical weapons and/or conversion of chemical weapons production facilities (CWPFs). During the period under review, informal consultations were held in early September, mid-October, and mid-November. Issues discussed included boundaries of production and captive use, plant site import and export declarations, transfers of Schedule 3 chemicals, sampling procedures, verification costs under Articles IV and V, and the recommendations of the Office of Internal Oversight (OIO) and the External Auditor.

The fifteenth and sixteenth meetings of the Council were convened on 9 and 13 November, respectively. The fifteenth meeting was convened in order to address the delay in the provision by Saudi Arabia of visas to an OPCW inspection team for a scheduled inspection of a discrete organic chemicals (DOC) plant site. Saudi Arabia provided the visas prior to the Council's meeting, and the inspection was successfully completed. The Council and the Director-General took the opportunity of the fifteenth meeting to draw attention to a state party's obligation under the Convention to provide two-year multiple-entry visas to inspectors, as well other Convention-mandated notifications: points of entry, standing diplomatic clearance numbers, implementing legislation, and National Authorities.

At its sixteenth meeting, the Council was asked to address the issue of destruction of Category 2 chemical weapons — phosgene drained from munitions — at an industrial facility in Perm, Russian Federation. Originally, the phosgene was to have been destroyed at a facility in Shchuch'ye, where it was drained from munitions. However, in mid-October, the Secretariat was informed by Russia that such action would require an environmental permit from local authorities, which would be a lengthy procedure and would delay Russia's destruction of its Category 2 chemical weapons beyond the Convention's deadline for Category 2 destruction — 29 April 2002. Therefore, ten tons of phosgene would be transported to Perm and destroyed. The Council was unable to reach consensus at its sixteenth meeting. In the absence of a consensus, continuous monitoring of the destruction of phosgene was undertaken by the Secretariat. This situation would continue until a detailed plan for the verification of destruction of Category 2 chemical weapons at the Perm facility was concluded. Russia began to destroy the phosgene on 28 November with continuous monitoring by the OPCW.

In his opening statement to the Council in its twenty-sixth session, which was noted by the Council, the Director-General began by emphasising the OPCW's responsibility in preventing and responding to chemical terrorism. He stated that the CWC provides an international legal foundation for the fight against chemical terrorism and therefore the need for universal membership to the treaty was greater than ever. Furthermore, the need for a complete ban on transfers of Schedule 3 chemicals to states not party to the Convention was imperative. Such restriction would enable the OPCW to better police the proliferation of chemical weapons and their precursors, helping to ensure that such weapons do not fall into the hands of would-be terrorists.

On the financial issues, the Director-General emphasised that the cash situation remained critical. He thanked Russia and India for their reimbursements of Article IV and V costs and he was encouraged by indications that the United States would soon follow suit and pay the EUR 2.3 million it owed to the OPCW. As of the end of September, the OPCW required a minimum of EUR 17.9 million to remain fully functional through the end of the year.

In his opening statement to the twenty-seventh session of the Council, the Director-General drew the Council's attention to the financial difficulties encountered in the course of 2001, which resulted in the OPCW being able to carry out only about 60 per cent of the approved programme of inspections, measured in missions completed. In addition

to other areas of increase, higher budgetary allocations would be necessary for the purchase and maintenance of inspection equipment over the next few years to guarantee the ability of the Inspectorate to conduct inspections in a safe and technologically sound manner. He further stressed the importance of the OPCW adapting to the threat posed by chemical terrorism and assiduously implementing its mandate in this regard, including the important provision of the CWC on legal assistance (Article VII) and the need for effective national implementation of the Convention, as well as the pursuit of universality, in addition to full implementation of Articles X and XI. The Director-General also highlighted the need for states parties to make the required declarations to the OPCW, an issue brought to the fore at the fifteenth meeting of the Executive Council, as well as the strain on financial and personnel resources imposed by the last minute notification of chemical weapons destruction operations. The Director-General informed the Council of ongoing preparations for the first review conference and his recent visit to UN headquarters in New York.

Status of Implementation of the Convention Under this agenda item, the Council received and noted a report from the Director-General, at its twenty-sixth session, on the status of implementation of Articles X (Assistance and Protection Against Chemical Weapons) and XI (Economic and Technological Development) for the period 1 November 2000–31 July 2001. Details of the report are presented below, in the sections on Article X and XI implementation.

At its twenty-seventh session, the Council noted the 2001 mid-year verification implementation report.

The issue of verification at Schedule 1 facilities, discussed at the Council session in June, was considered by the Council at its twenty-sixth session, but a decision was deferred to a future session and discussion would continue during the intersessional period. Similarly, with regard to the issue of import and export declarations by a particular Schedule 2 facility, discussion would continue during the intersessional period and the Council would return to the issue at its next session. However, the Council did not address the matter in its twenty-seventh session. In the matter of requests for clarification of declarations, the Council encouraged member states to reply to the Secretariat but deferred a decision requiring states parties to respond to such requests within 60 days from the date of their receipt and requiring the Council to receive reports on the status of requests for clarification at future regular sessions until the Council session in December. At its twenty-seventh session, the Council decided to consider this topic further during the intersessional period and return to it at its twenty-eighth session, in March 2002.

The Council in its twenty-sixth session noted and expressed dissatisfaction with the fact that only 19 states parties had declared information on their national programmes related to protective purposes to the Organization. All states parties were urged to provide information on their national protective programmes as soon as possible. At its twenty-seventh session, the Council also addressed those issues brought to the fore by the fifteenth meeting of the Council, namely the failure by many states parties to make the required notifications to the Secretariat.

New Russian Destruction Plan The Chairman of the State Commission of the Russian Federation on Chemical Disarmament, Mr Sergei Kiriyenko, addressed the Council in its twenty-sixth session with the purpose of presenting to the Council the newly-revised Russian programme for the destruction of its chemical weapons stockpiles. He emphasised three important decisions taken within Russia with respect to its destruction programme: the transfer of chemical weapons storage and destruction functions from the Ministry of Defence to a special civilian agency — the Russian Munitions Agency; the creation by President Putin of the State Commission on Chemical Disarmament; and a six-fold increase in the 2001 federal budget for spending on chemical weapons destruction. He stated that of the US\$3 billion the destruction effort was expected to cost, Russia was prepared to bear 80 per cent of the costs, while the remainder would have to be covered by financial assistance from the international community and donor countries. Mr Kiriyenko went on to emphasise the realistic nature of the new programme and the need for financial assistance to implement it fully. He concluded by urging the Executive Council to approve all Russian requests for the conversion of former CWPfS on the grounds that conversion prevents economic harm and aids the campaign against proliferation.

Mr Kiriyenko discussed the difficulties encountered by Russia in its destruction of the Category 2 chemical weapons. He also reiterated the Russian view that within the two-stage process for destroying chemical munitions filled with organophosphorus agents, only the first stage needed to be completed within the CWC's timelines, and the second stage — involving the destruction of reaction masses — could be completed further down the road. In Russia's view, the requirements to destroy chemical weapons were fulfilled after the first stage, when all the chemical agents had been detoxified, and the second stage was solely an economic and environmental issue. Mr Kiriyenko asserted that if the Council were to adopt the Russian approach, the destruction of chemical weapons in Russia could be significantly accelerated and carried out at less expense to Russia.

In the new programme, the number of full-scale destruction facilities was reduced from seven to three, which would be located at Shchuch'ye, Kambarka, and Gorny. If US funding for the construction of the Shchuch'ye CWDF was not forthcoming, then facilities at Pochep, Leonidovka, and Maradykovsky would be constructed for the demilitarisation of airborne chemical munitions and the detoxification of organophosphorus chemical agents. These facilities would operate between 2006 and 2011. Phase I of destruction activities at Gorny (the destruction of lewisite) were due to begin in the first quarter of 2002, and phase II destruction of mustard and mustard/lewisite mixtures was scheduled for 2003. The construction of the Kambarka CWDF would be completed in 2005 and all lewisite stored there would be destroyed by 2011. The new program envisaged that construction of phase I of the Shchuch'ye facility would be completed by 2005 and all stockpiles of chemical weapons stored at Shchuch'ye destroyed by 2007. At that point, phase II would begin, and during 2007–12 Shchuch'ye would be used to destroy chemical munitions filled with organophosphorus agents transported there from other CWSFs.

The new plan provided for the destruction of 1 per cent of Russia's chemical weapons stockpile by 2003, 20 per cent

by 2007, and 45 per cent by 2009. It provided for complete destruction of the stockpile by 29 April 2012. This would require the extension of the timelines as provided for under the Convention, which obligated possessor states to completely destroy their chemical weapons stockpiles by 2007. The Conference of the States Parties previously (in 2000) extended the first intermediate deadline by which Russia was to have destroyed one per cent of its stockpile of Category 1 chemical weapons from 29 April 1999 to 29 April 2002. In his statement to the Council, Mr Kiriyenko stated that a request to extend the final deadline to 2012 would be submitted to the OPCW in November.

Extension of Destruction Deadlines The Russian request to extend its deadline for destruction of 100 per cent of its Category 1 stockpile was received by the Secretariat in late October, and considered by the Council at its twenty-seventh session. The request reiterated the timelines set out by Mr Kiriyenko in his statement to the twenty-sixth session of the Council. The Council was required to make a recommendation on this request for action by the Conference of the States Parties at its seventh session, scheduled for 7–11 October 2002. The Council in its twenty-seventh session decided to consider the Russian request further at its twenty-eighth session.

An additional request for an extension of the intermediate Phase 2 deadline for destruction of Category 1 chemical weapons was submitted by a state party of withheld identity and considered by the Council at its twenty-seventh session, which deferred a recommendation to its March 2002 session. This state party would fulfil its obligation to destroy 20 per cent of its Category 1 chemical weapons stockpile by the end of 2002 in conjunction with an ahead-of-schedule completion of phase 3 destruction requirements.

Destruction/Conversion of Chemical Weapons and CWPfS With regard to the repeatedly postponed decision on plans for verification of the destruction of Category 2 chemical weapons at a CWDF in Shchuch'ye (Russian Federation), the Council in its twenty-sixth session deferred decision to its next session. During the intersessional period, these plans were modified so that phase I destruction — the draining of phosgene from munitions — was to be carried out at the Shchuch'ye facility, while phase 2 would be conducted at the facility in Perm. These developments were first brought to the Council's attention at its sixteenth meeting. At its twenty-seventh session, the Council again deferred decision, and the plans would be further considered at the Council's twenty-eighth session in March 2002.

Two other detailed plans for the verification of destruction of chemical weapons — at the Anniston CWDF in the United States and at Gorny in Russia — were considered by the Council at its twenty-seventh session, and a decision was deferred to the March 2002 Council session.

At its twenty-sixth session, the Council approved amended plans for the verification of destruction of Category 3 chemical weapons at Leonidovka, Seltso, and Pochep, in the Russian Federation. The plan for destruction at Leonidovka was an amended version of the plan previously approved by the Council at its twenty-first session in May 2000.

The sole subject of discussion at the fourteenth meeting of the Council in August, the combined plan for destruction

and verification of the CWPF (GB production and filling) at the Rocky Mountain Arsenal in the United States, was submitted by the Secretariat to the Council at its twenty-sixth session. Decision, however, was deferred to the twenty-seventh session of the Council in December, where the Council was able to consider a plan agreed to by both the Secretariat and the United States. The Council decided that further consideration of this plan was needed, and deferred decision to its twenty-eighth session.

The Council also considered combined plans for the destruction and verification of CWPFs in a state party of withheld identity and at Norton Disney in the United Kingdom at its twenty-seventh session. The plan for the former facility was introduced to the Council during its twenty-sixth session and destruction at the latter facility concerns three dilapidated unused buildings. Decision on the UK plan was deferred to the Council's twenty-eighth session. The Council approved the plan for the other facility.

The Council considered many conversion requests submitted by the Russian Federation over the course of the last year, on which decision was repeatedly deferred by the Council, at its twenty-seventh session. Conversion plans for two facilities at Novocheboksarsk, one which was previously used for the production of aminomercaptan and the other for the production of chloroether, were among these. The plans were first introduced to the Council at its twenty-second session. In the intersessional period between the twenty-sixth and twenty-seventh sessions, Russia declared to the Secretariat its intention to begin the destruction of specialised equipment at both facilities by late November 2001. These activities would be conducted in accordance with the request for conversion and with continuous monitoring by OPCW inspectors. A recommendation on the Russian requests for conversion of these facilities was deferred by the Council to its twenty-eighth session.

Requests for the conversion of two production facilities at Volgograd — one once used to produce sarin and the other soman — were submitted to the Council at its twenty-sixth session and considered again during the twenty-seventh session in December. In Council decided to further consider both request at its March 2002 session.

At its twenty-seventh session, additional Russian conversion requests were considered by the Council, for a former lewisite production facility at Dzherzhinsk, a facility at Novocheboksarsk for the production of VX-type substance and filling it into munitions, as well as a facility for loading chemical sub-munitions into munitions at that location, a facility for filling sarin, soman and viscous soman into munitions at Volgograd, and another facility at Volgograd for the filling of mustard gas and lewisite mixture into munitions. The Council submitted all of these requests for further consideration at its twenty-eighth session in March 2002.

Conversion requests for all seven facilities scheduled for conversion in the four possessor states parties have been submitted to the Council. In a statement to the Council at its twenty-sixth session, Russia encouraged the Council to act more quickly with regard to its requests for conversion and plans for destruction and verification of destruction of CWPFs and chemical weapons. In his opening statement to the Council in its twenty-seventh session, the Director-General drew the Council's attention to the need to assist with the conversion of a CWPF in Bosnia and Herzegovina.

Facility Agreements At its twenty-seventh session, the Council considered a number of draft facility agreements between the OPCW and states parties regarding on-site monitoring at CWDFs and inspections of industrial facilities. The agreements considered involved a CWDF in a state party of withheld identity, two facilities at Aberdeen Proving Ground in the United States, a facility at the Deseret Chemical Depot in the United States, a Schedule 2 plant site in Sweden, and a Schedule 1 protective purposes facility in Spain. The Council approved the facility agreement between the OPCW and a state party of withheld identity. The Council would further consider all other facility agreements at its twenty-eighth session.

A lack of agreement regarding language on sampling prevented the Secretariat from submitting to the Council draft facility agreements for US CWDFs at Tooele and Anniston. Regardless, the United States chose to submit both draft texts to the Council in its twenty-seventh session. The Council decided to further consider both items at its twenty-eighth session.

Central OPCW Analytical Database The Council in its twenty-sixth session was requested to consider and adopt lists of new validated data for inclusion in the Central OPCW Analytical Database; forwarded to the Director-General by both the ninth and tenth meetings of the Validation Group. A decision in this matter was deferred to the twenty-seventh session.

At its twenty-seventh session, the Council adopted two new lists of validated data for inclusion in the Central OPCW Analytical Database.

The eleventh meeting of the Validation Group took place during 13–14 December.

During the period under review, the CD-ROM version of the Central OPCW Analytical Database was made available to states parties. This certified electronic version contained 521 mass spectra adopted by both the first and second sessions of the Conference of the States Parties. A second version of the electronic database, containing 534 mass spectra, would be released before the end of the year.

Staff Regulation 3.3 At its twenty-sixth session, the Executive Council received information from the Secretariat on the staff assessment system, underlining the fact that OPCW budgeting does not depend for part of its funds on a system of staff assessment. This system was used by UN-linked international organizations to create a pool of funds out of which such organisations make tax refunds to staff members whose taxes on salaries are not reimbursed by their own states. Staff assessment in the OPCW existed only in a notional manner, on paper. OPCW budgets are calculated on net and not gross salary amounts. States parties therefore contribute only the amount of money required to cover the net salaries of staff. In other UN and UN-affiliated organizations the staff assessment is used to set up a tax equalisation fund. A variation on the UN tax equalisation fund could be established within the OPCW budget as a mechanism into which agreed sums of money to cover reimbursement of levied taxes could be paid by those states parties that tax their nationals on the Secretariat staff. Once taxes are levied against international civil servants, reimbursement in full is unavoidable. Any refusal to reimburse

is a violation of the basic principles of international civil service law. On the other hand, reimbursement without prior payment by the taxing state party violates Staff Regulation 3.3(b). Therefore the Executive Council needed to explore all options in order to find a solution to the problem. An additional incentive for the Council and the Secretariat to come to a decision quickly was the prospect that if staff members were to take up claims for reimbursement with the Administrative Tribunal of the International Labour Organisation, based on past precedent, the claims were likely to succeed. Decision in this matter was deferred to the twenty-seventh session of the Council, at which it was still not taken up.

Chemical Industry Issues On the occasion of the last Council session of the calendar year, the twenty-seventh in December, the Council took up the results of intersessional consultations on unresolved chemical industry issues: low concentration limits for Schedule 2A and 2A* chemicals, boundaries of production, and the implementation of Section B of Part IX of the Verification Annex. The Council decided to further consider, at its twenty-eighth session, the issues of low concentration limits for Schedule 2A and 2A* chemicals and boundaries of production, citing a lack of consensus and a need for further intersessional consultations.

On the third topic, the selection of other chemical production facilities for inspection, the Council praised the Secretariat's efforts in this regard and requested that the Secretariat keep the Council informed of further developments. Under the CWC, the Council should not have undue influence on the process of selecting facilities for inspection and the assessment of risk. Thus, the Secretariat held the view that the methodology employed in this matter was a decision to be made by the Secretariat alone. The selection process was, however, governed in part by the requests for clarification issued by the Secretariat to states parties and a state party's response to such a request. The states parties could therefore play a key role in the selection process by submitting clarifying information when requested to do so.

Financial Issues On 30 August, at a briefing for permanent representatives, the Director-General stated that all outstanding balances under Articles IV and V, totalling some EUR 3.5 million, must be paid prior to 30 September 2001 in order for regular operations at the OPCW to continue through the end of the year. Both Russia (EUR 1.44 million) and India (EUR 105,000) complied with this request prior to the convening of the September Council session. Russia paid all but EUR 37,000 of the monies it owed to the Organization. In mid-October the United States also made a payment of about EUR 2.2 million. By the end of the year, the Secretariat expected to invoice another EUR 2.4 million for the costs of Article IV and V inspections; it further expected that these monies would not be received from the inspected states parties until the first months of 2002.

At the twenty-sixth session of the Council in September, the Secretariat emphasised that EUR 17.9 million was needed to meet salaries and common staff costs, contractual obligations, and minimal verification and international cooperation activities through the end of 2001. Extra measures would need to be taken to ensure the procurement of this sum.

A total of EUR 2.3 million had already been received in contributions under the 2002 budget, including a payment by Canada of its EUR 1.5 million assessment. An amendment of financial regulation 4.7 would enable the Director-General to use these monies in 2001 and reimburse them in 2002 with income received under Articles IV and V. The extra funds would allow more extensive activities in the areas of verification and international cooperation in the fourth quarter of 2001. The Council was not, however, authorised to approve amendments to financial regulations; only the Conference could take such action.

The Council in its twenty-sixth session noted the statements by the Director-General and documents issued by the Secretariat on this topic and urged all states parties with outstanding financial obligations to the OPCW to meet them immediately and in full — including all outstanding balances from the Preparatory Commission (1993–97). The Council authorised the Director-General to spend the cash on hand through the end of December 2001, including the EUR 2.4 million expected to be invoiced for activities carried out under Articles IV or V through the end of 2001. In order to achieve this, the Council directed the Director-General to use the Working Capital Fund to offset any projected cash shortage over the next few months — stemming from a lack of activity under Article IV or V or a lack of reimbursement. In order to replenish the Fund, a requirement under Financial Regulation 6.6, the Council understood that the Director-General may be required to borrow from the 2002 contributions already received. The Council acknowledged the fact that such borrowing stood in contradiction to Financial Regulation 4.7, yet authorised the action regardless. The money would be reinstated in 2002 by the payment of invoices issued for inspections conducted under Articles IV and V in the last quarter of 2001. The Council requested from the Director-General monthly updates on the financial and budgetary situation within the Organization, including the use of the Working Capital Fund.

At its twenty-sixth session, the Council also approved the request made by the Director-General at the twenty-fifth session of the Council for an inter-budgetary transfer. The budgetary transfer would inject nearly EUR 2 million into the budgetary allotment to verification costs. The Council in its twenty-sixth session took note of the Secretariat's initial projections of anticipated increases in the 2003 budget, and requested that the Advisory Body on Administrative and Financial Issues (ABAF) consider this document and provide a recommendation to the Council in its twenty-seventh session. On the future possibilities for handling Article IV and V reimbursements, the Council in its twenty-sixth session decided to consider the issue further during the intersessional period and return to the topic at its twenty-seventh session in December.

Prior to the December Council session, on 27 November, another briefing was held for the permanent representatives on the OPCW's financial situation. At this meeting, the Director-General stated that of the 2001 austerity budget of EUR 60.2 million, only EUR 55.1 million had been received as of 31 October. He emphasised the impact of this shortfall on inspection activity and international cooperation programmes. The OPCW's doors remained open only because of the Council allowing the Director-General to borrow upon anticipated Article IV and V reimbursements,

in an amount totalling EUR 2.4 million. The Secretariat was working to develop a “cash budget” for 2002, which was anticipated not to amount to more than EUR 58 million. Because the structure of the budget remained fundamentally flawed, even if all states parties pay their 2002 contributions on time — by 1 January 2002 — only 60 percent of the programming planned for 2002 could be fully realised. Full programme delivery would have required a budget of EUR 64.1 million, and the deliberate under-budgeting of the OPCW by its states parties led to the current and projected lack of resources. Prior to the approval of a programme and budget for 2003, at the seventh Conference of the states parties in October 2002, the states parties and the Secretariat must address themselves to the structural problems that continue to plague the OPCW budget and threaten the re-emergence of a dire financial crisis.

In his opening statement to the Council in its twenty-seventh session, the Director-General stated that as of 1 December the OPCW was owed EUR 2.6 million in assessed contributions since 1993 — EUR 1.1 million from 2001. Furthermore, EUR 1.85 million was outstanding for the costs of Article IV and V inspections. The cash on hand at the start of December stood at just EUR 2.8 million, plus the 2.4 million the Council authorised the Secretariat to borrow at the twenty-sixth session. The Director-General predicted a deficit of nearly EUR 6 million in the first months of 2002, stemming from the fact that the Secretariat could only (based on past experience) expect to collect EUR 58.1 million of the approved budget of EUR 61.9 million, which was already less than the EUR 64.1 million required by the Secretariat for delivery of the full programme of work for 2002.

At the conclusion of its twenty-seventh session, the Council noted all of the documents and briefings it had received on matters related to the budget and finances of the Organisation, including a report on progress in consultations on Article IV and V reimbursements, which had not yet resulted in a consensus recommendation. Although, the states parties concerned were amenable to making partial advance payments of the estimated costs of Article IV and V inspections for a given year. The Council expressed concern over the EUR 6 million deficit projected for 2002 and saw an urgent need not only for states parties to pay all financial obligations for both 2001 and 2002, but also for intersessional consultations on the implementation of the 2002 budget to proceed. The Council requested that the Secretariat provide additional information on its projected deficits, and asked that budgetary consultations concentrate on ways in which to maintain core programming essential to the full and effective implementation of the Convention. The Council intended to reach a decision at its twenty-eighth session in March 2002 that would pre-empt a financial crisis in 2002—like the one that nearly forced the closure of the OPCW in 2001.

The Director-General warned the Council that the failure to provide additional funds would lead to severe restrictions and cuts in the programme of work approved by the Conference of the States Parties in its sixth session. As it stood in December 2001, the OPCW would only be able to carry out seven of the thirteen planned seminars and/or workshops in the area of international cooperation and assistance, and the shortfall would have a negative impact on nearly all other areas of the Secretariat’s day-to-day work

— such as proficiency testing, security, health and safety, and inspection equipment. The ability to conduct inspections would also be severely impacted. While continuous monitoring at CWPFS would need to be carried out at 100 per cent, inspections of CWSFs, CWPFS, and OACW sites would be cut by nearly 30 per cent, and less than a third of the 132 budgeted chemical industry inspections could be realistically completed.

Thirty states parties continued to be in arrears for more than two years worth of assessments, and thus could not participate in a vote, should one be called, in the OPCW.

Internal Oversight and the External Auditor

The Council in its twenty-sixth session noted a report by the Director-General on the status of implementation of the recommendations made in 2000 by the Office of Internal Oversight (OIO). In sum, progress had been made on issues related to the mandate of the OIO, the management of human resources, strengthening the procurement system, the confidentiality regime, and the management of financial resources, including the tightening of internal financial procedures. Outstanding recommendations existed in relation to post succession and the hand-over of responsibilities, the review of posts and upgrades/promotion of staff members, temporary assistance contracts and the appointment of consultants, separation payments, and the Smartstream system.

The Council noted an additional report at its twenty-sixth session on the implementation of recommendations of the External Auditor. Subjects addressed included budgeting and invoicing for Article IV and V inspections and the reimbursement of the associated costs, implementation of results-based budgeting, the need for realistic projections of expenditure and income, the limiting of budgetary transfers, the short-term investment of funds, the financial regulations with regard to cash surpluses, procurement, and equipment. Efforts would be undertaken to bring budgeting and expenditures in the OPCW into line with other international organizations such as the IAEA and the WIPO. Proposals would be brought to the ABAF meeting during 29–31 October. It was noted that invoices for the costs of Articles IV and V inspections were being issued at a faster rate to ensure that 95 per cent of these invoices were sent out within the year in which the inspections are conducted. With respect to outstanding assessed contributions, the Council was extremely concerned about non-payment of annual contributions and requested the Chairman of the Executive Council and the Director-General to write to those states parties in arrears on behalf of the Council, to urge immediate payment of all debts.

Both of the documents discussed above were reviewed during the intersessional period. The Council noted these intersessional discussions at its twenty-seventh session.

Advisory Body on Administrative and Financial Issues (ABAF)

The ABAF met during 29–31 October in order to provide a mid-term review of the finances of the OPCW. The report of this eleventh session of the ABAF was submitted to the Council in its twenty-seventh session for consideration. The report recommended that the mandate of OIO should be redefined in a manner that ensures a sustained focus on the management of the OPCW budget and resources. The

ABAF noted that two thirds of the staff resources of the OIO are used for non-core internal oversight business, such as the quality management system and the confidentiality audit. Thus, the ABAF recommended that the core audit function of OIO be reinforced. On Article IV and V reimbursements, the ABAF suggested that more comprehensive documentation accompany invoices sent to the states parties for the costs of Article IV and/or V inspections. Also, strict deadlines for the payment of invoices should be established and, if necessary, enforced through financial penalties. The ABAF encouraged further savings in the 2002 programme of work and hoped that the Secretariat would work in advance to avoid a financial crisis in 2002. The ABAF examined the Secretariat's initial projections of the anticipated increase in the 2003 programme and budget and requested further details, particularly in the areas of External Relations and Information Technology. The ABAF continued to keep under consideration proposed amendments to a large number of the financial regulations—suggested by the Secretariat to ensure the smooth, efficient, and well-funded implementation of the Convention. The Council noted the ABAF report at its twenty-seventh session.

MOU with World Customs Organization (WCO) A draft of an agreement between the WCO and the OPCW was submitted to the Council for review and approval at its twenty-sixth session, as per the decision of the Conference in its sixth session. The draft memorandum of understanding (MOU) between the two organizations calls for mutual consultation, exchange of information and documents, technical and financial cooperation, and coordination of technical meetings and missions. Such an arrangement would promote the non-proliferation mandate of the OPCW as the global customs services could provide valuable assistance in detecting trade in chemicals prohibited by the CWC. Furthermore, these agencies possess comprehensive databases of export and import data that could prove useful to the OPCW. Approval of the text of the MOU was deferred to the Council in its December session. The document was discussed during the intersessional period and considered by the Council at its twenty-seventh session, yet decision was again deferred to the next session of the Council.

First Review Conference The Council in its twenty-sixth session established an open-ended working group on preparations for the first Review Conference — which according to the Convention must be held in 2003. The Conference at its sixth session had requested the Council to take such action. This group was charged with making recommendations to the Council on substantive and organizational aspects of the Review Conference and cooperating with the Secretariat in the preparation of background documentation. The group would report on its progress to each subsequent regular session of the Council.

The first meeting of this working group took place on 29 November, where Argentina was appointed at its first chair; France, Iran, Nigeria, and Poland were appointed vice-chairs. Issues discussed at the first meeting ranged from the format and conduct of the first Review Conference to the involvement of NGOs in the review process and their place at the conference itself.

Chemical Terrorism The Chairman of the Council issued a statement, reflecting the sense of the members of the Council at its twenty-sixth session, on the consequences of the 11 September terrorist attacks. In the statement, he emphasised that the full and comprehensive implementation of the Convention would help to reduce the threat posed by chemical terrorism, and thus called on states parties to intensify efforts to achieve universality of the convention and comply with their obligations to destroy chemical weapons and prevent the proliferation of chemical weapons and the illegal use of chemicals and related technology. These measures were dependent upon full compliance with Article VII of the Convention. The statement called for increased activity under Articles VII and X — encouraging the OPCW to expand activities in the areas of protection and assistance and legislative support to states parties in enacting appropriate penal legislation to implement the Convention nationally. At the urging of the Director-General, the Council agreed to enter into an in-depth debate on the subject of chemical terrorism and the role of the OPCW at the twenty-seventh session of the Council in December.

The OPCW's mandate in this regard stemmed not only from Article X on assistance and protection but also from the Article I requirement to destroy chemical weapons, thus making them inaccessible to terrorist organisations or individuals, the industrial and export control regime found in Article VI, and the Article VII requirement to criminalise the prohibitions of the Convention and enact proper penal legislation. These provisions ensure that no state party to the CWC could serve as a safe haven for those who use chemical weapons as tools of terror.

During the period under review, the Council was also presented with the Secretariat's newly developed concept on assistance and protection (see section on Article X implementation below), which detailed the preparations that must be undertaken within the OPCW and laid out a programme for the provision of emergency assistance in the event that a state party makes a request for such assistance due to the use or threat of use of chemical weapons against it. The Secretariat also circulated a paper on the OPCW's contribution to any global anti-terrorism campaign.

At its twenty-seventh session, the Council encouraged states parties to consider their offers of assistance under Article X and select one of the three options provided for in the Convention: contribution to the Voluntary Fund, conclusion of a bilateral agreement, or the declaration of an unilateral offer of assistance. The Council also welcomed recent contributions to the Voluntary Fund for Assistance made by both the Netherlands (EUR 200,000) and the United Kingdom (£100,000), and also thanked Sweden for its contribution of an expert to the staff of the Secretariat's International Cooperation and Assistance Division. Fulfilment of Article X obligations by the states parties would enhance the OPCW's ability to respond to chemical terrorism, as would universal adherence to the Convention. Furthermore, full implementation of the CWC inspection and export control regimes, the Council concluded, would serve to minimise the risk of diversion of toxic chemicals or chemical weapons for terrorist uses. The Council decided at its twenty-seventh session to continue intersessional consultations on assistance and protection.

The Council, at its twenty-seventh session, gave careful consideration to the OPCW's contribution to global anti-terrorist efforts and established an open-ended working group charged with the development of specific measures that would enable the OPCW to prevent the development or use of chemical weapons by terrorists.

Other Business The Council in its twenty-seventh session received a report on the results of a regular audit of the Secretariat's secure-critical network, conducted in October. The report contained assurances for the states parties that the Secretariat was fulfilling its mandate with respect to confidentiality and under the terms set out in the Confidentiality Annex to the Convention. The Council requested the Secretariat's proposals stemming from the recommendations contained in the report. These recommendations relate to the need to adopt an internationally recognised security standard such as ISO 17799 or BS 7799, as well as the allocation of both fiscal and personnel resources.

Other issues brought to the fore during the 2000 and 2001 Council sessions, but not discussed during the most recent Council sessions included: challenge inspections, guidelines for determining the usability of old chemical weapons produced between 1925 and 1946, the scale of assessments, the classification of posts within the Secretariat, the classification and over-classification of confidential documents, and declaration requirements for adamsite. The Council at its twenty-seventh session adopted decisions on five issues and again deferred twenty-four other topics to intersessional consultation and further consideration at either its next session in March 2002 or future 2002 Council sessions.

Action by Member States

The South Pacific island state of Nauru ratified the Convention on 12 November and Uganda deposited its instrument of ratification on 30 November. The Convention entered into force for Nauru on 12 December, 30 days after depositing its instrument of ratification with the Secretary-General of the United Nations. Likewise, the Convention would enter into force for Uganda on 30 December.

Thus, at the end of 2001, the number of states parties to the Convention stood at 145, with 29 signatory states, and 19 states that had neither signed nor ratified the Convention.

Secretariat

Declaration Processing As of 1 December, initial declarations had been received from 140 states parties. Only three initial declarations — from Kiribati, Mozambique, and Zambia — were still outstanding. However, 12 states parties had been informed that their initial declarations were incomplete (i.e., missing declarations under Articles III or VI). The two newest states parties, Nauru and Uganda, would not be due to make their initial declarations until mid-to-late January.

With regard to annual declarations, 32 states parties of the 34 expected to submit such information had submitted their annual declarations on anticipated activities (ADAA) for 2002 with respect to Schedule 3 chemicals. For activities involving Schedule 2 chemicals, 30 of the 32 states parties expected to submit had made their ADAA for 2002.

States parties were encouraged by the Executive Council to respond to the Secretariat's requests for clarification of declarations. As well, states parties were reminded of their obligation to make the necessary notifications to the Secretariat. Only 108 states parties had informed the Secretariat of their National Authority details; 57 had enacted implementing legislation, 80 had identified points of entry, and only 67 had issued standing diplomatic clearance numbers for unscheduled flights. More than 30 had not issued two-year multiple-entry visas for inspectors.

On 3 December, the Secretariat hosted a workshop on the submission of declarations in an electronic format.

Inspections and Verification As of 7 December, 1,119 inspections had been completed or were ongoing at 500 sites in 49 states parties. Inspections of chemical weapons and chemical weapons-related facilities had occurred in Bosnia and Herzegovina, China, France, India, Iran, Japan, Russia, the UK, the USA, the Federal Republic of Yugoslavia, and a state party of withheld identity. The breakdown of inspections was: 18 to ACW sites; 264 to CWDFs; 227 to CWPfFs; 152 to CWSFs; 65 to DOC plant sites; 37 to OCW sites; 99 to Schedule 1 facilities; 177 to Schedule 2 plant sites; 76 to Schedule 3 plant sites. Three additional inspections were conducted under special circumstances. OPCW inspectors had spent a total of 65,855 days on mission.

Of those inspections originally planned and budgeted for 2001, by December the Secretariat completed 100 per cent at CWDFs, 57 per cent at CWPfFs, 65 per cent at CWSFs, 43 per cent at OCW sites, 40 per cent at ACW sites, 100 per cent at Schedule 1 facilities, 68 per cent at Schedule 2 facilities, 26 per cent at Schedule 3 facilities, and 50 per cent at DOC plant sites. As of 7 December, 74 inspections had been completed under Article VI in 2001.

In his statement to the Council at its twenty-sixth session, the Director-General revealed that the Secretariat undertook a technical assistance visit to Panama in July, the results of which should enable Panama to clarify its initial declaration.

Secretariat analysis of public sources revealed that at least 43 states parties, who did not submit any declaration under Article VI, were likely to be engaged in declarable chemical industry activities. The Secretariat contacted all the states parties in question and was addressing the issue bilaterally.

Destruction/Conversion As of 1 November, the OPCW had overseen the destruction of 6,119 metric tons of chemical agent (Category 1) and 1.89 million munitions or containers — out of a declared total of 69,868 metric tons of chemical agent and 8.6 million munitions or containers.

Significant progress was achieved in the course of 2001 in the destruction programmes in all four states parties that declared the possession of chemical weapons stockpiles. Despite the debate over the destruction of phosgene, Russia was on track to meet the CWC-deadlines for complete destruction of its Category 2 chemical weapons, and its request for the extension of its intermediate and final deadlines for destruction of Category 1 chemical weapons had been submitted to the Executive Council (see above). In mid-November, Russia completed the destruction of 280,000 powder and burster charges and 4,300 unfilled munitions and devices at its Category 3 destruction facilities.

in Leonidovka, Maradykovsky, Pochep, and Seltso. This represented the entire Russian stockpile of Category 3 chemical weapons, therefore, Russia fulfilled this particular destruction obligation well ahead of the April 2002 deadline. All planned Russian conversion requests were submitted to the Secretariat, and had been already presented to the Council for its consideration and recommendation to the Conference. Three conversion certificates had so far been issued for Russian facilities — the mustard gas production facility and the facility for the filling of mustard gas and lewisite mixture into munitions at Chapaevsk and the facility for the filling of hydrocyanic acid into munitions at Dzerzhinsk. In total, the Secretariat had issued nine conversion certificates for former CWPfFs in the four declared possessor states parties. The OPCW had certified the destruction of 27 CWPfFs in the four possessor states parties.

The United States met the requirement to destroy 20 per cent of its Category 1 chemical weapons during the summer months, well ahead of the phase 2 deadline — 29 April 2002. By the end of 2001, it had already destroyed 23.4 per cent of its stockpile. The initial visit to the new CWDF at Anniston had been undertaken. The facility was scheduled to start operation in April 2002 — necessitating greater budgetary allocations in 2002 and 2003 for continuous monitoring by OPCW inspectors. In the fourth quarter of 2001, the United States completed a review of its chemical demilitarisation programme. Consequently, the estimated dates for completion of destruction activities at the eight US destruction facilities were revised and it seemed likely that the US destruction programme would need to continue past the 2007 deadline set out in the Convention; for at least two facilities, destruction activities would not be completed until 2011. These delays were in part the consequence of strict environmental and safety regulations. The possible extension of the CW destruction schedule was not however a forgone conclusion and the United States would, if necessary, submit a request for the extension of final destruction deadlines prior to 2006.

On 27 August, a state party of withheld identity submitted a request for an extension of the phase 2 intermediate deadline for the destruction of 20 per cent of its Category 1 chemical weapons. This request stemmed from technical difficulties and strict environmental laws. The state party of withheld identity planned to meet the requirement to destroy 20 per cent of its Category 1 stockpile by the end of 2002 (instead of April 2002), in conjunction with the completion of phase 3 destruction requirements for Category 1. This state party met the phase 1 intermediate deadline for Category 1 chemical weapons and already completed the destruction of its Category 3 stockpile. The Council considered the request for an extension of the phase 2 deadline and a facility agreement for the CWDF in question in both its twenty-sixth and twenty-seventh sessions.

Combined plans for the verification of destruction of the last remaining CWPfF in India were submitted for consideration by the twenty-sixth session of the Council, and were considered further by the Council at its session in December. India already completed the destruction of 29 per cent of its Category 1 chemical weapons, and had made significant progress in destroying its stocks of Category 2 chemical weapons.

Implementation of Article X According to a report by the Director-General on the status of implementation of Articles X and XI of the Convention, presented to the Council at its twenty-sixth session, the OPCW's Article X activities fell into five categories: information supplied by states parties on national protective programmes, the data bank on protection against chemical weapons, providing advice on developing and improving a state party's protective capacity, coordinating the international response to requests for assistance, and carrying out investigations of alleged use.

With regard to the first three categories, as of 31 July 2001, a total of 19 states parties had provided the Secretariat with information related to their national protective programmes; the data bank had been established, as per the decision of the Conference at its first session; and the Protection Network of experts could provide advice to states parties as well as aiding the Secretariat in expanding and diversifying the protection data bank.

Under the fourth category, the coordination and mobilisation of requested assistance and protection, the Secretariat recently developed a strategic concept on the implementation of the requirements of Article X of the Convention regarding the provision of assistance to States Parties in cases of use or threat of use of chemical weapons. This system would be a modular approach comprised of a stockpile of equipment and expertise at OPCW headquarters supplemented by stockpiles within states parties, distributed throughout the world. Within hours of a request for assistance or protection, a limited response could be mobilised via the actions of the OPCW's assistance coordination and assessment team (ACAT). In the provision of assistance, the OPCW would also rely upon the cooperation of other international organizations, such as the UN Office for Coordination of Humanitarian Affairs. Bilateral agreements would be pursued with all organizations with relevant mandates, to assist with the delivery of assistance, the management of on-site activities, and training. The assistance response system (ARS), particularly the logistical and transportation costs, would be funded by the contributions made by states parties to the Voluntary Fund for Assistance, which as of 31 July 2001 stood at about NLG 1.4 million due to the contributions of 27 states parties. As well, 42 states parties had either made unilateral offers of assistance or expressed the intention to conclude bilateral assistance agreements with the OPCW. The assistance provided by states parties would be included in either the stockpile kept at OPCW headquarters or in the regional stockpiles.

In order adequately to prepare to respond to a request for assistance, the Secretariat had planned a series of courses and workshops to be included as regular features of the OPCW calendar, but many activities had to be postponed or rescheduled due to the financial constraints faced by the Organization. In light of current world events, the ability of the OPCW to respond to an incident of chemical terrorism gained prominence and Article X activities were likely to increase in the coming year.

In the fifth category of Article X activities, the OPCW had not been requested to conduct an investigation of alleged use of chemical weapons, but trial inspections and exercises had been conducted.

The Secretariat and the government of Austria jointly hosted the Fifth Annual Assistance Coordination Workshop

in Vienna, Austria during 15–19 October. The workshop enabled participants to review the recently-developed ARS as well as share their own experiences with the provision of assistance, and explore the response of the OPCW and the international community to chemical terrorism. Possible scenarios involving the use of chemical weapons were discussed and analysed. Sixty-one representatives from 42 states parties as well as representatives from NATO and the International Committee of the Red Cross (ICRC) were able to participate in the workshop. Austria demonstrated its offer, under Article X, of a search and rescue unit.

The CWC Protection Network held its second meeting during 19–20 November. The Protection Network was established under Article X of the Convention to enable the Secretariat to react to requests by states parties for expert advice on their programmes for the development and improvement of a protective capacity against chemical weapons. The first meeting of this body — now comprised of 20 technical experts from 16 countries — occurred in October 1999. The November meeting was immediately followed by a workshop on “chemical alarms for civil protection”, taking place from 21 to 22 November at OPCW headquarters in The Hague. Together, these two events comprised “Assistance and Protection Week” at the OPCW.

The fifth Swiss Emergency Field Laboratory Training Course (SEF-LAB V) took place as originally scheduled during 2–7 December at the Swiss facility in Spiez. SEF-LAB VI was scheduled for 7–14 April 2002 at the same location. Also in Spiez, Switzerland and the OPCW would host the fifth CW Chief Instructor Training Programme (CITPRO V) during 10–16 February 2002.

Article X activities or events postponed due to the OPCW’s financial difficulties included the planned civil protection course in the Czech Republic and the medical defence course in Iran. The Czech course was rescheduled for March 2002, and the Iranian course for October 2002. As well, a media course planned for The Hague and visits planned for the conclusion of bilateral agreements under Article X had to be cancelled. The OPCW would participate in the TRIPLEX 2002 exercise in May 2002 in Bornholm, Denmark.

Implementation of Article XI The report of the Director-General outlined above also gave an overview of the activities of the Organization under Article XI. These activities were essentially concerned with building-up the capacity of states parties for the implementation of the CWC and the development of chemistry for peaceful uses. These endeavours had thus far included support for conference attendance and internships for individuals from Eastern Europe, Africa and Asia. The Secretariat had also facilitated at least one instance of equipment and technology exchange, benefiting the national authorities of Ghana and Zimbabwe, and funds had been allocated for two research projects on saxitoxin, involving scientists in Chile, the Philippines, and South Africa. An electronic database was launched in 2001 and is accessible on the Internet or via a CD-ROM. It was also distributed to the national authorities of states parties.

Programming was being explored to enhance cooperation between the Secretariat and chemical industry associations, as well as the International Foundation for Science, the United Nations Institute for Training and

Research, the UN International Narcotics Control Board, the World Customs Organization, and the Convention on Persistent Organic Pollutants.

Support for national implementation of the Convention in all aspects — political, economic, and legal — was a priority for the OPCW under Article XI. Activities in this area included regional and international training courses for national authority personnel, regular contact with and the provision of information to national authorities, most recently in the form of an informational CD-ROM, and the OPCW ethics project in coordination with the UN study on disarmament and non-proliferation education.

Foremost among Article XI activities in 2000 and 2001 was the OPCW Associate Programme. This project brought chemists and researchers from undeveloped or developing countries to experience a six-week training course not only in CWC implementation but also in modern chemical industry practices. The programme was comprised of three segments: training in industrial chemistry at the University of Surrey, UK, courses on the CWC/OPCW at OPCW headquarters in The Hague, and internship placements with major chemical industry facilities in the Netherlands, Belgium, and France. The 2001 programme began on 6 August and came to a close on 16 October. It involved 11 participants and was by all measures a success. The OPCW expected to expand the Associate Programme and include it in the annual OPCW programme of work.

Programming under Articles XI was hard hit by the financial constraints within the OPCW and many programmes originally scheduled for the fourth quarter of 2001 had to be postponed and rescheduled. Not affected were the above-mentioned Associate Programme and the national authority training courses described below.

During 5–9 November, the Secretariat hosted a thematic workshop on strengthening national capacities for chemical analysis and monitoring for the sound management of chemicals, organised in conjunction with UNITAR. Participating in the workshop were 41 experts from 22 countries, including officials from the OPCW, UNITAR, UNEP, and WHO, and they made numerous recommendations related to legal, policy, administrative, financial, human resource and technical issues. During this same time span, both basic and advanced national authority training courses were held concurrently at OPCW Headquarters in The Hague. A total of 45 participants — mostly personnel of national authorities — were accommodated by the courses.

Proficiency Testing The results of the ninth proficiency test, conducted during April–July with 18 laboratories participating, were presented to the Council at its twenty-sixth session. In order to minimise the costs incurred by the Secretariat, a laboratory in Germany prepared the samples and they were evaluated by the UK facility at Porton Down, at no expense to the OPCW. Of the 18 laboratories, 12 qualified for a score [see *News Chronology* 3 September]. Nearly all the participating laboratories would have to submit reports to the Secretariat on actions taken to account for their errors in order to qualify to participate in the next test.

One laboratory (in the Republic of Korea) performed well enough in the ninth proficiency test to have its temporary suspension — resulting from poor performance in the sixth proficiency test — revoked. Thirteen laboratories had

received designated status, although two of these (in China and the Czech Republic) remained on temporary suspension pending their satisfactory performance in three consecutive proficiency tests. The designated laboratories are located in China, the Czech Republic, Finland, France, German, Republic of Korea, the Netherlands, Poland, Russia, Sweden, Switzerland, the United Kingdom, and the United States.

The tenth official proficiency test began on 5 November — the Netherlands prepared the samples and Finland would evaluate the results, both at no cost to the OPCW. For 2002, both Finland and the United Kingdom made offers to evaluate test results free of charge. Proficiency testing in 2002, however, could not proceed without similar offers to prepare test samples.

Legal Issues As of 1 December, 95 states parties had yet to respond to the legislative questionnaire first distributed in July 2000; 16 were members of the Executive Council. The results of the questionnaire would provide the necessary guidance to and help focus the work of the Secretariat in supporting implementation of the Convention, as well as in preparing for the 2003 review conference. Fourteen states parties that had not previously informed the Secretariat of any measures taken to implement the CWC nationally under Article VII, paragraph 5 responded to the questionnaire, providing the Secretariat with some insight into their implementation of the Convention at the national level. According to analysis of responses, undertaken by the Secretariat, nearly all those states parties responding to the questionnaire reported having controls in place with regard to the production, use, and transfer of scheduled chemicals; however, there were inconsistencies reported with regard to salts, mixtures, captive use and saxitoxin. The responding states parties encompassed a range of implementation methods and a mixture of legal systems. The Secretariat's analysis looked at the form and status of legislation, the application of legislation, including extraterritorial application, the penalties enacted, prohibitions on the transfer of Schedule 1 and Schedule 2 chemicals, and the regulatory provisions for scheduled chemicals and DOCs, among other issues.

However, the same analysis revealed a disturbing inability of states parties to prosecute nationals for actions in violation of CWC provisions on the production and/or use of chemical weapons. Proper implementing legislation is required to prohibit subnational groups or individuals from conducting activities prohibited by the CWC as required by Article VII. In his opening statement to the Council in its twenty-seventh session, the Director-General urged states parties to respond to the legal questionnaire and to re-examine their implementing legislation with an emphasis on the measures taken to ban transfers of Scheduled chemicals to states not party to the Convention.

As of 1 December, 57 states parties had informed the Secretariat that they had implementing legislation in place.

Official Visits Mr Sergei Kiriyenko, the Chairman of the State Commission of the Russian Federation on Chemical Disarmament, made an official visit to the OPCW during the twenty-sixth session of the Council. Mr Kiriyenko addressed the Council and presented the new Russian destruction programme for its chemical weapons stockpile

On 7 September, the UN General Assembly approved the UN-OPCW relationship agreement and the Director-General travelled to New York in October in order to meet with UN officials to discuss its implementation. While there, he took the opportunity to meet with representatives from states not party to the CWC in pursuit of universality. The Director-General returned to UN Headquarters on 6 December to address the fifty-sixth session of the UNGA, which was scheduled to take up an agenda item on cooperation between the UN and the OPCW. Under this item, the OPCW would only have the opportunity to address the UNGA biannually. The Director-General, the Secretariat, and the states parties were working to impress upon the UN the importance of annual reporting. A resolution to this effect was before the UNGA, awaiting a decision in 2002.

On 26 November, the Austrian Foreign Minister, H.E. Dr Benita Ferrero-Walder, paid an official visit to the OPCW, during which she took the opportunity to address a specially convened meeting of permanent representatives and OPCW staff. In her statement, Foreign Minister Ferrero-Walder emphasised the importance of full political and financial support for the Organization.

Outreach Activities On 24 September, the OPCW hosted the UN Disarmament Fellows, an annual programme that sought to educate junior members of various foreign ministries in all issues related to disarmament and arms control.

The planned regional seminar on regional universality and chemical weapons destruction in Seoul, Republic of Korea, scheduled for 17–19 October, had to be postponed. With financial support from both Canada and the United Kingdom, a regional seminar on universality took place in St. Ann, Jamaica during 26–28 November. Participating were 40 individuals, representing 14 countries, including 7 states not party to the Convention (Antigua and Barbuda, Barbados, Belize, Dominican Republic, Guatemala, St Kitts and Nevis, and St Vincent and the Grenadines). The next regional seminar was being organised for Khartoum, Sudan in March 2002. The seminar would focus on universality for Africa and the Middle East, as well as building capacity within the African states parties for the proper implementation of the Convention.

On 11 November, the OPCW was represented at the Armistice Day ceremony in Ieper, Belgium by the Deputy Director-General, who in his speech emphasised the need to prevent the use of chemical weapons by terrorists and pursue universality for the Convention. In the course of the ceremony, the Mayor of Ieper announced the five nominees for the 2002 Ieper Peace Prize; the OPCW was included among the nominees.

On 12 November, a statement was delivered on behalf of the Director-General at a Public Forum on Russian implementation of the CWC held by Green Cross International.

Staffing The period under review saw the departure of Ron Manley (UK), the Director of Verification and formerly Special Adviser to the Director-General. The new Director of Verification, due to take up his position in January 2002, was Mr Horst Reeps (Germany). Mr Yuichiro Ogino (Japan) was appointed as the new Internal Auditor with the Office of Internal Oversight. Mr Gordon Vachon (Canada) took up his position as Special Assistant to the Director-General for

External Relations in mid-October. As well, the former Office of Special Projects would become the Special Projects Division, still under the Direction of Mr Serguei Batsanov (Russia), which would then oversee both the Health and Safety Branch and the Office of Confidentiality and Security. Ruth Mohlenkamp (Germany), formerly Head of the Policy Review Branch, was appointed Head of the Office of Confidentiality and Security. Per Run (Sweden), formerly Head of the Inspectorate Management Branch, was appointed the new Head of the Policy Review Branch. The Inspectorate Management Branch would be headed by Mr Renato Carvalho, formerly an inspection team leader.

As of 7 December, 464 of the allotted 507 fixed-term posts in the Secretariat were occupied. Of these, 325 were in the professional and higher category and 139 were in the general service category. Including staff on short-term and temporary assistance contracts and others the total personnel strength was 510 from nearly 70 nationalities. Following a decision by the Conference at its sixth session, the Secretariat continued to keep 30 fixed-term positions unfilled.

Subsidiary Bodies

Confidentiality Commission No date had yet to be decided upon for the next regular session of the Commission; its fifth session, planned for 18–20 April, was cancelled as part of the OPCW's austerity measures. In October, the Secretariat passed a third audit of its security critical network, which was overseen by the Office of Confidentiality.

Scientific Advisory Board (SAB) The SAB did not meet during the reporting period, and neither did any of its temporary working groups. Several SAB members were involved in activities outside the OPCW, in particular in relation to a project planned by the International Union of Pure and Applied Chemistry (IUPAC) in preparation for the 2003 Review Conference. A new temporary working group

on biomedical samples would likely be set up in early 2002. The work of the SAB during the coming year would focus on the preparations for the review conference, including work undertaken in coordination with the Secretariat task force on the review. Issues under examination included the destruction and verification of destruction of chemical weapons, scientific and technical developments that may impact on verification methods and instruments, and the impact of new scientific and technological developments on the Convention—for example on the Schedules of Chemicals and the definition of chemical weapons.

Future Work

Taking the highest priority in the programme or work of the OPCW for the coming year is the comprehensive implementation of the Convention in all its aspects. This involves verification, assistance and protection, international cooperation, national implementation, legal assistance, and universality, and will make an important contribution to the global effort to prevent and combat chemical terrorism. In order to accomplish this, decisions must be taken within the OPCW's decisionmaking bodies that will ensure the adequate funding of the organisation and address key verification issues: destruction, conversion, and the regime for chemical industry.

Much work continues to be undertaken within all bodies of the OPCW — the SAB, the Secretariat including the Inspectorate, the Council, and the open-ended working group (involving member states as well as the Secretariat) — with respect to the first Review Conference and the identification of key issues and/or aspects of the CWC's implementation that merit discussion and debate.

This review was written by Pamela Mills, the HSP researcher in The Hague.

Report from Geneva

Quarterly Review no 17

The Biological and Toxin Weapons Convention

The Fifth Review Conference of the Biological and Toxin Weapons Convention (BWC) was held in Geneva from Monday 19 November to Friday 7 December. On the final day the Review Conference, having made considerable progress towards agreement of the Final Declaration but unable to conclude a complete text, decided by consensus “to adjourn its proceedings and reconvene at Geneva from 11 to 22 November 2002”. This followed the Preparatory Committee meeting held in Geneva on Wednesday to Friday 25 to 27 April (see *Quarterly Review no 15*) which had agreed a provisional agenda, draft rules of procedure and a recommended distribution of the posts of Chairmen and Vice-Chairmen of the subsidiary bodies (the Committee of the Whole, the Drafting Committee and the Credentials Committee) among the three regional groups.

On the opening day of the Review Conference, Ambassador Tibor Tóth of Hungary was elected President of the Review Conference, Ambassador Markku Reimaa of Finland elected as Chairman of the Committee of the Whole, Ambassador Munir Akram of Pakistan as Chairman of the Drafting Committee and Ambassador Ali-Ashgar Soltanieh of Iran as Chairman of the Credentials Committee. The provisional agenda was also adopted with its four substantive items:

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 Special Conference

13. Other matters, including the question of future review of the Convention.

The three week Review Conference was structured so as to commence with two days of general debate in which representatives of 34 states parties, one signatory state, Egypt, and one observer, the International Committee of the Red Cross (ICRC), made statements. This was followed by the Committee of the Whole which met on Wednesday 21 November through to Thursday 29 November and carried out an article by article review of the Convention producing a report containing language proposed by individual states parties or groups of states parties for the Final Declaration. It presented this report on Friday 30 November. The Drafting Committee then met on Friday 30 November through to Friday 7 December, seeking consensus language for the Final Declaration.

91 states parties participated in the Review Conference: Albania, Algeria, Argentina, Armenia, Australia, Austria, Bahrain, Bangladesh, Belarus, Belgium, Bolivia, Brazil, Brunei Darussalam, Bulgaria, Canada, Chile, China, Colombia, Costa Rica, Croatia, Cuba, Cyprus, Czech Republic, Denmark, Dominican Republic, Estonia, Ethiopia, Federal Republic of Yugoslavia, Finland, France, Germany, Greece, Guatemala, Honduras, Hungary, Iceland, India, Indonesia, Iran (Islamic Republic of), Iraq, Ireland, Italy, Jamaica, Japan, Jordan, Kuwait, Latvia, Lebanon, Libyan Arab Jamahiriya, Liechtenstein, Lithuania, Luxembourg, Malaysia, Malta, Mauritius, Mexico, Monaco, Mongolia, Netherlands, New Zealand, Nicaragua, Norway, Oman, Pakistan, Panama, Peru, Philippines, Poland, Portugal, Republic of Korea, Romania, Russian Federation, Saudi Arabia, Senegal, Singapore, Slovakia, Slovenia, South Africa, Spain, Sri Lanka, Sweden, Switzerland, Thailand, Tunisia, Turkey, Ukraine, United Kingdom of Great Britain and Northern Ireland, United States of America, Venezuela, Viet Nam and Yemen. This was a significant increase on the 77 states parties that participated at the Fourth Review Conference in 1996: Algeria, Bahrain, Bolivia, Costa Rica, Dominican Republic, Estonia, Federal Republic of Yugoslavia, Guatemala, Honduras, Jamaica, Latvia, Lebanon, Lithuania, Monaco, Oman, Panama, Singapore, Venezuela and Yemen all participated in 2001 whilst Bosnia and Herzegovina, Ghana, Kenya, Nigeria and San Marino who had participated in 1996 did not in 2001.

Five signatory states participated: Egypt, Morocco, Myanmar, Nepal and United Arab Emirates, two more (Nepal and the UAE) than in 1996. Two states, Holy See and Israel, were granted observer status in 2001, two fewer than in 1996 when Algeria, the former Yugoslav Republic of Macedonia, Israel and Kazakhstan were accorded Observer status. Algeria has recently acceded to the BWC which now has 144 states parties and 18 signatory states (BWC/CONF.V/INF.1 dated 26 October 2001).

As usual, the Secretariat prepared background documents on the participation of states parties in the agreed confidence-building measures (CBMs) (BWC/CONF.V/2), on compliance by states parties (BWC/CONF.V/3) and on new scientific and technological developments of relevance

to the Convention (BWC/CONF.V/4). Information on compliance by states parties was provided by 22 states parties — listed as the statements appear in BWC/CONF.V/3 and its nine additions: Belarus, **Bulgaria**, Finland, Greece, **Japan**, Latvia, Lebanon, **Netherlands**, **Republic of Korea**, Russian Federation, United States, Yugoslavia; Pakistan; Argentina, **Australia**; **UK**; China; Uzbekistan; **Canada**; Cuba; **New Zealand**; and Poland. The countries shown in bold adopted the useful approach of addressing compliance on an article by article basis. Information on relevant scientific and technological developments was provided by five states parties: Bulgaria, South Africa, Sweden, the United States of America and the United Kingdom. The UK paper was comprehensive and at 29 pages was longer than the combined length of the other papers on scientific and technological developments.

In addition, a number of papers were submitted by states parties and circulated as Review Conference documents. These, together with other documents are listed in Box 1 [documents will be posted on <http://www.opbw.org> as they become available].

Review Conference documents

Documents submitted by states parties:

BWC/CONF.V/5 — Legislation in the Federal Republic of Germany on the Prohibition of Biological Weapons

BWC/CONF.V/6 — Technical assistance, exchange and cooperation undertaken by Australia in the field of biotechnology

BWC/CONF.V/7 — Federal Republic of Germany — Developments in non-profit and industrial applications of genetic engineering, biotechnology and other areas of life sciences

BWC/CONF.V/8 — Federal Republic of Germany — Transparency in biodefence

BWC/CONF.V/9 — Implementation of Article X of the Convention — France's policy on scientific cooperation in biology and medicine in the field of health

BWC/CONF.V/10 — Background information on the compliance of Article IV — Brazil

BWC/CONF.V/10/Corr. 1 — Background information on the compliance of Article IV — Brazil

BWC/CONF.V/11 — The reply of the Libyan Arab Jamahiriya

Further key documents:

BWC/CONF.V/1 — Provisional agenda for the Fifth Review Conference

BWC/CONF.V/2 — Background information document on the participation of the States Parties in the agreed Confidence-Building Measures (CBMs)

BWC/CONF.V/3 — Background document on compliance by States Parties with their obligations under the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction

BWC/CONF.V/4 — Background document on new scientific and technological developments relevant to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction

BWC/CONF.V/12 — Fifth Review Conference of the States Parties to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction: Interim Report

BWC/CONF.V/INF.1 — List of States Parties to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction

Opening Remarks

After being elected, **Ambassador Tibor Tóth** made some opening remarks in which he expressed his thanks for being elected President. He started by saying that, although any review conference was a crucial event interpreting the past and projecting the future within a timeframe of a decade, this was not an easy task even under normal circumstances. “This time ... the Fifth Review Conference will have to penetrate much deeper into [the] past and future than any of its predecessors.” Ambassador Tóth noted that the negotiations on the compliance protocol came to an abrupt halt in August, and that the Fifth Review Conference

will have to chart the course for future action that will determine the state of the whole of the biological weapons prohibition regime for a much longer period of time than just the next five years ahead. That time scale altogether is close to a generation; the potential ramifications could transcend even further into the future.

He went on to note that another challenge is posed by the recent use of biological weapons in the incidents using anthrax as a weapon of terror which was forcing us to live with the notion that the use of these weapons is becoming a *de facto* part of our everyday life. He said:

Such a notion is slowly eroding all the prohibition layers, both politically and legally binding, as contained in the consensus final declarations of all the previous Review Conferences and in the Biological Weapons Convention itself. The Convention is facing perhaps the greatest challenges in its 26-year history. All of this is puts us in a situation profoundly different to that faced by previous Review Conferences.

He concluded by calling on all delegations to participate in a constructive spirit, to stay realistic, and

at the same time live up to the requirements of preserving the integrity of the regime in accordance with the expectations of the international community. Action or lack of action will shape the future of the biological weapons prohibition regime much beyond the Fifth Review Conference. We will have to reconfirm at the Conference the importance the international community attaches to the integrity of each and every prohibition norm....We must not accept the slow erosion of the norms that served us for decades, if not longer. We must comprehend that in the light of political and public expectations we have no other viable choice but to overcome these challenges.

Jayanatha Dhanapala, Under Secretary-General for Disarmament Affairs then presented a statement from United Nations Secretary-General Kofi Annan which said:

Preventing the use or threat of use of biological agents and toxins is more important than ever. The horrific attacks of 11 September in the United States could have been far worse if weapons of mass destruction had been used. The challenge for the international community is clear: to implement, to the fullest extent possible, the prohibition regime offered by the Convention.

The statement went on to note:

in recent weeks the world has seen the use of biological agents to create chaos and terror, violating the international norm. ... Full implementation of the Biological Weapons Convention must be given higher priority. Relevant national legislation needs to be tightened, and the acquisition or use

of these weapons needs to be criminalized. The international community also has to be prepared to assist Member States should prevention fail. The United Nations, for its part, stands ready to play a coordination role in this regard. ...

The renewed global focus on terrorism has brought concerns about biological and toxin weapons to the fore. Missing this opportunity, given difficulties in negotiations on other weapons of mass destruction, would only exacerbate the current crisis in multilateral disarmament diplomacy in general. I urge you to come together, overcome your differences, and take these next crucial steps in the history of this landmark Convention.

General Debate

The general debate started on the morning of Monday 19 November with six statements — by the European Union, the United States, South Africa, Japan, Pakistan and China. **Ambassador Jean Lint** of Belgium opened the general debate with a statement on behalf of the EU and the Central and Eastern European countries associated with the EU — Bulgaria, the Czech Republic, Estonia, Hungary, Lithuania, Poland, Romania, Slovakia, and Slovenia — and the associated countries, Cyprus, Malta and Turkey. The statement was thus on behalf of 27 states parties. He started by noting that, particularly in the last year, “important events had taken place which are directly relevant to the BTWC”. Referring to 11 September as well as the anthrax attacks, the statement went on to say that the EU “believes that disarmament and non-proliferation on a general and multilateral basis are today more than ever essential in order to deny terrorists and terrorist organisations any access to more powerful means to implement their abominable activities”. He continued: “The international community is entitled to expect that States taking part in this Conference will spare no effort to prevent biological weapons from being used by terrorists.”

Further, the EU statement said: “The EU also appeals to States Parties to adopt, during this Conference, concrete measures in the fight against biological weapons.” After deeply regretting the failure to agree an instrument to reinforce the Convention, the statement urged that the Review Conference must be the opportunity to give a new impulse to our work by defining a series of commitments and additional measures that States Parties should adopt in order to:

strengthen the implementation of the Convention in all of its provisions: compliance with the fundamental norm in Article I, non-proliferation and export controls, measures in case of concerns over compliance with the Convention (e.g. investigation measures), technical assistance and international cooperation.

In respect of the agreed confidence-building measures, the EU appeals to all states parties to cooperate fully and regularly in the exchange of information. It was noted that modifications could be made to some CBMs to ease their implementation from a technical point of view. In addition, the EU proposed that “some of the confidence-building measures be made legally-binding” and added that “these confidence-building measures will only prove fully useful in the wider context of legally binding measures aimed at strengthening the Convention in a multilateral framework”.

The statement concluded by saying that “It is essential that the Conference agree to a regular follow-up to the work to enable the States Parties to strengthen the Convention comprehensively.”

John Bolton, Under Secretary of State for Arms Control and International Security, then made a statement on behalf of the United States in which he referred to President Bush’s warning in his address to the UN General Assembly:

the world faces the horrifying prospect of terrorists searching for weapons of mass destruction, the tools to turn their hatred into holocaust. ... We, the parties to the Biological Weapons Convention, must demonstrate an unwavering commitment to fighting this undeniable threat. We must overcome years of talking past each other, and address the real issues. Will we be courageous, unflinching, and timely in our actions to develop effective tools to deal with the threat as it exists today, or will we merely defer to slow-moving multilateral mechanisms that are oblivious to what is happening in the real world?

He went on to say:

Before we consider new ways to strengthen the Biological Weapons Convention, however, we must first confront the failure of many States to abide by that very document. Too many States are Parties to the BWC but have not lived up to their commitments. Any nation ready to violate one agreement is perfectly capable of violating another, denying its actual behavior all the while. The United States will simply not enter into agreements that allow rogue states or others to develop and deploy biological weapons. We will continue to reject flawed texts like the BWC draft Protocol, recommended to us simply because they are the product of lengthy negotiations or arbitrary deadlines, if such texts are not in the best interests of the United States and many other countries represented here today.

He then went on to stress:

While the vast majority of the BWC’s parties have conscientiously met their commitments, the United States is extremely concerned that some states are engaged in biological weapons activities that violate the Convention. We also are concerned about potential use of biological weapons by terrorist groups, and states that support them.

Insofar as Usama bin Laden and his al-Qaeda terrorist organization is concerned:

rest assured that the United States will not rely alone on treaties or international organizations to deal with such terrorist groups or the states that support them. Neither the Biological Weapons Convention nor the former draft BWC Protocol would stop biological terrorism by groups like al Qaeda or restrain their rogue-state patrons.

Beyond al-Qaeda, the most serious concern to the US is Iraq:

The United States strongly suspects that Iraq has taken advantage of three years of no UN inspections to improve all phases of its offensive BW program. The existence of Iraq’s program is beyond dispute, in complete contravention of the BWC. The BWC Protocol would have neither hindered nor stopped it.

The Under Secretary of State noted other countries: “Also extremely disturbing is North Korea’s BW program. The United States believes North Korea has a dedicated, national-level effort to achieve a BW capability and that it has developed and produced, and may have weaponized, BW agents in violation of the Convention.” The United

States believes Iran “probably has produced and weaponized BW agents in violation of the Convention”, that Libya “has an offensive BW program in the research and development stage, and it may be capable of producing small quantities of agent” and that Syria (which has not ratified the BWC) “has an offensive BW program in the research and development stage, and it may be capable of producing small quantities of agent”. Finally, the US is concerned about the growing interest of Sudan (a non state party) in developing a BW programme.

John Bolton then went on to say:

we need to look beyond traditional arms control measures to deal with the complex and dangerous threats posed by biological weapons. Countering these threats will require a full range of measures—tightened export controls, an intensified non-proliferation dialogue, increased domestic preparedness and controls, enhanced biodefense and counter-bioterrorism capabilities, and innovative measures against disease outbreaks. Strict compliance by all Parties with the BWC is also critical. ... An essential element in our strategy is to find agreement in this body on measures that countries can undertake immediately to strengthen the BWC.

Specific proposals in the US statement included the following:

- Parties agree to enact national criminal legislation to enhance their bilateral extradition agreements with respect to BW offences and to make it a criminal offence for any person to engage in activities prohibited by the BWC.
- Parties should have strict standards for the security of pathogenic microorganisms and: (a) adopt and implement strict regulations for access to particularly dangerous micro-organisms, including regulations governing domestic and international transfers; and (b) report internationally any releases or adverse events that could affect other countries.
- Sensitizing scientists to the risks of genetic engineering, and exploring national oversight of high-risk experiments, is critical and timely, as is a professional code of conduct for scientists working with pathogenic micro-organisms.
- Establish a mechanism for international investigations of suspicious disease outbreaks and/or alleged BW incidents.
- Setting up a voluntary cooperative mechanism for clarifying and resolving compliance concerns by mutual consent, to include exchanges of information, voluntary visits, or other procedures to clarify and resolve doubts about compliance.
- Parties adopt and implement strict biosafety procedures, based on WHO or equivalent national guidelines.
- Enhance support of WHO’s global disease surveillance and response capabilities.
- Parties could agree to provide rapid emergency medical and investigative assistance, if requested, in the event of a serious outbreak of infectious disease, and to indicate in advance what types of assistance they would be prepared to provide.
- Restricting access and enhancing safety procedures for use of dangerous pathogens.

Throughout the statement, the draft Protocol was criticized no less than twelve times with an assertion that

none of the proposed measures, apart from the one providing the assurance of help in the event of a serious disease outbreak, was contemplated in the Protocol. In fact, all, apart from the proposed professional code of conduct, were included the Chairman's composite text.

Following the statement by the United States, the representatives of Iran, Iraq and Libya requested the right to reply under Rule 19 of the Rules of Procedure under which:

the President may accord the right of reply to a representative of any State participating in the Conference. Such statements shall be as brief as possible and shall, as a general rule, be delivered at the end of the last meeting of the day.

Peter Goosen, Chief Director, Peace and Security of the Department of Foreign Affairs, South Africa said: "the Fifth Review Conference ... comes at a particularly important — if not critical — juncture in the Convention's history." He noted that the 24th session of the Ad Hoc Group had not only been unable to reach agreement on the draft Protocol, it had not even been able to reach an agreement on its report to the states parties. He went on to say:

On 11 September 2001, the world was confronted by the horrendous terrorist attacks in the United States, which have subsequently been followed by the most widespread use of biological weapons as an instrument of terror in recent history. The use of disease — in this case anthrax — as a weapon of terror should not only be condemned in the strongest possible terms, but should also have been instrumental in underlining the importance of the work that had been undertaken to negotiate a legally binding protocol to strengthen the implementation of the Convention. These attacks made a clear statement to the entire international community, and particularly to the BWC States Parties. The threat of disease as a weapon of war and terror — the threat of biological weapons — is not speculative, it is a threat that is a "clear and present danger", which makes the Ad Hoc Group's failure all the more regrettable.

... if our opposition to biological weapons is to be sustained in the long term, it is necessary that the members of the international community — as a whole — take action and commit themselves to strengthening the norm against the development, production, stockpiling and use of these reprehensible weapons. South Africa continues to see the strengthening of the implementation of the BWC as a core element of the international security architecture.

He said that failure to agree the Protocol was "extremely unfortunate, and in our view sent the incorrect message out into the world" and concluded:

The necessity at this Review Conference is therefore for all States Parties to approach our work in a constructive way and to co-operate so as to accomplish our common goal and for us to satisfy the aspiration of the international community — as a whole — to do all in our power to prevent the use of disease as weapons of war and terror.

Toshio Sano of Japan, noting the events of 11 September and the subsequent anthrax attacks, said:

These incidents have vividly demonstrated that the threat of biological weapons is real and imminent in our current world. ... First and foremost, we should note that it is against this backdrop that this 5th Review Conference is being held today. The international community is more than ever attentive to this Review Conference and to how the States Parties to the BWC will eventually manifest ways to respond

to the threat of biological weapons. In response, we should be clear about demonstrating to the international community our full and united political will to fight against the threat of biological weapons.

Japan regretted the failure of the Ad Hoc Group to complete its negotiations and considers that:

a multilateral legally-binding instrument which involves all the States Parties to the Convention is necessary for international efforts to strengthen the Convention."

He concluded:

Finally, in the light of the growing concerns of the international community about the threat of biological weapons and the increasing need for the strengthening of the Convention, the States Parties need to meet frequently during the intersessional period for close cooperation and taking further actions. Therefore, Japan supports the idea of setting up a strong follow-up mechanism after this Review Conference by meeting in whatever format including a preparatory meeting for the next Review Conference or an annual meeting of the States Parties."

Abdul Basit, Acting Permanent Representative of Pakistan noted that the September 11 events in the US, followed by the continuing anthrax scare, are "a grim reminder of our vulnerabilities". He went on to say that:

ever more vigorous and concerted efforts are required today in order to counter the old and new threats comprehensively and effectively. In our view, the multilateral approach, with full participation of all concerned States, offers the best hope for attaining genuine security at all levels.

... [Pakistan] could not agree to an interpretation of Article III that is in any manner at variance with the provisions of Article X. ... This Conference must consider the subject of technical and scientific cooperation thoroughly, reaffirming the importance of full implementation of Article X. In this regard, the Chinese proposals, contained in document BWC/Ad Hoc Group/WP.453, dated May 8, 2001, provide a solid basis for evolving suitable recommendations.

He called for resumption of the work of the Ad Hoc Group, with an organisational meeting as soon as possible, and said that "the States Parties have come a long way from the 'Rolling Text' to the Chairman's Composite Text" and hoped that this Review Conference "would take the right decision with regard to the Ad Hoc group, enabling it to wrap up its work on a positive note to the satisfaction of all the States Parties." He concluded by:

underlining once again that it would be enormously disappointing if this Conference ended without moving the BWC process forward. A simple review ... cannot suffice. This Conference must come up with concrete recommendations for strengthening the BWC. New proposals should be welcomed and reflected upon thoroughly. But at the same time, we should not hasten to discard old ones, which remain relevant and need to be materialised.

Ambassador **Sha Zujang** of China contrasted his statement to the Fourth Review Conference in which he had surveyed the substantive progress made in arms control and disarmament and the current situation in which the question of "How to maintain and promote disarmament process has become a matter of concern to all countries". He noted:

considerable progress had been achieved in the negotiations for a protocol for the purpose of the strengthening of the

Convention. Still, we were let down eventually. Why did it happen? What can we do about it? These are the questions that must be answered at this Review Conference. In the wake of the September 11 event and a series of anthrax contaminations, at a time when the real threat of bioterrorism looms large, the last thing we should do is to evade these questions. In this sense, the results of this Review Conference will undoubtedly have long-term impact on the effectiveness of the Convention.

In considering the implementation of the Convention, China had noticed that

in fulfilling the obligations under and enhancing the effectiveness of the Convention, a few States Parties are more often than not, either wittingly or unwittingly, pose themselves as lecturers. They are always suspicious of the normal scientific research and production activities under the Convention carried out by other States Parties in the area of biology, while frequently lecturing others. They remain silent about their own relevant activities and facilities.

It was important to follow a single standard — the provisions of the Convention. The statement went on to address unilateralism vs. multilateralism, noting that

a certain country, relying on the strength of its enormous economic and military capabilities, often takes a utilitarian and unilateral approach towards efforts in the implementation of obligations and the enhancement of the effectiveness of the Convention. History has proved and will continue to prove that in an interdependent world, the complete prohibition of all biological weapons, the elimination of the threat of biological warfare and the prevention of related proliferation require the participation and efforts of all members of the international community. Unilateralism will never succeed, on the contrary, it will aggravate the problems.

... With bioterrorism already becoming a real threat, one of the most effective ways to combat it is to work within the multilateral framework and conclude through negotiations a reasonable, feasible and effective protocol on the basis of the existing mandate to strengthen the effectiveness of the Convention and enhance international cooperation.

The general debate continued that afternoon with statements by a further eight states parties — Cuba, New Zealand, Brazil, Croatia, Canada, Iran, Russian Federation and Libya followed by right to reply statements by Iran, Iraq and Libya. Further statements were made the following morning, Tuesday 20 November, by nine states parties — Ukraine, India, Mexico, Norway, Republic of Korea, United Kingdom, Bangladesh, Poland and Argentina. The general debate concluded that afternoon with statements by 11 states parties — Australia, Iraq, Indonesia, Switzerland, Malaysia, Belarus, Chile, Thailand, Algeria, Czech Republic and Turkey followed by Egypt, a signatory state, and the International Committee of the Red Cross, which had observer status. (Key points from these statements are available in “Report from Geneva — Friday 23 November 2001” available at <http://www.brad.ac.uk/acad/sbtwc>).

NGO Statements to the Review Conference On Wednesday 21 November, the formal afternoon session was suspended although the President remained in the chair in order to provide an opportunity for NGOs to make statements to the Review Conference. This followed the same procedure as had been adopted at the Fourth Review

Conference in 1996 with copies of the statements being distributed to delegations as the statements were made. Eleven NGOs made statements: Bradford University (Dr Graham S. Pearson); Federation of American Scientists (Dr Barbara Hatch Rosenberg); Friends World Committee for Consultations (David Atwood); Institute of Biology, UK (Prof Malcolm R. Dando); International Network of Engineers and Scientists for Global Responsibility (Prof Kathryn Nixdorff); Michigan University/Princeton University (Hazel Tamano); SIPRI (Dr Jean Pascal Zanders); Sunshine Project (Edward Hammond); VERTIC (Oliver Meier); Women’s International League for Peace and Freedom (Azania Kaduma); and 20/20 Vision (James K. Wyerman).

Although presenting a range of views, all emphasized the importance of a multilateral legally binding instrument to strengthen the Convention.

Committee of the Whole The Committee of the Whole commenced its work to consider in detail the substantive issues relevant to the Convention on Wednesday 21 November. It reviewed the provisions of the Convention, Article by Article, followed by consideration of the Protocol. It also considered agenda items: “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 Special Conference”, and “13. Other matters, including the question of future review of the Convention”. Its report included in an Annex proposals for language for the Final Declaration put before the Committee of the Whole. The Annex utilises a tabular form with two columns. The first is somewhat confusingly headed “Potential Common Ground Texts based on Previously Agreed Formulations” (with a footnote stating “Text in **bold** indicates that the same text has been proposed before the Committee of the Whole”) which actually has text in bold if it comes from the Final Declaration of the Fourth Review Conference. The second column is headed “Proposal before the Committee of the Whole” and has text in bold if the proposed language was identical to text accepted in the Final Declaration of the Fourth Review Conference, in italic if a minor change from text accepted at the Fourth Review Conference and in normal if it is a new proposal.

There were 31 working papers submitted by individual states parties or by groups of states parties to the Committee of the Whole containing proposals for one or more elements of the Final Declaration in contrast to the 8 working papers submitted at the Fourth Review Conference. An analysis of the numbers of proposals by Article is shown below:

Article	Proposals	
	5th Rev Con	4th Rev Con
Solemn Declaration	3	2
Preamble	2	1
Article I - basic prohibition	9	6
Article II - destruction	1	3
Article III - non-transfer	8	3
Article IV - legislation	6	1
Article V - consultation	6	2

Article VI - complaints	4	3
Article VII - assistance	4	2
Article VIII - Geneva Protocol	5	3
Article IX - chemical weapons	5	2
Article X - technical cooperation	8	4
Article XI - amendments	1	1
Article XII - reviews	2	1
Article XIII - withdrawal	—	—
Article XIV - accession	2	1
Article XV - languages	2	1
Total	71	38

A further analysis of the 71 proposals made by 22 individual states parties or by groups of two or more states parties showing the numbers of proposals submitted by an individual state party or a group of states parties is shown below. 12 proposals were submitted at the Fifth Review Conference by the USA, 11 by Iran, 10 by the EU, 8 by Mexico, 5 by Libya, 4 by China and 4 by the NAM and Other States, 3 by Brazil and 3 by China and six other states — a quite different distribution from the submissions at the Fourth Review Conference when 6 were by Iran, 5 by the USA, 5 by the Non-Aligned Countries, 4 by the United Kingdom and 3 by South Africa.

State Party/Group	Proposals	
	5th Rev Con	4th Rev Con
United States	12	5
Islamic Republic of Iran	11	6
European Union	10	—
Mexico	7	—
Libya	5	—
China	4	—
Non-Aligned ¹	4	5
Brazil	3	—
China plus other states ²	3	1
South Africa	1	3
United Kingdom	—	4

Notes:

1. For complete accuracy, this should read “NAM plus Other States” for 2001 and “Non-Aligned Countries” for 1996.

2. This was “China plus six States” for 2001 and “China plus four States” for 1996

Just over two weeks prior to the Review Conference, President George W. Bush announced seven measures to strengthen the Biological Weapons Convention which the US urged all states parties to take. These were reiterated in the statement made by John Bolton on the opening day of the Review Conference and, as might be expected, these seven measures were all reflected in the language proposed by the United States. It is interesting that the essence of one or more of these proposals were also submitted by individual states parties or by groups of states parties. Some of these are long-standing and their proposal by other states parties will have been by coincidence but others such as those proposed by the EU and by Mexico will have been to show a willingness to consider the US proposals alongside other proposals made to the Review Conference and the ideas developed during the Ad Hoc Group negotiations.

US Proposal	Article under which the US submitted its proposal	Articles under which other states submitted analogous proposals
Criminal legislation	IV	III (EU, Mexico) IV (Canada/Switzerland, EU, Japan, Mexico)
Investigation of suspicious outbreaks	V	VI (EU) VII (Mexico)
Procedures for BWC compliance concerns	V	V (EU) VII (Mexico)
International disease control	VII X (?)	VII (Brazil, EU) X (Australia/France/Italy, Japan, Mexico, China +, EU, NAM)
National oversight for security and genetic engineering	IV	Preamble (Iran) IV (EU) VII (Mexico)
Code of conduct	I IV	I (Chile, EU) IV (Canada, Switzerland) VII (Mexico)
Responsible conduct in study, use, shipment		IV (Mexico/Peru, EU) VI (Mexico) VII (Mexico) X (Mexico, EU)

It should, however, be noted that the US proposals are not elaborated in detail leading to possible differences of interpretation of what is intended by them. This is in contrast to the careful elaboration in the proposals for Article V submitted by South Africa for extending CBMs A and G and adding a new CBM H. The experience with the submissions made under the CBMs and the US statement on 25 July 2001 regarding the composite Protocol text make the absence of detail in the US proposals to strengthen the Convention surprising as such detail is necessary so as to ensure consistency in interpretation and implementation.

In addition to the above proposals submitted by the United States, there were a number of novel ideas proposed in the language submitted to the Committee of the Whole including the following:

- Language that non-adherence and non-ratification by non-States Parties pose a threat to international peace and security (Solemn Declaration — NAM)
- Scientific Advisory Panel (Art I — EU)
- Pests and vectors (Art I — Iran)
- Ethnic weapons (Art I — Iran)
- Crop elimination (Art I - Mexico)
- Termination of offensive programmes (Art I — USA)
- Common principles for export controls (Art III — EU)
- Global overview of transfers (Art III — EU)
- No transfers to non-States Parties (Art III — Iran)
- Biosafety Protocol and Advance Informed Agreement (Art III — Mexico/Peru)
- Covert operations (Art IV — Iran)
- Report accidental releases (Art IV — USA)
- Strengthened CBMs/mandatory/procedure (Art V — EU)
- Extended and new CBMs (Art V — South Africa)
- Abusive allegations (Art V — Iran)

- Integrated approach BWC/Biosafety Protocol (Art VI — Mexico)
- BTWC/CWC — no legal gaps between general purpose criteria (Art IX — Mexico)
- Coordinate Review Conference work of BWC and of CWC (Art IX — Mexico)
- Updating of Article IX (Art IX — Pakistan)
- Cooperation Committee (Art X — China plus seven States Parties)
- Good Laboratory Practice audit trails of transfers (Art X — EU)
- No transfers even for peaceful purposes (Art X — USA)
- WHO logical association with BWC goals (Art X — USA)
- Meetings between 5th and 6th Review Conference to consider measures agreed at 5th Review Conference (Art X — USA)

The Committee of the Whole submitted its report to the Fifth Review Conference on Wednesday 30 November.

Drafting Committee The Drafting Committee commenced its work on 30 November and held 13 meetings between then and 7 December. Following a suggestion to the Review Conference by the President, the Chairman of the Committee of the Whole and the Chairman of the Drafting Committee, the Chairman of the Drafting Committee was assisted in his work by Facilitators in the following areas:

- Solemn Declaration — Ambassador David Broucher (United Kingdom)
- Use — Minister Counsellor Alfredo Labbé (Chile)
- Legislation/Criminalization — Ambassador Gustavo Albin (Mexico)
- Safety — Ambassador Volker Heinsberg (Germany)
- Investigations — Ambassador Rakesh Sood (India)
- Assistance — Ambassador Chris Westdal (Canada)
- Disease Surveillance — Ambassador Ali Ashgar Soltanieh (Islamic Republic of Iran)
- Confidence Building Measures — Ambassador Hubert de la Fortelle (France)
- Cooperation (other than on disease & surveillance) — Minister Counsellor F. S. Duque Estrada Meyer (Brazil)
- Follow-up/Ad Hoc Group — President of the Conference

By the middle of the final week, several of the Facilitators were reported to have made good progress in developing text that would attract consensus. By the morning of the final day, 7 December, Ambassador Tóth was reporting that 75 per cent of the Final Declaration had been consolidated and that the outstanding critical issues were non-compliance with the Convention, follow-up to the Review Conference, and the question of the Ad Hoc Group and whether or not this should resume its work.

Late in the afternoon of the final day, agreement had been reached on the language in the Final Declaration relating to the first 11 Articles of the Convention — and it was known that consensus language was available for Articles XIII, XIV and XV — when the United States tabled new language for Article XII. The draft language being considered for Article XII had been as follows:

1. The Conference decides that a Sixth Review Conference shall be held in Geneva at the request of the majority of States Parties, or in any case, not later than 2006.

2. The Conference decides that the Sixth Review Conference shall consider, *inter alia*,

- ...
- The impact of scientific and technological developments relating to the Convention;
- The relevance of the provisions of, and the implementation of the Chemical Weapons Convention on the effective implementation of the Biological and Toxin Weapons Convention, duly taking into account the degree of universality attained by such conventions at the time of the Fifth Review Conference;
- The effectiveness of confidence-building measures as agreed at the Second and Third Review Conferences;
- The requirement for, and the operation of, the requested allocation by the United Nations Secretary-General of staff resources and other requirements to assist the effective implementation of the relevant decisions of the Fourth Review Conference;

3. The Review Conference reaffirms that conferences of States Parties to review the operation of the Convention should be held at least every five years.

The new language proposed for Article XII by the United States, without prior consultation with any of the other states parties, was as follows:

1. The Conference decides, beginning in November 2002, that States Parties will meet annually between the Fifth Review Conference and the Sixth Review Conference to
 - (a) consider and assess progress by States Parties in implementing the new measures adopted at the Fifth Review Conference; and
 - (b) consider new measures or mechanisms for effectively strengthening the BWC
2. The Conference decides that an Expert Group may meet, following each annual meeting of the States Parties if agreed at the annual meeting. The Experts group will examine matters as directed by the States Parties at the preceding annual meeting. The Experts Group will not negotiate measures, but may provide a report, adopted by consensus, to the States Parties on matters examined.
3. The Conference takes note of the work of the Ad Hoc Group, and decides that the Ad Hoc Group and its mandate are hereby terminated and replaced with the process elaborated in paragraphs 1 and 2.
4. The Conference decides that the Sixth Review Conference will be held in November 2006.

This proposal by the United States was received with shock and anger not only because of its proposed termination of the Ad Hoc Group and its mandate but also because of its unexpected introduction less than two hours before the Review Conference was scheduled to end thereby jeopardizing the whole Review Conference and the progress towards agreement of a Final Declaration. In order to avoid complete failure of the Review Conference, there was no alternative other than to adjourn the Review Conference.

Ambassador Tóth subsequently noted that the Review Conference had been quite close to finishing its work, “both in terms of the volume of the elements which were consolidated and in terms of the understandings which had been reached”. He added that “the draft Final Declaration was 95 per cent ready” although “there seemed to be a serious absence of understanding concerning the issue of the Ad Hoc Group where the differences between positions

appeared to be irreconcilable”, at least in the time remaining at the Review Conference. He went on to conclude that:

the draft final declaration can in the meantime be an orientation for delegations to undertake ... and even to start implementation of some of these ideas. All the consolidated elements will not all fade away.

Analysis

In this analysis, article by article, of the latest draft Final Declaration issued on the morning of Friday 7 December, mention is first made of what was attracting consensus which was novel compared to Final Declarations of previous Review Conferences before examining the language that still remained to be agreed. It should be noted that some of the language that remained to be agreed may have been agreed during the negotiations on that day — there is, however, no later version of the draft Final Declaration.

Solemn Declaration This had been agreed with 12 subparagraphs and contains several new subclauses from the nine subparagraphs of the Fourth Review Conference including the following:

- The determination of States Parties to accomplish total elimination of all weapons of mass destruction;
- Their dissatisfaction at the fact that, after a quarter of a century since the entry into force of the Convention, universality has not yet been achieved;
- Their conviction that terrorism in all its forms and manifestations and whatever its motivation, is abhorrent and unacceptable to the international community and that terrorists must be prevented from acquiring agents, toxins, biological weapons or associated knowledge;
- Their recognition of the particular importance of responding to the threat posed by biological weapons by strengthening the Convention including through binding measures agreed by all States Parties.

One notable omission is the subparagraph that appeared at the Fourth Review Conference:

- Their recognition that effective verification could reinforce the Convention;

Preamble This had been agreed and was essentially the same as at the Fourth Review Conference.

Article I Much of this had been agreed using language essentially the same as at the Fourth Review Conference. Interestingly, one reaffirmation had an agreed extension to include “transmission by means of vectors of biological origin” so that this now read:

The Conference reaffirms the undertaking in Article I never in any circumstances to develop, produce, stockpile or otherwise acquire or retain weapons, equipment or means of delivery designed to use such agents or toxins for hostile purposes or in armed conflict, including by transmission by means of vectors of biological origin, in order to exclude completely and forever the possibility of their use. [Underlining indicates new language from that agreed at 4th Rev Con]

Three paragraphs are not yet agreed:

The Conference reaffirms that the use by the States Parties, in any way and under any circumstances, including within

their own territory, of microbial or other biological agents or toxins, as well as of weapons, equipment or means of delivery designed to use such agents or toxins for hostile purposes or in armed conflict, that is not consistent with prophylactic, protective or other peaceful purposes, is effectively a violation of Article I of the Convention. [Underlining indicates new language from that agreed at 4th Rev Con]

The Conference notes that experimentation involving open-air release of pathogens or toxins harmful to humans is inconsistent with the undertakings contained in Article I; experimentation involving open-air release of pathogens or toxins harmful to animals or plants that has no justification for prophylactic, protective or other peaceful purposes is inconsistent with the undertakings contained in Article I.

The Conference emphasizes, once more, the vital importance of full implementation by all States Parties of all the provisions of the Convention, especially Article I. The Conference calls upon all States Parties and Signatories to comply fully with their obligations on the basis of the conviction that any non-compliance with its provisions could undermine confidence in, and achieving the basic provisions of, the Convention. [Underlining indicates new language from that agreed at 4th Rev Con]

Article II Two paragraphs had been agreed and were identical to first and last of the four paragraphs agreed at the Fourth Review Conference.

Article III Seven paragraphs had been agreed — compared to four at the Fourth Review Conference — which included the following new paragraphs:

The Conference urges States Parties to take appropriate measures to prevent and respond to any violation, including by individuals or sub-national groups, of transfer regulations or legislation, including the qualification of such a violation as a punishable offence, consistent with the provisions of the Convention.

The Conference stresses that any recipient, including a State not party, must be prevented from acquiring biological agents or toxins of types and in quantities that have no justification for prophylactic, protective or other peaceful purposes; weapons, equipment or means of delivery, and information that would assist the development, production, stockpiling and means of delivery of biological and toxin weapons.

The Conference emphasizes that terrorists and terrorist groups should be prohibited from receiving materials and capabilities relevant to the Convention.

Two paragraphs are not yet agreed:

The Conference encourages States Parties to consider, within the framework of the Convention, ways to enhance the implementation of this Article, including elaboration of a set of common principles and guidelines in the field of export controls.

The Conference takes note with interest of the provisions of the Cartagena Protocol on Biosafety which addresses, inter alia, transboundary movements of living genetically modified organisms.

Article IV 12 paragraphs had been agreed — compared to seven at the Fourth Review Conference — which included the following new paragraphs:

The Conference encourages States Parties to adopt promptly, in accordance with their constitutional processes, measures to prevent terrorists from acquiring biological agents or toxins, dual-use equipment and information on the production, stockpiling, acquisition or retention of the agents, toxins, weapons, equipment and means of delivery specified in Article I of the Convention, anywhere within their territory, under their jurisdiction or under their control. The Conference calls upon States to make all possible efforts to prevent all terrorist acts including bio-terrorist acts in all their forms and manifestations.

The Conference calls upon each State party to consider to adopt and implement national regulations to establish and maintain the protection of biological agents and toxins considered to be dangerous and relevant to the objectives of the Convention, including regulations on who may possess or acquire them and where or how they may be handled as well as regulations governing domestic and international transfers, and to enforce all such regulations by legislative or administrative measures, including penal measures, as appropriate.

The Conference encourages each State Party to consider adopting and implementing, if this is not yet the case, national guidelines for genetic engineering work consistent with the objectives and purposes of the Convention.

The Conference urges each State Party to provide appropriate legal assistance, in accordance with their national legislation and international agreements, in connection with criminal investigations or criminal proceedings relating to the development, production, acquisition, stockpiling or use by natural persons or legal entities of the agents, toxins, weapons, equipment or means of delivery specified in Article I of the Convention.

The Conference calls on each State Party to enhance its ability to prosecute or, where appropriate, extradite individuals for biological weapons offenses, in accordance with their national law and bilateral extradition arrangements.

A new subparagraph had been added to the previous language regarding the importance of legislative measures designed to enhance domestic compliance, legislation regarding the physical protection of laboratories and facilities and the inclusion in textbooks that reads as follows:

- Efforts by industry and scientific community to develop codes of conduct and/or ethical standards for work relevant to the prohibitions of the Convention, without prejudice to the primary responsibility of States parties to adopt legislative, administrative and other measures to implement the provisions of the Convention. Such codes could include, inter alia, a statement that scientists will use their knowledge and skills for the advancement of human welfare and will not conduct any activities directed toward use of microorganisms or toxins or other biological agents for hostile purposes or in armed conflict.

Two paragraphs are not yet agreed:

The Conference invites States parties to consider, as appropriate, the negotiation of legal agreements to prevent and eliminate crimes involving biological and toxin weapons.

The Conference notes also that some States Parties have provided proposals and suggestions of further strengthening international law and relevant national legislation, and

believe those proposals and suggestions are worthy of further exploration and consideration. The Conference also welcomes and encourages other States parties to provide relevant comments, suggestions and proposals in this regard.

Article V Seven paragraphs had been agreed which were essentially the same as at the Fourth Review Conference. One of these paragraphs relating to the confidence-building measures had been made stronger so that it reads as follows:

The Conference recognizes that participation with confidence building measures since last Review Conference has not been satisfactory nor universal and not all responses have been prompt or complete. In this regard, the Conference urges all States Parties to complete full and timely declarations in the future, noting the value of nil returns. The Conference further reminds all States Parties of the importance of submitting their CBMs to the United Nations by the 15 April each year. In this regard, the Conference also recognizes the technical difficulties experienced by some States Parties with respect to preparing CBM responses. [Underlining indicates new language from that agreed at 4th Rev Con]

A new paragraph has been agreed that reads as follows:

The Conference invites States Parties to consider setting up or designating a national entity responsible for the national implementation of the CBMs.

Two paragraphs are not yet agreed:

The Conference stresses the need for all States Parties to deal effectively and promptly with compliance issues. In this connection, States Parties reconfirm their agreement to provide specific, timely responses to solving any problems which may arise in the application of any provisions of the Convention. Such responses should be submitted, if appropriate, in accordance with the procedures agreed upon by the Second Review Conference and further developed by the Third Review Conference. The Conference reiterates its request that information on such efforts be provided to the Review Conferences. The Conference reaffirms that consultation and cooperation pursuant to this Article may also be undertaken through appropriate international procedures within the framework of the United Nations and in accordance with its Charter. [Underlining indicates new language from that agreed at 4th Rev Con]

The Conference takes note of proposals to expand the scope of existing confidence building measures, to improve existing measures and to create new measures, in order to provide a broader range of relevant information, consistent with the approach agreed upon in 1991. Therefore, the Conference invites States Parties to further discuss modifications of CBMs.

Article VI Six paragraphs had been agreed which were essentially the same as at the Fourth Review Conference. One new paragraph which had not been agreed read as follows:

The Conference invites States Parties to consider the development by all States parties of a compliance mechanism within the framework of the Convention to conduct investigations regarding alleged breaches of the Convention.

There is an associated clause which has also not been agreed in a paragraph that is otherwise identical to that adopted by

the Fourth Review Conference and had been agreed by the Fifth Review Conference:

The Conference recalls, in this context, United Nations Security Council resolution 620 (1988), which at the time encouraged the United Nations Secretary-General to carry out prompt investigations, in response to allegations brought to its attention by any Member State concerning the possible use of chemical and bacteriological (biological) or toxin weapons that could entail a violation of the 1925 Geneva Protocol or of any other applicable rule of international treaty or customary law. The Conference also recalls the technical guidelines and procedures contained in Annex I of United Nations document A/44/561 to guide the United Nations Secretary-General on the timely and efficient investigation of reports of the possible use of such weapons. The States Parties reaffirm their agreement to consult, at the request of any State Party, regarding allegations of use or threat of use of bacteriological (biological) or toxin weapons and to cooperate fully with the United Nations Secretary-General in carrying out such investigations. Pending the agreement of the mechanism described in the paragraph above, the Conference stresses that in the case of alleged use the United Nations is called upon to take appropriate measures expeditiously, which could include a request to the Security Council to consider action in accordance with the Charter. [Underlining indicates new language, not yet agreed, from that agreed at 4th Rev Con]

Article VII The language for this Article had been agreed. It comprises six paragraphs which have been developed and strengthened from that in the Final Declaration of the Fourth Review Conference. For example, the paragraph referring to the possible coordinating role of the World Health Organization (WHO) has been extended to include the Office International des Epizooties (OIE) and the Food and Agriculture Organization (FAO). There are two new paragraphs which elaborate on possible types of assistance:

The Conference invites each State Party in a position to do so to identify possible types of medical, veterinary, or other assistance that might be made available. The Conference urges States Parties to commit, to the extent that they are able, to provide, or contribute to, the training and operation of national and/or international rapid response teams for emergency medical assistance, as well as necessary materials and equipment, especially for detection.

The Conference expresses concern at the possibility of biological weapons use or threat of use. The Conference underlines the value of promoting, as appropriate, access to medicines, medical prophylaxis and treatment as a crucial condition in the combat of outbreaks of disease resulting from a violation of the Convention.

Article VIII The language for this Article had been agreed. It comprises seven paragraphs which are closely similar to those in the Final Declaration of the Fourth Review Conference.

Article IX Three paragraphs had been agreed. The first paragraph is identical to the corresponding paragraph in the Final Declaration of the Fourth Review Conference. Two new paragraphs have been agreed — one dealing with universality of the Chemical Weapons Convention:

The Conference also welcomes the fact that 143 States parties have become States parties to the Convention and

some others have declared their intention to adhere to the Convention. It strongly urges all those that have not yet ratified or acceded to do so, in order to achieve the early universalization of the Convention and a world free of chemical weapons. In this connection, the Conference urges all States Parties to persuade non-Parties to the Chemical Weapons Convention to ratify or accede to the Convention to realise its universality.

The other taking note of the forthcoming Review Conference of the CWC:

The Conference takes note that the First Review Conference of the Chemical Weapons Convention will take place in 2003, and affirms the complementarity between the objectives of the two Conventions.

One paragraph had not been agreed:

The Conference also underlines the importance of effective and full implementation of the Convention in all its aspects.

Article X 20 paragraphs have been agreed. Several are essentially the same as those in the 17 paragraph Final Declaration of the Fourth Review Conference whilst several are new, frequently with several subparagraphs, which have largely been taken from language in Article 14 of the Chairman's composite text. These include:

The Conference notes that, since the Fourth Review Conference, States Parties — both bilaterally and multilaterally, including through specialized International Organizations such as WHO, UNDP, FAO, OIE and ICGEB and other relevant organizations — have increased their contributions to facilitate international cooperation in the field of biotechnology, which focused on, *inter alia*:

- (a) Research activities aimed at improving the capabilities of States parties to monitor emerging and re-emerging diseases and to treat them;
- (b) International cooperation on disease outbreaks;
- (c) International cooperation on vaccine research and production and on global vaccination programs;
- (d) Technology transfers;
- (e) Training of national experts from developing countries on microbiology, molecular biology, immunology and pathology, plant biology, protein structure and function, virology, industrial biotechnology;
- (f) Research activities on genome dynamics;
- (g) Establishment of biological data bases;
- (h) Publication, exchange and dissemination of relevant information.

Another paragraph lifts language from the General provisions of Article 14 addressing technical cooperation in the Chairman's composite text of the Protocol with a slightly modified chapeau stating that:

The Conference urges States Parties to continue to implement specific measures designed to enhance compliance with and ensure effective and full implementation of Article X of the Convention among States Parties. The implementation of such measures shall, inter alia, be aimed at: [underlined language is identical to that in paragraph 1 of Article 14 of the Chairman's composite text]

This is then followed by three subparagraphs that are essentially identical to the three subparagraphs of paragraph 1 of Article 14 of the Chairman's composite text.

A further paragraph lifts language from paragraph 4 of Article 14 of the Chairman's composite text of the Protocol with a different chapeau stating that:

The Conference urges States Parties to undertake or continue to promote and support the following activities, in furtherance of any current endeavors relevant to and in accordance with the Convention, where appropriate, individually, jointly, through arrangements with relevant international organizations including, but not limited to, the Food and agriculture Organization, International Center for Genetic Engineering and Biotechnology, International Vaccine Institute, Office International des Epizooties, Organization for the Prohibition of Chemical Weapons, United Nations Environment Program, United Nations Industrial Development Organization or World Health Organization and the Secretariat of the Convention on Biological Diversity: [underlined language is identical to that in paragraph 4 of Article 14 of the Chairman's composite text]

This is then followed by subparagraphs (a) to (n) which largely reflect the subparagraphs (a) to (k) of paragraph 4 of Article 14 of the Chairman's composite text as well as include new subparagraphs.

Three paragraphs are not yet agreed. Two paragraphs are alternatives dealing with references to the Convention on Biological Diversity with the second alternative including an additional sentence making reference to the Cartagena Protocol on Biosafety:

5. The Conference underlines the importance, in the context of Article X implementation, of the Convention on Biological Diversity and of the Rio Declaration and the Agenda 21 adopted by the United Nations Conference on Environment and Development held in Rio de Janeiro, Brazil, 1992.

5 bis The Conference underlines the importance, in the context of Article X implementation, of the Convention on Biological Diversity and of the Rio Declaration and the Agenda 21 adopted by the United Nations Conference on Environment and Development held in Rio de Janeiro, Brazil, 1992. The Conference welcomes the adoption of the Protocol on Biosafety to the Convention on Biological Diversity in 2001 and looks forward to further steps being taken during the World Summit on Sustainable Development, to be held in Johannesburg, in 2002.

It is surprising that the first alternative is not shown as agreed language as it is a rephrased version and substantively identical to the paragraph in the Final Declaration of the Fourth Review Conference which read as follows:

9. The Conference takes note of the significant steps forward in promoting cooperation in the biological field taken by the United Nations Conference on Environment and Development held in Rio de Janeiro, Brazil, in 1992, including the adoption of Agenda 21 and the Rio Declaration, and by the Convention on Biological Diversity, and underlines their importance in the context of Article X implementation.

The other paragraph which is not yet agreed relates to the establishment of a forum for the consultation on cooperation — essentially a Cooperation Committee similar to that in the Chairman's composite text — on which the proposed language is clearly taken, without even amendment to remove the inappropriate reference to the Protocol, from paragraph 2 of the Chairman's composite text and reads as follows:

The Conference calls for the establishment of a forum for consultation and creation of opportunities for cooperation on matters related to the promotion of scientific and technological exchange in the field of peaceful, bacteriological (biological) and toxin activities, and review of the implementation of Article X of the Convention among the States Parties to the Protocol. [underlined language is identical to that in paragraph 2 of Article 14 of the Chairman's composite text]

Article XI A single paragraph has been agreed that is closely similar to the final fourth paragraph of the Final Declaration of the Fourth Review Conference.

Article XII One paragraph had been agreed that is closely similar to the first paragraph of the Final Declaration of the Fourth Review Conference:

The Conference decides that a Sixth Review Conference shall be held in Geneva at the request of the majority of the States Parties, or in any case, not later than 2006.

Two paragraphs have not been agreed which read as follows:

2. The Conference decides that the Sixth Review Conference shall consider, *inter alia*,

- ...
- The impact of scientific and technological developments relating to the Convention;
- The relevance of the provisions of, and the implementation of the Chemical Weapons Convention on the effective implementation of the Biological and Toxin Weapons Convention, duly taking into account the degree of universality attained by such conventions at the time of the Fifth Review Conference;
- The effectiveness of confidence-building measures as agreed at the Second and Third Review Conferences;
- The requirement for, and the operation of, the requested allocation by the United Nations Secretary-General of staff resources and other requirements to assist the effective implementation of the relevant decisions of the Fourth Review Conference;

3. The Review Conference reaffirms that conferences of States Parties to review the operation of the Convention should be held at least every five years.

This language is identical to that in the Final Declaration of the Fourth Review Conference and is clearly at a draft stage as it has not been appropriately updated — for example, the third tirt should refer to the degree of universality attained at the **Sixth** Review Conference and the fifth tirt should refer more generally to the relevant decisions of **previous** Review Conferences rather than just to the Fourth.

Article XIII A single paragraph has been agreed that is closely similar to the first part of the single paragraph of the Final Declaration of the Fourth Review Conference although the words in the Final Declaration of the Fourth Review Conference expressing “satisfaction that no State party to the Convention has exercised its right to withdraw from the Convention.” are omitted.

Article XIV Two paragraphs have been agreed in contrast to the five adopted in the Final Declaration of the Fourth Review Conference. These two paragraphs essentially are the same as the first three paragraphs of the Fourth Review Conference. The omitted fourth and fifth paragraphs are

those welcoming regional initiatives leading to wider accession and the appeal to those states parties who have not taken part in the Conference to participate in the implementation of provisions contained in the Final Declaration.

Article XV A single paragraph has been agreed which is similar to that in the Final Declaration of the Fourth Review Conference, although without any reference to the work of the Ad Hoc Group and with an emphasis on Arabic as being an official language of the United Nations system.

Reflections

The failure of the Fifth Review Conference to agree a Final Declaration during its three week meeting from 19 November to 7 December is to be regretted especially as it occurred at a time when, following the anthrax attacks in the United States, more attention world-wide was being focused on how to counter the danger of biological weapons than ever before. Consequently, there was more political and public expectation that the states parties at the Fifth Review Conference would explore every avenue and go the extra mile in order to arrive at a consensus Final Declaration which would further extend the understandings amongst the states parties and thereby strengthen the regime totally prohibiting biological weapons. The decision to adjourn until 11 to 22 November 2002 was better than a complete failure — but still fell far short of international expectations.

The analysis above shows that the Review Conference was well on its way to agreement of a Final Declaration which, whilst not being as strong as would have been desirable, would at least have demonstrated a determined international political will totally to prevent any development, production, acquisition, use or threat of use of biological weapons. None of the paragraphs yet to be agreed on the final day of the Review Conference appeared insoluble — given a will to find a solution.

In considering the reasons for the failure of the Review Conference to agree its Final Declaration on 7 December, the onus has to be placed squarely upon the United States. Although its statement to the Review Conference attracted much attention because of its naming of states parties and states that the United States suspected of not being in compliance with the Convention, this was not without precedent as at the Third Review Conference in 1991 both the United States and the United Kingdom had named the Soviet Union and Iraq as being non-compliant whilst at the Fourth Review Conference in 1996 statements were made by Australia, France, the United States and the United Kingdom naming the former Soviet Union and Iraq as states parties considered not to be in compliance with the BWC. The difference in 1996 was that in respect of both the former Soviet Union and Iraq there were ongoing mechanisms (the trilateral process and UNSCOM) which sought to address the compliance concerns. It was notable how John Bolton in his press conference in Geneva (see transcript at <http://www.us-mission.ch/press2001/1119boltonpress.htm>) was repeatedly asked — and pointedly declined to answer — whether the United States intended to use the procedures set out at previous Review Conferences, and used by Cuba in 1997 — to address compliance concerns. This contrast was underlined by the United States proposed language for

Article V of the Final Declaration of the Fifth Review Conference which in regard to addressing problems concerned with the Convention stated:

The Conference ... reaffirms that any State Party which identifies such a problem should, as a rule, use these procedures to address and resolve it

and went on, after noting that these procedures had been satisfactorily invoked since the Fourth Review Conference — a reference to the Cuban invoking of the Article V procedures — to add:

The Conference ... calls on any State Party which identifies a problem ... to use these procedures, if appropriate, to address and resolve it.

It became evident during the Review Conference that the United States, whilst content to call for national measures, would not consent to any language which required multilateral action or sought to arrive at legally binding measures to strengthen the regime. It also apparently had difficulty in accepting language referring to other international treaties such as the Convention on Biological Diversity or the Cartagena Protocol on Biosafety to which the United States is not a party even though such language had been agreed at the previous Review Conference. The tabling, within two hours of the end of the Review Conference, of language, without any prior consultation even with close allies, proposing termination of the Ad Hoc Group and its mandate showed a serious misreading of the widespread desire of all the other states parties to strengthen the effectiveness and improve the implementation of the Convention in accordance with the mandate of the Ad Hoc Group. The attitude of the United States to the Review Conference and the Biological and Toxin Weapons Convention is very hard to understand. The rest of the world appreciates and recognizes the value of the multilateral regime against biological weapons in strengthening collective security and following the events of 11 September and the subsequent anthrax attacks in the United States, it would have been expected that the United States would have been aware of — and would have wished to benefit from — the considerable benefits that could accrue from multilaterally strengthening the BWC regime as national measures are always going to be subject to national interpretation and are unlikely to be harmonised internationally. The United States has missed a real opportunity to help to protect itself — and its fellow states parties — from the dangers of biological weapons.

In looking ahead to the adjourned Review Conference, there is much to be said for like-minded states — such as the 36 states parties on whose behalf Brazil had spoken in support of the Chairman's composite text in July 2001 (Argentina, Australia, Austria, Belize, Brazil, Bulgaria, Canada, Chile, Croatia, Cyprus, the Czech Republic, Denmark, Ecuador, Greece, Guatemala, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Mexico, the Netherlands, New Zealand, Nicaragua, Norway, Peru, Republic of Korea, Romania, Slovakia, Slovenia, South Africa, Spain, Sweden, Turkey and Ukraine), together with the other members and associated countries of the European Union (such as Belgium, Estonia, Finland, France, Germany, Liechtenstein, Lithuania, Poland, Portugal, and United Kingdom) as well as states parties such as Jamaica, Japan, Latvia, Monaco,

Singapore, and Switzerland which together would come to over 50 states parties — to consult together to agree on how to proceed in November 2002 should the United States still not recognise the importance to collective security of a multilaterally strengthened BWC regime. It is also worth remembering that the rules of procedure of the Review Conference do state:

If, notwithstanding the best efforts of delegates to achieve consensus, a matter of substance comes up for voting, the President shall defer the vote for 48 hours and during this period of deferment shall make every effort ... to facilitate the achievement of general agreement

and then go on to add:

If by the end of the period of deferment the Conference has not reached agreement, voting shall take place and decisions shall be taken by a two-thirds majority of the representatives present and voting, providing that such majority shall include at least a majority of the States participating in the Conference.

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

Proceedings in South Africa

Quarterly Review no 7

The Continuing Trial of Wouter Basson

Monday 24 September was a public holiday in South Africa so proceedings resumed the following day. Cross examination of Basson on the fraud charges continued on the 25 and 26.

Prosecutor Anton Ackermann began by putting it to Basson that the only control exercised over foreign payments made on behalf of Project Coast by Military Intelligence, was verification that they fell within the project budget and that the necessary Reserve Bank authorisation had been obtained. No physical verification of the receipt of goods was ever carried out and auditor Petro Theron relied heavily on the documentation provided by Military Intelligence for audit purposes. Basson strongly denied that this was the case, and claimed that due diligence was exercised at all times.

Basson said that the Surgeon-general, Niel Knobel, and other members of the Co-ordinating Management Committee, were not apprised of the detail of every single payment made from the Coast budget and that Gen Knobel was not informed about every trip he undertook.

Basson answered questions relating to the specific acquisition of equipment which he claimed was intended for the laboratory at the Special Forces Headquarters. The State is disputing that some of the equipment Basson claims was purchased from Roger Buffham was indeed bought.

Basson said he had “no memory” of any documents having been in his possession which related to the true nature of his dealings with Bernard Zimmer, David Chu, David Webster or Roger Buffham on behalf of the Principals. He said that these people would have kept records which they have obviously destroyed, leaving only the false documents and those specially created as cover stories, for investigators to find. He said it was not his job to keep a central record of his dealings with, or on behalf of the Principals, and that if he had any documents pertaining to their relationship, he might have shredded them.

Ackermann stated that no documents mentioning Abdul Razak, Dieter Dreier or Simon Puerra, or any that would support Basson’s version of his relationship with these people, was found in the blue steel trunks found at the time of his arrest in 1997. Basson said that he had no mandate

from the Chief of the South African Defence Force to inform the Chief of Staff Intelligence about the covert operations.

Asked to comment on certain claims made in a document authored by the Director of Military Counter Intelligence about Project Jota, Basson said that Project Jota was not, as has generally been assumed, simply a new name allocated to Project Coast. He claimed that from 1992, Jota was the name of the defensive component of the CBW project, while Coast continued to be the name of the offensive arm. He said that Col Ben Steyn was fully informed about Jota, but was told nothing about Coast when he took over as Project Officer from Basson.

Basson said that Jota’s task was limited to the manufacture of NBC suits and other protective/defensive equipment manufactured in South Africa. He said that Steyn had “no idea” what Coast entailed, particularly in regard to the offensive weaponisation of chemical substances which was why Steyn was not involved in the destruction of the drugs in January 1993.

Ackermann pointed out that this was the first time, during the trial or in any other forum, that a clear distinction has been drawn between projects Coast and Jota.

During a brief re-examination of Basson by defence advocate Jaap Cilliers it was placed on the record that even after Basson was dismissed from the Defence Force in 1992 he was paid in cash by the Defence Force. Cilliers informed the court that the defence closed its case. The Judge had no further questions for the witness.

The court adjourned on 26 September until Monday 8 October when senior prosecutor Anton Ackermann brought a surprise application for the court to subpoena three foreign witnesses — former Swiss Military Intelligence chief General Peter Regli and two of Basson’s alleged “financial principals”, Dieter Dreier and Yusuf Murgham — to testify before legal argument begins.

The next morning, Judge Willie Hartszenberg formally dismissed the State application. He did not consider the three suggested witnesses to be essential, and expressed doubt that they would admit to having participated in sanctions-busting or sharing classified information with South Africa. Their

evidence, he said, would carry little weight, and by calling them, the trial would be delayed even further.

The court adjourned until 5 November when Dr Torie Pretorius began by outlining the State's case on Charges 25 to 27 which pertain to the accused's alleged involvement in drug dealing.

It had to be borne in mind, said Pretorius, that Basson is an exceptionally intelligent and highly qualified individual. In addition to his impressive array of academic qualifications, he was responsible for drawing up the psychological profiles used by the South African Defence Force to select Special Forces recruits, and was acquainted with all the Special Forces operators during his time in the military. He is also a qualified explosives expert.

During the course of his career he rubbed shoulders with leaders across the entire political spectrum (PW Botha, President Nelson Mandela, prominent Libyans, members of the Co-ordinating Management Committee, Madame Danielle Mitterand, Russians, East Germans etc) while simultaneously dealing with arms smugglers and drug lords.

In short, said Pretorius, Basson was a rare and particularly intelligent witness, an expert in several fields and as such, capable of offering plausible responses to any questions. Not only does he have an answer for everything, he has the ability to embroider on his responses with elaborate anecdotes. He also said that it should also be borne in mind that the keynote of South Africa's CBW programme, in which he played the leading role, was deceit. Front companies and cover stories were the order of the day, plausible deniability the watchword. In the world of "smoke and mirrors" in which he moved, especially in the latter phase of Project Coast, Basson himself acted as both information and disinformation officer. His world was that of the spy and it would be entirely accurate to describe him as a master of deception. Cover stories were carefully crafted to include just enough of the truth to withstand scrutiny.

Pretorius's argument was interrupted frequently by Judge Willie Hartzenberg. Clearly, said the Judge, what the State expected was that the court should find that the accused is so intelligent, so accomplished at misleading "everyone", that no matter how credible his version of events, it was a lie. The State should bear in mind, said the Judge, that in the world of smoke and mirrors, nothing was as it seemed, and in order for the court to reject out of hand the bizarre versions furnished, there had to be seriously irrefutable evidence to the contrary.

The following day advocate Tokkie van Zyl responded for the defence to the details of the drugs charges. The court then adjourned.

The court resumed on Monday 26 November. Within minutes of senior prosecutor Anton Ackermann launching his final argument on the fraud charges, it became clear that this crucial phase of the trial would turn into a battleground between Judge Willie Hartzenberg and the State.

Tension between the judge and the prosecution, which has been simmering since 4 February 2000, when a sharp exchange gave rise to the unsuccessful application for the judge to recuse himself on the grounds of bias and prejudging the case in favour of the accused, boiled over by Wednesday, and on Thursday morning, Ackermann informed the court that he would leave presentation of the remainder of his argument to junior State counsel Werner Bouwer.

The State's final argument on the fraud consists of two volumes, the first runs to some 387 pages. The argument is intended to prove beyond reasonable doubt, based on the evidence of witnesses and thousands of supporting documents, that there is no substance to Basson's claims that he established and managed the WPW Group and all its subsidiaries on behalf of Russian, Libyan and East German financial principals, and that these companies were then "hijacked" by the SA Defence Force to serve the interests of Project Coast. The State case against Basson is that the WPW Group was set up by Basson for personal gain, and used to defraud the SADF/Project Coast for his own benefit.

Ackermann told the court that in deciding whether or not Basson was guilty, there was really only one question to be answered: Did the foreign financial principals exist, or were they a figment of the accused's imagination? The answer to this question would determine whether or not Basson's defence was reasonably, probably true, or whether the State was correct in averring that all activities of the WPW Group were conducted for personal gain, and that the existence of The Principals was a fabrication.

On the basis of the State case, the judge argued, after setting up the WPW Group at the end of 1986, the accused had spent the next five years "doing absolutely nothing for the benefit of Project Coast", spending the time squandering SADF funds on his personal interests, without anyone in the SADF ever noticing.

Not entirely, said Ackermann — South Africa did have the new generation teargas, CR, to show for Basson's efforts — but that was about the sum total of achievements throughout the lifespan of Project Coast.

It was patently obvious, Ackermann said, that "we are precisely back where we were on February 4 last year, and that despite the fact that the State has spent two years proving to the court that there were no financial principals, you have not moved one iota from your position stated at the time, namely that it would take very little to convince you that the WPW Group was not set up to serve the interests of Project Coast". This despite the fact that at not a single meeting of the CMC was any mention ever made of Libyans, East Germans and Russians being involved, and despite the uncanny coincidence that at all times, the needs and interests of the SADF/Project Coast just happened to dovetail neatly with those of The Principals.

In the grey world of chemical and biological warfare, observed the judge, "everyone knows what everyone else is doing". The accused had been specifically ordered to infiltrate the international CBW milieu, and he had succeeded in doing so and in the process, made contact with a host of people who had been of assistance to him, such as Wilfred Mole, Blucher and Roger Buffham.

No, said Ackermann. The accused had been faced at a certain point with a major dilemma. When confronted with documentary proof of the WPW Group's structuring, he had to find an explanation, and proceeded to invent The Principals and the highly improbable tale of the SADF "hijacking" their interests to own advantage. The effect of the tale spun by the accused was that the SADF paid for CBW research wanted by The Principals.

And, said the judge, by all accounts, the SADF was entirely satisfied that it "got what it paid for". But what,

asked Ackermann, had the benefit of this arrangement been to The Principals?

They had been furnished with the same research findings as Project Coast, said the judge.

In other words, said Ackermann, in Angola the SADF was at war against such forces as the Russians, but the results of CBW research conducted in South Africa was being given to them, the enemy? Yes, said the judge — but in “edited” form.

So, said Ackermann, the SADF’s managers, including General Kat Liebenberg, were handing over to South Africa’s declared enemies at the time, information on CBW that could be used against their own troops. If that was what the judge believed, said Ackermann, “every general serving in the SADF at that time will have to be charged with high treason for knowingly supplying the Russians with South Africa’s CBW research findings”.

But Mr Ackermann, said the judge, “the information came from the Russians — clandestinely, to be sure, and at a cost of millions”.

The State had proved beyond reasonable doubt, said Ackermann, that there were no foreign principals involved. But, said the judge, by the “early 90s it was quite obvious to

anyone that huge political change in South Africa was imminent”.

The judge commented that in three days of listening to Ackermann, all he had learned from the argument was that according to the State, “everything which the accused said that does not support your case was a lie ... your entire argument boils down to a claim that the accused is incapable of telling the truth”. The judge later said that he had listened to the accused testifying for 40 days on a wide range of matters, and not in an argumentative manner. “My impression is that he merely tried to provide the court with the facts”, said Hartzenberg.

With the year-end recess beginning on 7 December, the court has been adjourned. The final phase of the trial will thus only take place in the first few months of the year 2002.

This review is based upon reports written by Chandré Gould and Marlene Burger of The Chemical and Biological Warfare Research Project at the Centre for Conflict Resolution, an independent institute associated with the University of Cape Town. Detailed weekly reports on proceedings can be found on the CCR web site: www.ccr.uct.ac.za

News Chronology

August through October 2001

What follows is taken from issue 54 of the Harvard Sussex Program CBW Chronicle, which provides a fuller coverage of events during the period under report here and also identifies the sources of information used for each record. All such sources are held in hard copy in the Sussex Harvard Information Bank, which is open to visitors by prior arrangement. For access to the Chronicle, or to the electronic CBW Events Database compiled from it, please apply to Julian Perry Robinson.

August In London, the British-Sudan Public Affairs Council [see 14 Jun 00] publishes a pamphlet entitled *Damien Lewis, Sudan and 'Death in the Air': A Case Study in Irresponsible Television*. The pamphlet is an attack on a television documentary about allegations of chemical warfare in Sudan [see 1 Sep 00]. The documentary was of a quality to have been shortlisted for the Rory Peck Awards 2000.

3 August In Geneva, the 24th session of the Ad Hoc Group of states parties to the BWC [see 30 Jul] convenes in plenary session to consider its activities for its remaining two weeks. Throughout the previous week, Ad Hoc Group chairman Ambassador Tibor Tóth of Hungary had conducted informal consultations with some thirty delegations. In these consultations, Tóth had focused on three questions: whether there is willingness to continue with negotiations on the BWC Protocol; if not, what should be the course of action; and how should the Group approach the drafting of its report. The general consensus from both the informal consultations and the plenary debate is that there is support for the composite text as the basis for finalizing the Protocol but that continued negotiations could be counterproductive in the light of the US rejection [see 25 Jul]. Tóth later tells reporters that the Group could not go on working on the Protocol without the participation of the US. In view of this general feeling, the Group turns its attention to the drafting of its report. Press reporting describes this as a decision to suspend the work of the Ad Hoc Group, despite the fact that no such decision is taken and work on a final report must continue. Tóth circulates a draft report on 6 August.

3 August In Cuba, where varroasis has been afflicting the country's apiculture since 1996, *Granma Internacional* suggests that the bee plague, which is caused by mites infesting beehives, “could well be a result of biological warfare against the island”.

3–4 August In South Korea, a 106-person investigation team organised by the Korea Truth Commission is conducting a field probe of the allegations of US germ warfare during the Korean War. The team visits Kwangju to tour a nearby alleged attack site [see 9 June] and to hear testimony by residents, including a 74-year old man, who claim damages from the US.

5 August In London, the Saudi-owned weekly *Al-Majallah* reports an alliance between the al-Qaeda organization led by Osama bin Laden [see 21 Jul] and the Egyptian Jihad organization [see 18 Apr 99], and it quotes unidentified “Arab sources close to Bin-Ladin” as having “recently stated that he has been studying for some time the possibility of using a biological weapon against US interests, considering that such a weapon is both effective and painful and can be secured easily from neighbouring countries at cheap prices”.

5 August Canadian testing of chemical weapons in Panama during 1944–47 is addressed in a further [see 22 Apr Panama] article in the *Ottawa Citizen*. The article reports a Department of National Defence study written in 2000 that had just been released under the Access to Information Act. The test site, on San José island, had been used for chemical-weapons trials by Britain and the United States as well as by Canada. The three

countries have been informed by Panama that it will invoke their obligations under the Chemical Weapons Convention to remove abandoned chemical weapons if it is determined that the island is still contaminated. Canada had shipped in more than a thousand empty casings for a 50-lb clusterable bomb that were then filled with mustard gas made in Canada that had been supplied to the United States some years previously. The report, from Defence Research Establishment Suffield, states further: "There is a distinct possibility that some areas of San Jose island that were contaminated as a result of testing of the Canadian 50-lb bomb remain contaminated to the present day".

6 August In Russia the popular magazine *Ogonek* carries an interview with environmental activist Lev Fedorov in which he continues [see 13 Jun] to speak of great numbers of chemical weapons having been recklessly discarded. He claims, again, to have archival documentary evidence to prove that the Soviet military buried mustard gas in around 400 different sites in Russia and other USSR successor states. These old chemical weapons have not been declared, as he says they should, under the terms of the CWC. Several sites in Moscow and in a number of other towns and cities are named in the article. Dr Fedorov has taken samples from one site — the Kuzminki lake in Moscow — which, upon independent analysis was reported to contain mustard gas. He maintains, further, that documents that would shed light on the situation are, in contravention of current Russian law, being withheld from the public domain.

8 August In Russia a presidential decree is issued *On confirmation of the list of human, animal and plant pathogens, genetically altered microorganisms, toxins, equipment and technologies subject to export control*. This new list replaces the one in RF Presidential Instruction 298-rp of 14 June 1994. The decree states that export controls do not extend to vaccine strains of pathogens, vaccines and other biological preparations used to indicate, diagnose or treat infectious diseases obtained from strains [sic] of pathogens or toxins included in the new list. Few details are provided about the decree, but a Kremlin spokesman tells Reuters news agency that the decree, and another on missile-related technology, is to "protect national interests, carry out Russia's obligations under the 1972 Biological and Toxin Weapons Convention and those concerning non-proliferation of missiles capable of delivering weapons of mass destruction."

8 August In the United Kingdom, where, as in other countries [see 31 May and 23–27 Jun], anthrax hoaxes continue to proliferate, the police dismiss a report in the *Daily Express* about claims by the Scottish National Liberation Army that it had recently sent a bogus anthrax bomb to the University of St Andrews, where Prince William, eldest son of the heir to the British throne, is due to enrol in September. A package labelled as containing anthrax arrives at the university 12 days later, a similar package also being received at the UK Department of Environment, Food and Rural Affairs. Both are reportedly associated with an e-mail communication to the *Express* newspaper group, passed to Scotland Yard, stating that four premises across the UK were being sent packages containing a harmless substance purporting to be anthrax. The other two premises were said to be a London hotel and a newspaper, understood to be *The Sun*.

9 August In the UK, Palgrave publishes *Britain and Biological Warfare: Expert Advice and Science Policy, 1930-65* by Brian Balmer, a senior lecturer in the Department of Science and Technology Studies, University College London, and formerly at the University of Sussex end of the Harvard Sussex Program. The book provides a detailed historical account of

how the UK began work on biological weapons and how its policy gradually shifted from maintaining a capability to retaliate with the weapons to one of abandoning the weapons altogether but maintaining defences against them. The account is based on British state papers, including those of the Biological Research Advisory Board, which provided the interface between the country's scientists and those parts of government and the military responsible for biological warfare preparedness. Among much that is here published for the first time is an account of Project Red Admiral, which was the development programme initiated in 1946 by high-priority Air Staff Requirement OR/1006 for an antipersonnel biological bomb to be carried by medium- and long-range bombers. The project completion date, initially late 1951, gradually slipped and, by August 1948, the requirement was that production of "child bombs" at a rate of 100,000 per week should begin by January 1955, aiming for a war reserve of 7 million. By then the concept for Red Admiral was a 1000-lb cluster bomb capable of delivering different types of agent according to the fill of the bomblets that it clustered. Field-tested were bomblets containing the causative agents of anthrax, brucellosis, plague and tularaemia, and there were also field trials involving VEE and vaccinia viruses, the latter serving as a simulant for smallpox virus. The Air Force terminated the requirement in July 1954. Dr Balmer examines these and associated developments, and the transition from an offensive to a defensive BW posture, particularly for the role played by scientific advisers.

13 August From Gaza, the Palestinian Center for Information Sources publishes a report in *Al-Manar*, the official Palestinian Authority weekly, entitled "Will we reach the option of biological deterrence?" According to the report, "serious thinking has begun for a while about developing a Palestinian weapon of deterrence." The article goes on to talk about "bombs or death-carrying devices" directed at "Israeli water resources or the Israeli beaches, let alone the markets and the residential centers".

14 August US Under Secretary of State for Arms Control and International Security John Bolton gives a wide-ranging interview in which he speaks at length on both the BWC and CWC. On the BWC, Bolton says that the US "remains committed" to the treaty despite its rejection [see 25 Jul] of the draft protocol to strengthen the Convention. Explaining the reasons behind the rejection, Bolton says that "it had to do with our cost-benefit analysis of the draft protocol and our conclusion that it provided essentially no benefits and had a lot of downsides." He goes on to reject the notion that a bad treaty is better than no treaty at all: "A bad treaty is a treaty that encourages, or at least allows, violation and disdain, and it fosters international hypocrisy, lulls people into a false sense of complacency, and actually can detract from our ability to focus on the problem, which, ... in the case of BW attack on the United States, we regard as a serious problem. So we take the treaty obligation seriously. And the idea of accepting something that doesn't accomplish its stated aims and may actually weaken our ability to protect ourselves is just the wrong way to go."

On the implementation of the CWC, Bolton says: "I was quite concerned by some of the issues that I had heard raised about management and budget issues at the OPCW. And we've actually had fairly extensive discussions here and with some of our allies who were participants in the OPCW about what steps might be taken. ... [T]he failure of the OPCW to carry out its mandate effectively could call the Chemical Weapons Convention itself into question and threaten the integrity of the convention. But if the convention is not implemented properly, as I say, this can undercut support and

efficacy of the convention as a whole." On the problems facing the Russian chemdemil programme, Bolton says: "If it were a question of a little bit of additional resources or a little bit of flexibility on the deadlines of the convention, I don't see that as a big problem. I think it would be a bigger problem if we came to the conclusion that they just didn't intend to comply at all. That would have implications for the new strategic framework as well. So that's one of the reasons we remain optimistic, is we think they do want to develop a new framework, and obviously compliance with the CWC would be part of that."

14 August In Washington, DC, at the National Academy of Sciences building, the Committee on Biological Threats to Agricultural Plants and Animals of the NAS Board on Agriculture and Natural Resources reconvenes under the continuing chairmanship of Dr Harley Moon for a roundtable discussion with outside experts. The committee had been established some months previously to undertake a study for the Agricultural Research Service of the US Department of Agriculture, the purpose of which is, in the Academy's words, "to evaluate the ability of the United States to deter, prevent, detect, thwart, respond to and recover from an intentional, biological attack against the nation through its supply of food and fibre". The committee is due to report in mid-2002.

15 August In Chechnya, rebels are planning to use toxic agents in terrorist attacks, so it is alleged by the public relations centre of the Russian Federal Security Service, citing telephone intercepts. The FSS had intercepted a conversation between Chechen commander Rizvan Chitigov and a colleague, Khizir Alkhazurov, in the UAE, in which Chitigov requests instructions for the production of "poison". According to the FSS, weapons and ammunition were discovered in a cellar belonging to one of Chitigov's followers along with instructions for making five types of "toxic substances for mass application". The instructions detail how to use chemicals commonly available in Russia to coat ammunition and for other acts of sabotage. According to a report on Russia TV, the discovery has led to the imposition of tighter security on all chemical manufacturers and places where chemicals might be acquired. A Chechen MP denies the allegations, recalling previous such claims and accusing the Russians of possessing chemical weapons and of using them in Chechnya. On 17 August, the Chechen deputy prime minister asserts that the allegations are in fact preparation for the use of chemical weapons by Russian forces in Chechnya and appeals for international pressure upon Russia. Later, on 30 August, *Rossiyskaya Gazeta* reports that Chitigov had phoned *Komsomolskaya Pravda* and confirmed his intention to use "powerful toxins" against "infidels".

15 August In Geneva, during the 24th session of the Ad Hoc Group, a further briefing is provided by the Quaker United Nations Office in conjunction with the University of Bradford Department of Peace Studies at which a new Bradford evaluation paper on *The BWC Protocol* is presented by one of the series editors, Graham Pearson: no 22, *The US Rejection of the Composite Text: A Huge Mistake Based on Illogical Assessments*.

15 August In the US House of Representatives, Republicans are saying they will hold up Congressional release of \$582 million towards payment of US arrears to the United Nations unless, so the *Washington Post* reports next day, the Congress also approves the *American Servicemembers Protection Act* (HR 1794). This is legislation intended to exempt Americans from the International Criminal Court, whose statute President Clinton had signed shortly before leaving office [see 31 Dec

00]. Attached to the House version of the State Department authorizations bill that provides for the UN arrears, the legislation would cut off US military assistance to any country outside NATO that ratified the Rome statute; would prohibit US troops from serving in any UN peace-keeping force unless the UN Security Council gave them immunity from ICC jurisdiction; and would authorize the president to use military force to free any US or allied service members held by the Court. House Republicans later drop their opposition to the UN payments in return for Administration support for a revised version of the Act, which the State Department announces on 25 September. Later still, provisions preventing FY 02 funds being appropriated to support the ICC or its Preparatory Commission are signed into law through their inclusion in the Defense and State Department appropriations acts.

16 August Sri Lankan Defence Ministry spokesman Brigadier Sanath Karunaratne rejects the accusation by the Liberation Tigers of Tamil Eelam that government forces have just acquired chemical weapons — specifically, a new infantry weapon system with chemical warheads — for use against the separatists. Brigadier Karunaratne explains that the new purchase, from Russia, was an infantry rocket flame thrower, "not a banned weapon". Earlier, the Colombo *Sunday Leader* had reported that the government had purchased a thousand units of the RPO-A Shmel rocket launcher, which fires rocket-propelled projectiles carrying thermobaric warheads, as used in Chechnya. On 27 August, an "open appeal to the international community" is sent to a number of foreign ministers under the heading "Sri Lanka getting ready for chemical warfare". Recalling that Sri Lanka is an original member of the CWC, the letter alleges that the country is "in breach of its own obligations under the Convention".

16 August The OPCW Technical Secretariat publishes a further analysis of responses to the survey of national measures for implementing the CWC [see 8 Jun 00]. Responses to the questionnaire, now received from 57 states parties, indicate that a range of legal methods and regulatory instruments are being used in relation to scheduled and discrete organic chemicals. The Secretariat's analysis states that "although the extent to which the Convention's obligations are being implemented remains uneven, including amongst States Parties which have a significant chemical industry, the various measures being adopted serve the Convention's non-proliferation objectives, and the measures themselves are not an impediment to the effective implementation of the Convention. Better coordination and harmonisation is desirable." The analysis shows that between 75 and 81 per cent of respondents have legislation in place to regulate scheduled chemicals, including about three-quarters of states parties with declared or inspectable facilities. However, the responses also show that of those states parties involved in declared import-export activities, only two-thirds for Schedule 1, one-half for Schedule 2 and one-third for Schedule 3 have regulations in place. Although required by Article VII, only one-third of survey respondents have given their legislation extra-territorial effect. As of 15 August, the Secretariat has received information on national implementation legislation, as required by Article VII.5, from 55 states parties. The report also includes mention that 33 states parties have reviewed their existing regulations in the field of trade in chemicals, as required by Article XI.2(e).

16 August In the US, the Department of Health and Human Services releases a fact sheet on its bioterrorism initiative and particulars of its FY 2002 budget request [see 10 Jul]. The request amounts to \$350 million, an 18 per cent increase on the total of \$297 million in 2001. The efforts of the Department are

focused on five areas: improving the public health surveillance network; strengthening capacities for medical response; expanding the stockpile of pharmaceuticals; expanding research on disease agents, rapid methods for identifying agents and improved treatments and vaccines; and preventing bioterrorism by regulation of the shipment of hazardous agents and toxins. Of the FY 02 request, \$182 million is for the Centers for Disease Control, \$51 million is for the Office of Emergency Preparedness and \$93 million is for research. The latter will be directed primarily through the National Institutes of Health which will fund research to generate genome sequence information on potential bioterrorism threats and to develop a new smallpox vaccine.

17 August In Geneva, the Ad Hoc Group of states parties to the BWC is due to conclude its 24th session [see 3 Aug]. This is the final session before the Fifth Review Conference in November, so the session has spent the time since its first week when the US announced its rejection of the chairman's draft protocol text [see 25 Jul] drafting a procedural report on its activities to be submitted to the Review Conference. However, the session ends at 0330 hrs on 18 August with no agreement on a final report. The main points of contention appear to be how the report should describe the events of the current session, with some states wanting to single out the US in the report, and whether or not and how to indicate a strategy for the future, including the future of the Group's mandate.

20 August Canadian Defence Minister Art Eggleton announces that Canada has made great strides in its ability to handle a CB terrorist attack despite a secret report to the contrary. The report, completed in May, is reportedly the first evaluation of Canada's NBC defence capabilities since 1985. The 140-page report had been obtained by the Canadian Press news agency under the country's Access to Information Act. According to the report, "resource shortfalls in NBC defence and medical research and development could have long-term capability consequences." Canada also lacks a long-term plan to equip and maintain a first-response team for NBC threats. Minister Eggleton says that Canada is well on the way to catching up with its allies and that C\$250 million will be spent improving capabilities over the next eight years. An updated strategy is to be in place by March 2002, in time for the G8 summit in Kananaskis County in June.

22 August In France the Paris *Liberation* carries a study of the US opposition to the BWC Protocol [see 30 Jul Canberra] written by Therese Delpech, the noted strategic analyst. She argues thus: "The reasons for the US rejection are of three kinds — the inadequacy of the verification procedures, the impact of inspections on the US pharmaceutical and biotechnology industry, and the need to protect US biodefence programmes. These programmes are authorized by the 1972 Convention, which bans only activities conducted for 'hostile' purposes. The three reasons deserve to be examined, if only to underline the obvious inconsistency that exists between the first of them and the two others. This inconsistency causes Washington to give constant priority to the protection of its defense industry and programs, to the detriment of verification. If the verification procedures envisaged by the protocol are not as effective as many states, including European states, would have liked, this is partly due to the efforts of the US delegation in Geneva, which throughout the negotiations, which have now been going on for six years, has raised objections in order to protect the objectives of its industry and of the Pentagon. At first sight, this is entirely normal, since every state defends its own interests in international negotiations, but it must not then

proceed to complain about a result that it considerably helped to bring about!"

Later on she explains the dangers she sees in the US rejection of the Protocol: "The most dangerous thing, however, is undoubtedly the fact that the US refusal constitutes an unquestionable victory for the proliferators. The rule banning such weapons has been weakened. This is of course not one of the objectives of the United States, which recently reaffirmed its attachment to the 1972 convention, but it is an undeniable result, and 2001 is the worst possible time for this to happen: indeed, biological weapons could well perform in the 21st Century the role that nuclear weapons performed in the 20th Century. Last, over and above the protocol, it is the whole multilateral architecture of nonproliferation, built with such difficulty, that has been hit again. If all the states were to follow Washington's lead, and to neglect multilateral processes, the United States would be first to regret it."

22 August In the United States, *Clinical Infectious Diseases* (an organ of the Infectious Diseases Society of America) publishes a paper by two of the principal eradicators of smallpox, Drs D A Henderson and Frank Fenner, arguing that destruction of all remaining stocks of variola virus on or before 31 December 2002 "seems an even more compelling goal today than it did in 1999", when the 52nd World Health Assembly authorized temporary retention [see 10 Dec 99].

23 August In New York, market analysts Frost & Sullivan report on the growing demand for protective devices due to "the rise in domestic and international terrorism". Their press release continues: "Due to the heightened awareness around the world of the CB threat, the demand for chemical and biological warfare agent detectors continues to increase". The firm's *World Chemical and Biological Agent Detector Markets* reports that this industry generated revenues of \$265.2 million in 2000, which are projected to reach \$494.2 million by 2007 [see also 13 Apr 98 and 12 Jun 00]. The United States and the United Kingdom are identified as the two countries at the forefront of developing the technology.

24 August From Sardinia, Italian troops set off from Alghero airbase to Macedonia where they will join the NATO Essential Harvest mission which, under British command, is disarming erstwhile combatants. Included in the rest of the Italian contingent that will follow next week is a team of biological and chemical warfare specialists.

24 August In the UK, it is reported that Wiltshire Constabulary, which is leading Operation Antler [see 27 Feb], now have "clear evidence" that Porton Down scientists broke the law during chemical weapons tests on service personnel. In a letter sent to one of the alleged victims, the chief investigating officer Detective Superintendent Jerry Luckett says that it was apparent that a criminal offence, contrary to the Offences Against the Person Act, had been committed and that papers would soon be sent to the Crown Prosecution Service. Luckett also states that the investigating team had found "clear evidence" that deceit had been used to recruit volunteers for the programme. Two days later, the London *Independent on Sunday* reports that Luckett has begun a second investigation focusing on the ill-health suffered by volunteers. The Wiltshire police force has convened a panel of medical experts, including specialists in toxic chemicals, and commissioned research into the medical effects of CS spray, Nonox ZA and pyrexal.

24 August From the University of Maryland, research fellow Elisa Harris, who had coordinated US policy on biological weapons for President Clinton's National Security Council

during 1993–2001, writes in *Christian Science Monitor* about the rejection of the projected BWC Protocol by the new Bush administration. In particular she argues against the recent statement by Secretary of State Colin Powell that the Clinton administration “probably would have come to the same conclusion”. She writes: “Rather than verification, our goal was deterrence: to make it more costly and risky for cheaters to keep cheating. ... We recognized from the outset that a protocol wouldn’t ‘solve’ the bioweapons problem. But it would create internationally agreed procedures for pursuing evidence that others were developing or producing bioweapons, something we lack today. It would also provide new data that would enhance our ability to detect and respond to foreign bioweapons programs. It would thus complement and help target the other elements of our non-proliferation policy.”

27 August In Baghdad, a 6-person team of experts from the World Health Organization arrives to investigate whether Iraqis have suffered increased levels of cancer and birth defects due to the depleted-uranium weapons used during the Gulf War [see 14 Oct 98 and 2–3 Dec 98]. The team is led by an Egyptian doctor, Abdel Aziz Saleh, and is expected to stay in Iraq for five days.

28 August In Russia a presidential decree is issued confirming a list of chemicals, equipment and technologies that can be used to manufacture chemical weapons and that are subject to export control [see also 8 Aug]. The decree states its goal as being to protect national interests and to comply with Russia’s international obligations under the CWC.

28–29 August At UN headquarters, the UNMOVIC college of commissioners reconvenes [see 21–22 May] for its sixth plenary session. As at the previous sessions, IAEA and OPCW staff attend as observers. UNMOVIC Executive Chairman Hans Blix reports on the Commission’s activities since the last meeting and briefs commissioners on other developments regarding Iraq relevant to UNMOVIC’s mandate. The college discusses a paper prepared by UNMOVIC staff on certain terms, including the phrase “key remaining disarmament tasks” in resolution 1289. Particular comments are made on that term and also on the “cooperation” expected of Iraq and on “unresolved disarmament issues”. UNMOVIC staff brief the college on plans for the implementation of a reinforced system of ongoing monitoring and verification and on the current use of overhead imagery by the Commission. The next session will be held from 26–27 November in New York.

29 August In Prague, the government commissioner for planning the reform of the Czech armed forces, Jaroslav Skopek, is interviewed by *Mlada fronta Dnes* on the day he submits his report, *Reform of the Armed Forces of the Czech Republic*, to the government. Among the questions he responds to is one on whether the proposed reduction in the size of the army means that it will have a special focus because of NATO membership. He says: “One such specialization is the result of the success of our antichemical unit in the Persian Gulf — it will be chemical research and defence against weapons of mass destruction”.

30 August In Pretoria, the prosecution in the case of Brigadier Wouter Basson [see 23 Jul] is seeking to compel American freelance journalist Andrew Jones to hand over the video of a long interview he had conducted with Basson shortly before the trial began [see 4 Oct 99 S Africa]. Summoned earlier in the week to appear in court today, Jones argues that he needs more time to prepare his opposition to the state’s application. He is said to regard the interview as his exclusive property and

had previously offered it, unsuccessfully, for sale at a price of several million rand, the profit to be shared between him, Basson’s step-brother and a trust formed on behalf of Basson’s son. Magistrate Frans von Reiche grants a 30-day postponement.

30 August The UN Secretary-General submits to the Security Council UNMOVIC’s sixth quarterly report [see 24 May]. The report covers the period from 1 June to 31 August, including the sixth meeting of the college of commissioners [see 28–29 Aug]. During the period of the report, the Executive Chairman, Hans Blix, has provided monthly briefings to the Presidents of the Security Council. Although still not able carry out operations in Iraq, the Commission has continued to prepare for such operations. A priority task has been the identification of unresolved disarmament issues. The report states that “it is clear that many disarmament issues have been resolved in the years since the adoption of resolution 687 (1991). ... It is also clear that, while some issues may have lost importance because of the passage of time, key disarmament tasks remain.” The list of unresolved issues will serve as the basis for the identification of the key remaining disarmament tasks once UNMOVIC has started its work in Iraq. In the absence of on-site inspections in Iraq, the Commission is concentrating on diversifying its other sources of information. It is now receiving overhead imagery from a commercial provider, is arranging for the screening of a great many open sources, and is also seeking to obtain information from governments. The report emphasizes that such activities, while valuable, “cannot serve as substitutes for the on-site inspection and monitoring envisaged by relevant Security Council resolutions”. The report notes that UNMOVIC staff have completed the revision and updating of the lists of dual-use items and materials to which the EXIM monitoring mechanism applies [see 1 Jun]. The new lists had entered into force on 13 Jun. UNMOVIC staff have also been consolidating the Commission’s database and archive, which consists of over one million documents, into one system with a uniform classification. In addition, some 13,000 aerial images have also been catalogued and entered into the archive.

31 August From Iran, the Health and Treatment Department of the Janbazan Organization (the Organization of Veterans’ Affairs) publishes statistics on late complications among CW casualties. According to the report, there are currently around 34,000 Iranian military personnel and civilians suffering from the long-term effects of chemical weapons, particularly sulfur mustard. The most common complaints experienced are pulmonary complications, from which approximately 42.5 per cent of victims are suffering, although this figure will likely rise as the nature of pulmonary complications is progressive. Other complications include skin and eye lesions. Many victims are suffering from more than one of these three complications necessitating a standard medical care programme and special clinics based in regional medical centres.

31 August In the UK, one in six veterans of the Gulf War believe themselves to be suffering from ‘Gulf War Syndrome’ according to a survey published today in the *British Medical Journal* by the Gulf War illnesses team at Guy’s, King’s and St Thomas’s School of Medicine in London [see 16 Jan 99]. Questionnaires were sent to 4,250 Gulf War veterans, of whom 2,961 responded. Of these, 513 (17 per cent) said that they had Gulf War syndrome, of whom 462 fulfilled CDC criteria for the illness. If this sample is representative, the article concludes that about 9,000 of the 53,000 British personnel deployed to the Persian Gulf believe they have Gulf War syndrome.

31 August The UN Department for Disarmament Affairs has received from 31 states parties to the Biological Weapons Convention the annual declarations that fell due on 15 April under the voluntary confidence-building measures agreed at the third BWC review conference [see 27 Sep 91]. The Department has now distributed a compendium of the declarations to all states parties. Over the next month, declarations are received from a further four states parties.

31 August The US General Accounting Office issues a report to congressional requesters on *Global Health: Challenges in Improving Infectious Disease Surveillance Systems*. The report reviews the framework of global surveillance, identifies factors which constrain its performance, and assesses initiatives designed to improve surveillance and response. The report includes the following: "New diseases have emerged, others once viewed as declining in significance have resurged in importance, and many have developed substantial resistance to known antimicrobial drugs. This picture is complicated by the potential deployment of infectious disease pathogens as weapons of war or instruments of terror."

September In Israel, the Defence Ministry has allocated \$47 million to development of non-lethal weapons, and has dispatched a team of military specialists to the United States to study what is being developed there. Describing this, a retired officer of the Israel Defence Force, David Eshel, writing in *Jane's Intelligence Review*, says that the non-lethal technology both available for immediate operations and appropriate to Israeli requirements is limited. His list of the various types includes chemical weapons: "CS gas ('tear gas') — common in law enforcement and widely used by the IDF, with marginal effects. Can be overcome by simple countermeasures. A variation is 'sleeping gas', an aerosol dispersed gas that induces fatigue and sleep. Effects depend on weather conditions." No further details are given about this novel disabling chemical [see also 12 Feb Israel].

2 September In Tokyo, Sergei Kiriyeenko, chairman of the Russian State Commission on Chemical Disarmament [see 4 May], reaffirms [see 9 Jun 97] to reporters that Russia is ready to provide technology to help Japan dispose of its abandoned chemical weapons in China. He says that Russia's low-temperature method would have less of an impact on the environment than the high-temperature method adopted by the United States. According to one report, he says that Russia is prepared to provide the technology and know-how "for free". Kiriyeenko further proposes that the two countries conclude a bilateral agreement on mutual aid and support in the destruction of chemical weapons. Kiriyeenko later visits foreign minister Makiko Tanaka to request Japanese support for a proposed Russian request to extend the timeframe for the destruction of its chemical weapons under the CWC to 2012. According to news reports, Russia will formally request the extension of the deadline at the forthcoming twenty-sixth session of the OPCW Executive Council. Kiriyeenko also asks for Japanese financial support for Russian chemdemil activities. He is on the first stop of a tour of G8 countries that will also involve Canada, France, Germany, Italy, the UK and the USA.

2 September In Iraq some three months previously, at least 20 soldiers died and 200 were hospitalised after participating in a chemical-weapons exercise that went wrong, so the London *Sunday Telegraph* reports, attributing "intelligence received from Iraq" and an unidentified diplomat. The soldiers are said to have been training in Al Suwayrah and Basmaya camps in the Zaafamia region to the south of Baghdad. The newspaper also reports that, in the past three months, production of

missiles and chemical weapons has begun at full strength at a military factory in the Syrian border area of Al Qayem.

2 September In Glasgow, the president of the British Association for the Advancement of Science addresses its annual science festival and warns that the UK is unprepared for bioterrorism. Sir William Stewart, a former chief scientific adviser to the government, says: "We only have to look at the current foot-and-mouth episode to see what can go wrong if we are not properly prepared and when a bug is not adequately contained." He goes on to say: "If nuclear weapons and space technology dominate the global defence thinking, what is left for the smaller and rogue nations without them? Are we naïve enough to believe that the recent advances in microbiology and genomic biology will be restricted to the civil field?"

2 September In New York, Atlantic Monthly Press publishes *Scourge: The Once and Future Threat of Smallpox* by Jonathan Tucker.

CBS News *60 Minutes* includes a segment on smallpox, with D A Henderson, Ken Alibek and David Kelly speaking to camera about weaponization of the virus. In voiceover at one point, anchorman Mike Wallace says: "And a still-classified intelligence report confirms there are three countries which are major threats for smallpox: Iraq, North Korea and Russia" [see also 1 Oct 00 and 28 Feb].

2 September In Colombia, at San Adolfo in Huila Province, FARC rebel forces use "poisonous gas" in an attack that kills four police officers and hospitalises another six, according to the provincial chief of police, Colonel Francisco Henry Caicedo, speaking on RCN radio two days later. However, national police chief General Ernesto Gilibert says that authorities have not confirmed the use of chemical weapons and are still investigating.

3 September In South Korea, in the lawsuit that has been brought by Vietnam-War and other Korean veterans against US herbicide manufacturers Dow Chemical and Monsanto Corporation [see 15 Nov 99], Seoul District Court agrees to accept in evidence *A comparison analysis on chemical dioxin levels of the liver serum of soldiers of the Vietnam War and soldiers who did not participate*, a study submitted by the plaintiffs. Some 17,200 veterans have now joined the action since it began in October 1999, each seeking Won 300 million (ca US \$240,000) in damages from the manufacturers.

3 September Russian State Commission on Chemical Disarmament Chairman Sergei Kiriyeenko [see 2 Sep Tokyo] tells reporters in Tokyo that Russia will destroy all of its Category 2 and Category 3 chemical weapons before the year's end. This includes 3844 artillery projectiles charged with 10 tonnes of phosgene.

3 September From the OPCW in The Hague, the Director-General announces the results of the Ninth Official Proficiency Test. The samples had been prepared by the UK, and the results evaluated by Germany. Of the other 16 participating laboratories, 10 met the adopted criteria and could be scored. Of the remaining 6, the Italian laboratory submitted no report, the Brazilian and the South African withdrew, the Singaporean and one of the Indian laboratories (IPFT) reported false positives, and one of the US labs (Lawrence Livermore National Laboratory) also failed, having reported irrelevant compounds in emulsion and decon samples and also in blanks. Of the 10 rated laboratories, none identified all of the spiked chemicals or their degradation products; three received a B rating (Netherlands, USA [Edgewood] and South Korea); and seven

received a D rating (Russia, India [IICT], Belgium, India [Vertox], Iran, USA [IITRI] and Romania). On the basis of these results, one of the three laboratories temporarily suspended following the sixth proficiency test is reinstated [see 4 Aug 00]. The GSRDC-4 laboratory in South Korea had met the criteria for redesignation by performing successfully in the last three consecutive tests. The other two laboratories, in China and the Czech Republic, remain on temporary suspension.

3 September The Stockholm International Peace Research Institute announces publication of *The Evolution of Biological Disarmament* by Nicholas Sims of the London School of Economics and Political Science. The volume is number 19 in the series SIPRI Chemical & Biological Warfare Studies.

3–5 September In the Czech Republic, the Purkyne Military Medical Academy Hradec Kralove hosts the 6th *Czech and Slovak Toxicological Conference with International Participation*, which marks the 50th anniversary of the Academy. The conference includes a symposium on the toxicology of cholinesterase inhibitors, with papers from Bulgaria, France, the Netherlands, Poland and Sweden, as well as the Czech Republic. Among the papers presented at the conference itself is one from Russia on long-term health consequences of exposure in Viet Nam to dioxin-containing Agent Orange herbicide. All contributions are to be published in full in *Military Medical Letters*.

4 September In the United States, the *New York Times* reports that the government has been undertaking secret research into biological weapons. The report, by Judith Miller, Stephen Engelberg and William Broad, states that the previously-undisclosed research began under the Clinton administration and has been approved by the Bush administration, which intends to expand it. Two projects were completed under the Clinton administration: Project Clear Vision, in which the Central Intelligence Agency built and tested a model of a Soviet-designed anthrax bomb; and a Defense Threat Reduction Agency venture, said to be called Project BACCHUS (for Biotechnology Activity Characterization by Unconventional Signatures), that involved the construction of what the *New York Times* describes as a “germ factory” in the Nevada Test Site. A third activity, Project Jefferson, includes a Defense Intelligence Agency effort still awaiting approval by the administration to reproduce a genetically modified anthrax organism produced by Russian scientists in the mid-1990s [see 1 Dec 97 Obolensk]. An unidentified administration official is quoted as saying that all three projects are “fully consistent” with the BWC, which allows research for “protective or defensive purposes”. The official adds: “This administration will pursue defenses against the full spectrum of biological threats”. Other officials are cited as saying that the need to keep such projects secret was a significant reason behind the US rejection of the draft BWC protocol [see 25 Jul].

The revelations are widely reported, both nationally and internationally, and spark a public debate on the status of such research under the BWC and on the accountability of US biodefence efforts. The next day, the *New York Times* quotes Mary Elizabeth Hoinkes, a former general counsel to the Arms Control and Disarmament Agency, as saying that the administration’s justifications are a “gross misrepresentation” and they “risk doing serious violence” to the BWC itself. At a Pentagon news briefing, however, reporters are told that “All of the work is consistent with US treaty obligations. All of the work is thoroughly briefed and gone through a heavy consultation process, both interagency and the appropriate legal reviews and the appropriate congressional briefings.”

5 September In London, senior officials from the UK and India hold the third round of talks in the Formalized Dialogue on Non-Proliferation and Disarmament. Issues discussed include nuclear issues, ballistic missile proliferation, the chemical and biological weapons conventions and export controls.

5 September In the US Senate, the Foreign Relations Committee holds a hearing on *The Threat From Bioterrorism and the Spread of Infectious Diseases*. The hearing is the first in a series to address homeland defense and the protection of US military forces to be convened by committee chairman Joseph Biden. He also intends the hearings to act as a counterweight to what he portrays as a “myopic focus” on national missile defence by the Bush administration. He goes on to say that “the threat from anonymous delivered biological weapons and from emerging infectious diseases simply dwarfs the threat that we will be attacked by a third world ICBM with a return address.”

Panel I considers the US response to an act of bioterrorism and hears testimony from Sam Nunn of the Nuclear Threat Initiative and former CIA director James Woolsey. Both had been participants in the recent *Dark Winter* exercise [see 23 Jul] and testify on the lessons learned from their experience. Panel II focuses on strengthening the domestic and international capability to prevent and defend against intentional and natural disease outbreaks. Testifying are: DA Henderson of the Johns Hopkins Center for Civilian Biodefense Studies; David Heymann, executive director of communicable diseases at the WHO; Fred Iklé of the Center for Strategic and International Studies; and Frank Cilluffo of the Center for Strategic and International Studies.

6 September Russian Defence Minister Sergey Ivanov, asked by Interfax to comment on press reports about the development of biological weapons in the United States [see 4 Sep], responds: “We are not doing anything of the sort, because we have signed an international convention banning development of biological weapons”. The Interfax news agency report continues [mistakenly]: “Yet the United States did not sign that convention, the minister added”.

6 September In Panama, Foreign Minister Jose Miguel Aleman announces that San Jose island, once the site of chemical-weapons trials [see 5 Aug], is to be evacuated and quarantined. He states that the USA had made a false declaration under the Chemical Weapons Convention: “The US has declared that no chemical weapons exist in Panama. We have found four bombs. They are intact and have detonators.” The bombs had been found by OPCW inspectors, who had visited the island in July, and who had identified the bombs as of US manufacture. The Foreign Minister states, further, that he had received the OPCW inspection report on 27 August and that he had then written to US Secretary of State Colin Powell demanding to know whether there were any more chemical weapons on Panamanian soil.

6 September US Defense Secretary Donald Rumsfeld meets with military leaders to review the results of *Positive Match*, a computer-generated simulation of military operations that had been conducted over four days in August. The simulation reportedly showed that the US military could defeat one adversary, such as North Korea, while halting an offensive by a second, such as Iraq. The simulation also considered how military operations would be affected if another event took place at the same time, such as terrorists attacking New York City with chemical weapons.

7 September The US Department of Defense transmits to Congress its *Chemical and Biological Defense Program Annual Report to Congress and Performance Plan*. This is the eighth such report, required under the FY 1994 Defense Authorization Act. The report is a 384-page document presenting fine detail, including particulars of the Department's involvement in efforts to implement the CWC. In its introduction, the report lists a number of countries under the heading "the current chemical and biological threat": North Korea, China, India, Pakistan, Iran, Iraq, Syria, Libya and Russia. In its outlook for the next ten years, the report states that "the threat from the proliferation of CBW weapons will certainly increase. This will result from the development of chemical and biological agents that are more difficult to detect and from the adoption of more capable delivery systems. DoD expects that more states with existing programs will master the production processes for complete weapons and will be less dependent on outside suppliers. States will be more proficient at incorporating chemical or biological agents into delivery systems and will be focusing on battlefield training as well as employment strategy and doctrine. Therefore, the threshold of some states to consider using these capabilities may be lowered. DoD does not expect significant increases in the number of government-sponsored offensive CBW programs. Nevertheless, the United States and its allies must be alert to this possibility as well as to the apparent growing interest in CBW on the part of sub-national groups such as terrorist organizations." In addition, the Department also publishes the *Joint Service Chemical and Biological Defense Program FY 00-02 Overview*, which summarizes the information in the annual report and the goals for FY 01 and beyond.

The Department also posts on its website its statutory report on *Biological Warfare Defense Vaccine Research and Development Programs*. The report had been required by the FY 2001 *National Defense Authorization Act* [see 10 Oct 00]. Annexed to the report is an independent review of the Department's vaccine acquisition strategy by a panel of experts assembled by external contractors SAIC. The panel finds that "the scope and complexity of the DoD biological warfare defense vaccine requirements were too great for either the DoD or the pharmaceutical industry to accomplish alone. To put in perspective, within the United States, vaccines are currently licensed to protect against approximately 20 diseases, whereas the DoD biological warfare defense program alone requires vaccines to protect against almost an equal number of disease-causing, biological warfare agents. In addressing this requirement, the Panel agreed with the DoD vaccine acquisition strategy, which focuses initially on a limited set of approximately eight vaccines [see 11 Aug 00]." The panel's report therefore recommends "a combined, integrated approach drawing on industry, DoD, and national scientific strengths and assets is essential". The panel also concludes that "a government-owned and contractor-operated vaccine production facility is an essential element of the DoD program". The DoD estimates that such a facility would cost \$1.56 billion over a 25-year life cycle with production beginning approximately seven years after the project starts. The panel of experts estimated that the DoD vaccine acquisition programme would require between \$2.4 and \$3.2 billion in research and development costs over a seven to twelve year period. The panel's report is being studied by the Defense Department, although the Department acknowledges that "many of the Panel's recommendations are at variance with Departmental policy".

In a section headed "management of BW perceptions and treaty compliance issues", the panel's report includes the following: "In addressing DoD vaccine requirements to protect against BW threats, an upfront and agreed upon public affairs plan is essential in overcoming any negative perceptions ...

about DoD's [Biological Defense Program]. Further, the industry does not want to be wrongly tainted by any suggestion it might be producing BW agents for DoD and it is opposed to any potential inspections imposed by BW conventions under the pretext that they might be producing BW agents instead of manufacturing vaccines to protect against such agents. If such inspections are or will be required, industry would be seriously concerned from both the perspective of potentially losing proprietary/trade secret manufacturing information, and the potential perception of being involved in an offensive instead of defensive program. Hence, such inspection activities would have an adverse impact on the industry's image and growth and would not have the support of their shareholders."

7 September The US Central Intelligence Agency posts on its website an unclassified version of its latest six-monthly *Report to Congress on the Acquisition of Technology Relating to Weapons of Mass Destruction and Advanced Conventional Munitions*, covering the period 1 July–31 December 2000 [see 22 Feb]. The report had earlier been transmitted to Congress as required under Section 721 of the FY 1997 Intelligence Authorization Act. The report repeats much of what the previous report in the series had claimed with respect to which countries the CIA believes possess or are developing CBW capabilities. Those reported as possessing or developing chemical or biological capabilities include Iran, Iraq, Libya, North Korea, Syria and Sudan. The next day, the claims are attacked on Iranian radio as being unjustified. A few days later, the Iranian foreign ministry issues a vehement denial of the US claims: "The Islamic Republic of Iran which suffered most from chemical weapons has never been after acquiring weapons of mass destruction".

9 September In the UK, unidentified security officials are said to believe that Iraqi spies posing as asylum seekers are smuggling CBW weapons into the country, according to the London *Sunday Express*, which also reports British fears that Iraq is producing large amounts of anthrax bacteria for sale to terrorist organizations.

10–11 September In Orlando, Florida, the National Institute for Government Innovation hosts a conference on *Hospital / WMD Consequence Management*.

11 September In the United States, terrorists hijack four passenger airliners on domestic flights from the east to the west coast. Two of the planes are flown into the twin towers of the World Trade Center in New York City, which both subsequently collapse. The third plane is flown into the Pentagon, one side of which is severely damaged. The fourth plane crashes in a field near the city of Pittsburgh. The attacks, the worst terrorist acts ever committed on US territory, are quickly blamed on Osama bin Laden and his al-Qaeda network. Subsequent investigations show that 19 hijackers had overpowered aircraft staff and piloted the planes into their targets. Only the plane that crashed in Pittsburgh had been prevented from reaching its target, assumed to be the White House or the Capitol building in Washington, by the actions of some of its passengers. US airspace is rapidly shut down with planes in mid-flight diverted or sent back to their departure points. US Air Force jets are sent to patrol the skies over Washington and New York City.

Initial estimates of the death toll approach 5,500 based on the number of people who worked the twin towers and the speed of their collapse. However, it emerges over the next few weeks that far more people than initially thought had managed to escape, or had not been in the buildings, and by mid-December the official death toll falls below 3,000.

Within minutes of the attacks in New York City, the 2nd WMD-Civil Support Team [see 13 Jan 00] based at Scotia in

New York state is activated and arrives in the city that evening, amid fears that the airliners could have been carrying biological weapons. It is the first-ever deployment of a WMD-CST. Other teams around the country are put on alert. The New York team spends the first 18 hours on-site checking for chemical and biological agents, of which none are detected. It departs on 13 September after having coordinated the arrival of follow-on emergency units. A few hours after the attacks, the Centers for Disease Control and Prevention issue an official health alert. The alert states that, due to "current events", the CDC is on heightened alert status and requests that state and local public health agencies "initiate heightened surveillance for any unusual disease occurrence or increased numbers of illnesses that might be associated with today's events." The CDC also releases a "Push Package" from the National Pharmaceutical Stockpile, which arrives in New York City later in the evening. Additionally, the CDC sends emergency supplies to assist hospitals in coping with the many expected casualties. Soon after the attack on the Pentagon, the US Army locks down the laboratories at Fort Detrick, evacuating the staff and increasing security. Increased security measures are also implemented at chemical weapons storage facilities across the country.

12 September In Brussels, the 19 members of the North Atlantic Council decide to invoke Article V of the North Atlantic Treaty for the first time since its signature in 1949, following the terrorist attacks in New York and Washington the previous day. Before Article V can become fully operative it must be determined that the 11 September attacks were indeed an armed attack directed from abroad. This is later verified to the satisfaction of the Council and the invocation of Article V is confirmed on 2 October. On 4 October, NATO Secretary General George Robertson announces eight measures which member states will take individually or collectively to operationalize Article V. The North Atlantic Council also decides, in response to a US request, to deploy five airborne early warning aircraft to the US allowing US aircraft to be re-deployed elsewhere and to deploy NATO's Standing Naval Force Mediterranean to the eastern Mediterranean. These are the first ever NATO deployments in support of Article V operations.

12 September The United Nations Security Council adopts a resolution that "unequivocally condemns in the strongest terms the horrifying terrorist attacks which took place on 11 September 2001". The resolution goes on to state that the Security Council "regards such acts, like any act of international terrorism, as a threat to international peace and security" and that the Council "expresses its readiness to take all necessary steps to respond to the terrorist attacks of 11 September 2001".

13 September In the US Senate, Senator Orrin Hatch introduces the *Combating Terrorism Act of 2001* (S.Amdt. 1562) as an amendment to House legislation on the FY02 appropriations for the Departments of Commerce, Justice and State, the Judiciary, and related agencies (HR 2500). Among its many provisions, the bill includes section 818 on "improvement of controls on pathogens and equipment for production of biological weapons". This section requests the Attorney General to submit a report within 60 days on the means of improving controls of biological pathogens and the equipment necessary to develop, produce or deliver biological weapons. The report should include a list of equipment identified as critical to the development, production or delivery of biological weapons, recommendations for legislation to criminalize the possession of such equipment for other than a legitimate purpose, recommendations for legislation to control the domestic sale and transfer of such equipment and recommendations for legislation to require the tagging or other

means of marking such equipment. In addition, the bill requests the President to undertake appropriate actions to enhance the standards for the physical protection and security of biological pathogens at research laboratories and other government and private facilities that create, possess, handle, store or transport such pathogens. The amendment passes the Senate with only 30 minutes of debate and is referred to a joint House/Senate conference committee. The bill does not become public law but many of its provisions, including Section 818, are elaborated upon in more detail by later anti-terrorism proposals.

13 September In Washington, Ambassador Donald Mahley speaks on "The BWC Protocol negotiations: observations from the last Ad Hoc Group session" at a session of the *Responding to the Challenge of Biological Weapons* series organised by the Chemical and Biological Arms Control Institute. According to a CBACI summary, he says that "traditional approaches to arms control — lists of declarations and on-site activities — are conceptually inapplicable in the field of biology because, unlike chemistry, biology and biotechnology are rapidly expanding and thus difficult to concretely define".

13–14 September In London, the chairman of the Russian State Commission for Chemical Disarmament, Sergei Kiriienko, is visiting as part of his tour of G8 countries [see 4 Sep]. He meets with Secretary of State for Defence Geoff Hoon and other senior officials from the Ministry of Defence, the Foreign and Commonwealth Office and the Department of Trade and Industry. Kiriienko briefs the officials on the revised Russian chemdemil programme which will be presented to the forthcoming session of the OPCW Executive Council. Kiriienko and Hoon also discuss the provision of UK funds to the construction of the Shchuch'ye destruction facility. It is hoped that a bilateral agreement on the assistance can be signed during Hoon's visit to Moscow in October.

After London, Kiriienko travels on to Rome and Paris. In Rome, Kiriienko discusses the Italian offer of \$7 million to support Russia's chemdemil efforts and the Italian defence minister announces that a contract will be signed in the "immediate future". In Paris, Kiriienko reportedly expresses surprise at France's willingness to support the Russian programme bilaterally, as well as through the European Union. French Prime Minister Lionel Jospin tells Kiriienko that government experts are starting a detailed study of the issue.

14 September In the United Kingdom, Sussex Police, which has been running a pilot study of a PAVA spray weapon known as Captor [see 16 Mar], has now become the first UK police force to have issued its officers with a chemical weapon not based on agent CS. The weapon is said to have boosted the morale of patrol officers in Brighton.

14 September UK Prime Minister Tony Blair, opening an emergency debate in the UK House of Commons on the terrorist attacks in the USA, says of the attackers: "We know that these groups are fanatics, capable of killing without discrimination. The limits on the numbers they kill and their methods of killing are not governed by morality. The limits are only practical or technical. We know that they would, if they could, go further and use chemical or biological or even nuclear weapons of mass destruction. We know, also, that there are groups or people, occasionally states, who trade the technology and capability for such weapons. It is time this trade was exposed, disrupted, and stamped out. We have been warned by the events of 11 September. We should act on the warning." Speaking later in the debate, Foreign Secretary Jack Straw echoes the Prime Minister's words: "It should by now be obvious to everyone that people who have the fanaticism and

the capability to fly an airliner laden with passengers into a skyscraper will not be deterred by human decency from deploying chemical or biological weapons, missiles, nuclear weapons or other forms of weapons of mass destruction if these are available to them. We have to redouble our efforts to stop the proliferation of such weapons." It is later reported that these warnings have been made in the light of intelligence-service reports that the terrorists behind the 11 September attacks already have access to chemical and biological weapons.

14 September In the US Senate, majority leader Tom Daschle introduces a resolution (S J Res 23) which "authorizes the President to use all necessary and appropriate force against those nations, organizations, or persons he determines planned, authorized, committed, or aided the terrorist attacks that occurred on September 11, 2001, or harbored such organizations or persons, in order to prevent any future acts of international terrorism against the United States by such nations, organizations, or persons." The resolution constitutes specific statutory authorization within the meaning of the War Powers Resolution. The resolution passes the House of Representatives on the same day (H J Res 64) and is signed into law by President Bush on 18 September (PL 107-40).

This same day the Congress approves a \$40 billion emergency supplemental appropriation, the *Emergency Supplemental Appropriations Act for Recovery from and Response to Terrorist Attacks on the United States of 2001* (HR 2888). President Bush signs the legislation into law on 18 September (PL 107-38). Not less than half of the \$40 billion is to be spent on disaster recovery activities and assistance in New York, Virginia and Pennsylvania, while the rest can be spent on increased transportation security, countering, investigating and prosecuting international terrorism and national security. The first \$10 billion can be spent without any further Congressional action and a second \$10 billion can be spent 15 days after the Office of Management and Budget has submitted proposed allocations to the Appropriations Committees. The final \$20 billion can only be spent after prior Congressional approval in a new emergency supplemental appropriations bill. The Administration sends a request to Congress for the second \$20 billion on 17 October along with a proposal outlining how it will be spent.

16 September The Istanbul *Hurriyet* reports that Turkey has warned Washington that Osama bin Laden "possesses a large amount of chemical weapons left in Afghanistan from the Soviet era".

16 September The London *Sunday Telegraph* reports that terrorists linked to Osama bin Laden were planning to release sarin nerve gas in the European Parliament in Strasbourg during its February session. According to the report, the attack was to be the first in a series against prominent buildings across Europe organized by terrorist cells in London, Frankfurt and Milan. The attack was foiled when German police broke up the Frankfurt cell in December 2000 leading to the arrest of six Algerians in London in early 2001 [see 17 Feb].

16 September The Czech Republic is identified in the London *Mail on Sunday* as a source of supply of anthrax bacteria and botulism causative-agent to Osama bin Laden. The Czech government establishes a special commission on 18 September to investigate the claims and an extraordinary session of the parliamentary security and defence committee is held on 19 September to consider the issue. The ministry of defence denies the allegations, asserting that its stocks of biological agents were destroyed in 1994 and the chairman of the security and defence committee announces after his

investigation that no biological agents had been obtained by terrorists. However, a Czech newspaper report a few days later claims that the final report from the 1994 operation does not give evidence that all biological agent holdings were destroyed.

16 September The US Federal Bureau of Investigation orders the grounding of all crop-dusting planes for 24 hours as a precautionary measure. After the ban is lifted, crop dusters are still prohibited from flying over metropolitan areas. The National Agricultural Aviation Association warns its members to be vigilant and to keep their aircraft secure. Later, on 23 September, the Federal Aviation Administration orders the planes grounded again for "reasons of national security" for 48 hours. The action follows the discovery that some of the suspected hijackers had expressed interest in buying a crop-dusting plane. Additionally, investigators have found documents and manuals on crop-spraying among the possessions of another suspected terrorist who was in custody at the time of the attacks.

Testifying before the House Judiciary Committee on 24 September, Attorney General John Ashcroft says: "Yesterday the FBI issued a nationwide alert based on information they received indicating the possibility of attacks using crop-dusting aircraft. The FBI assesses the uses of this type of aircraft to distribute chemical or biological weapons of mass destruction as potential threats to Americans. We have no clear indication of the time or place of any such attack. The FBI has confirmed that Mohammed Atta, one of the suspected hijackers, was acquiring knowledge of crop-dusting aircraft prior to the attacks on September 11th. The search of computers, computer disks and personal baggage of another individual whom we have in custody revealed a significant amount of information downloaded from the Internet about aerial application of pesticides or crop-dusting. At our request, the Federal Aviation Administration has grounded such aircraft until midnight tonight. In addition to its own preventative measures, the FBI has strongly recommended that state, local and other federal law enforcement organizations take steps to identify crop-dusting aircraft in their jurisdictions."

Asked on CBS television whether terrorists were planning another attack, with chemical or biological weapons, Defense Secretary Rumsfeld says: "We can't know that for certain. We can suspect it." He goes on to say that a number of countries the US views as terrorist sponsors "have very active chemical and biological warfare programs. And we know that they are in close contact with terrorist networks around the world."

17 September In Afghanistan, the existence of a "small, rudimentary, cinder-block laboratory where indicted terrorist Osama bin Laden is having chemical- and biological-weapons experiments conducted" is reported by *USA Today*. The newspaper attributes this information to unidentified senior US officials, and states that the laboratory is "deep inside the mountains of eastern Afghanistan". The report continues: "US satellite pictures taken within the last 2 weeks and reviewed by [the newspaper] seem to show several dead dogs leashed to poles near the laboratory building in bin Laden's Abu Khahab Camp north of ... Jalalabad. The officials say they believe, based on interviews with bin Laden recruits-turned-informants, that the animals were used as subjects on which chemical weapons were tested. While US officials are cited as saying that bin Laden is several years away from developing large-scale weapons of mass destruction, they add that the discovery of the laboratory is a "frightening discovery" [see also 8 Jul 98].

17 September In Moscow, visiting US Under Secretary of State John Bolton speaks to reporters about the security of Russian weapons of mass destruction after meeting with Russian Foreign Minister Igor Ivanov and Deputy Foreign

Minister Georgy Mamedov. Bolton says that “there has never been more attention to the dangers that terrorists — especially those who might have access to weapons of mass destruction — pose. So when in the past it was at one level of priority, I don’t think anyone doubts at the moment that it is now at the highest priority.”

Meanwhile, in Rome, Russian Munitions Agency Director-General Zinovi Pak tells reporters that the security maintained around Russian depots of chemical weapons will not allow terrorists to gain possession of the weapons, adding, however, that the security system needs to be constantly upgraded because “there are still people wishing to break into chemical arsenals”. Here he refers to the recent arrest of three people who had tried to enter the storage area in Shchuch’ye, and who earlier had had access to chemical arms depots.

17 September In Washington, at a press conference convened by the Gilmore advisory panel [see 15 Dec 00], there is attention to the subject of a terrorist attack with chemical or biological weapons; alarm on this score has been growing rapidly since the events of 11 September, and is leading to panic-buying of gas-masks, antibiotics. Governor Gilmore of Virginia says: “Such an attack has a high consequence, but not a high probability”. He also states his belief that non-state actors do not have access to lethal chemicals.

17–19 September In the UK, the Public Health Laboratory Service holds its 26th annual scientific conference at the University of Warwick. On 19 September, there is a workshop on *Responding to the Bioterrorist Threat*. One of the presentations is by Nigel Lightfoot of PHLS North, who provides details of a joint Home Office and Department of Health exercise called *Exercise Misty Scene*. The presentation aims to raise awareness and define the role of laboratories and microbiologists in coping with the threat and working in a team. In the light of the terrorist attacks in the US, Lightfoot says that the Department of Health and the PHLS are reviewing the UK’s contingency measures for a CBW attack. He tells reporters: “We are going to examine the plans already in place and look to see if any need to be refined. The risk is low but the risk is there and we have worked over the past few years to ensure that the right procedures are in place. Events in the United States ... have changed things somewhat and we will be looking at those plans again to ensure the right level of preparedness.”

18 September UNMOVIC Executive Chairman Hans Blix briefs the UN Security Council on the Commission’s current status and introduces its most recent quarterly report [see 30 Aug]. He tells the Security Council that UNMOVIC is prepared to implement its mandate in “an independent, effective and non-provocative manner”. Blix also states that “the cooperation of Iraq with UNMOVIC, as demanded by the Security Council, would create the opportunity for it to build confidence, which no unilateral statements can provide, that it is fully complying with all relevant resolutions of the Security Council and thus opening the prospect of the lifting of sanctions.”

18 September Milwaukee police, called out to a dispute between neighbours, are told by one of the parties, a drunken research scientist formerly employed by Battelle Memorial Institute in Columbus, Ohio, that he was building an anthrax delivery system in his basement. Later, FBI agents apply for a search warrant, but, on 28 September, find no anthrax. In subsequent press-reporting, the episode is portrayed as an instance of heightened post-11-September vigilance against potential biological or chemical threats [see 17 Sep].

19 September The European Commission publishes a proposal for a Council framework decision on combating terrorism. Article 3 of the draft decision is a list of crimes “punishable as terrorist offences” which includes “releasing contaminating substances”. The draft recommends to EU member states that this offence be punishable by a sentence of no less than 10 years. Currently only six of the 15 EU member states have specific legislation on terrorism, with the rest punishing offences under the ordinary law. The Commission also proposes a European arrest warrant based on the mutual recognition of judgements to allow the simplification of the extradition system within the EU.

19 September In Brussels, the Russia-NATO Permanent Joint Council convenes. The communiqué from the meeting states that Russia and NATO will continue consultations on the non-proliferation of nuclear, biological and chemical weapons and means of their delivery.

19 September US Attorney General John Ashcroft presents to Congress a package of anti-terrorism measures collectively dubbed the *Mobilization Against Terrorism Act*, although a second draft is known as the *Anti-Terrorism Act*. Both drafts include provisions on biological weapons, elaborating upon those in an earlier proposal [see 13 Sep]. Section 305 amends the definition of the term “for use as a weapon” used in Section 175 of US Code 18, creates an additional offence of possessing a biological agent, toxin or delivery system “of a type or in a quantity that, under the circumstances, is not reasonably justified by a prophylactic, protective or other peaceful purpose”, and criminalizes the possession or transfer of select agents by individuals disqualified from firearms possession and individuals from countries identified as being sponsors of terrorism. According to a Justice Department analysis, the change in the definition is necessary to “include all situations in which it can be proven that the defendant had no legitimate purpose for having such items”. The second draft adds detailed provisions on the regulation of select agents under the *Anti-Terrorism and Effective Death Penalty Act of 1996* [see 10 Jun 96] including fines of up to \$250,000 for violations of the regulations. However, these more detailed regulatory proposals are later dropped by the administration “apparently because of its inability to resolve inter-agency conflicts” as Senator Leahy later testifies to the Senate Judiciary Committee.

19–20 September At Quantico, Virginia, there is an International Non-Lethal Weapons Military Symposium. The symposium is described as a “two-day event consisting of a NLW demonstration/display day and a presentation/discussion symposium day. The first day will consist of NLW system demonstrations and displays. The second day will be held at the Marine Corps Research Center and will consist of a morning presentations followed by an afternoon issue discussion period.”

20 September In Brussels, interior ministers of the European Union meet as the Justice and Home Affairs Council to discuss EU responses to the terrorist attacks in the US [see 11 Sep]. They agree to take a number of steps including the establishment of a counter-terrorism unit within EUROPOL tasked with drafting a threat assessment, regular meetings between the heads of EU member states’ security and intelligence services and to provide an annual report to the European Parliament outlining the situation within the EU and analysing the trends established. The Council welcomes the imminent adoption of a Commission proposal for setting up a mechanism in the field of the coordination of civil protection measures. The Council also invites a forthcoming extraordinary meeting of civil protection

directors general to focus on responses to major terrorist attacks inside or outside the EU in order to identify issues for further work and areas requiring increased cooperation.

20 September In Washington, President Bush addresses a joint session of Congress on the recent terrorist attacks and the US response to them. On the identification of the perpetrators of the attack, Bush says: "The evidence we have gathered all points to a collection of loosely affiliated terrorist organizations known as al-Qaida." After listing his demands upon the Taleban government of Afghanistan, Bush says; "These demands are not open to negotiation or discussion. The Taliban must act and act immediately. They will hand over the terrorists, or they will share in their fate." As to the campaign against terrorism, Bush says: "Our enemy is a radical network of terrorists, and every government that supports them. Our war on terror begins with al-Qaida, but it does not end there. It will not end until every terrorist group of global reach has been found, stopped, and defeated."

Also in his speech, President Bush announces the creation of a new Cabinet-level post of Assistant to the President for Homeland Security to which he appoints Governor Tom Ridge of Pennsylvania. On 8 October, Bush signs Executive Order 13228 creating the Office of Homeland Security within the Executive Office of the President. The Office's mission will be to "develop and coordinate the implementation of a comprehensive national strategy to secure the United States from terrorist threats or attacks." Its functions will be to "coordinate the executive branch's efforts to detect, prepare for, prevent, protect against, respond to, and recover from terrorist attacks within the United States." The new office is expected to have a staff of around 100, similar in size to the National Security Council. Also created is a Homeland Security Council, chaired by the President, which will include the Vice President, the Attorney General, the secretaries of defense, treasury, health and human services, transportation and agriculture, as well as the directors of the CIA, FBI and FEMA. Concern is expressed in some quarters that, as a "czar" figure rather than the head of a new cabinet department, Ridge will lack the authority to coordinate and streamline the approximately 40 agencies and departments with a role in counter-terrorism.

On 29 October, President Bush issues the first in a new series of directives, Homeland Security Presidential Directive-1, on *Organization and Operation of the Homeland Security Council*. The directive establishes a principals committee, a deputies committee and eleven policy coordination committees under the authority of the HSC. The policy coordination committees cover the following functional areas: detection, surveillance and intelligence; plans, training exercises and evaluation; law enforcement and investigation; weapons of mass destruction consequence management; key asset, border, territorial waters and airspace security; domestic transportation security; research and development; medical and public health preparedness; domestic threat response and incident management; economic consequences; and public affairs.

20 September In the US, the presidents of the National Academies of Sciences, the National Academy of Engineering and the Institute of Medicine write to President Bush offering to "provide advice and counsel in any way that the nation desires" following the terrorist attacks on New York and Washington. The letter continues: "Over the next few weeks, we will be convening small groups of senior national experts — both security specialists and scientists — for a series of private meetings. These non-governmental groups will begin to explore the new dimensions of terrorism, and they will be asked to propose ways to marshal the enormous intellectual capacity

of the scientific and technological communities of the United States to respond to our new threats."

21 September The OPCW Secretariat publishes a new issue of *OPCW Synthesis*. Of particular interest is its account of the role of governments and of research institutes in implementation of the CWC. This has been written by Ron Manley, director of the Verification Division of the Secretariat. He draws attention to the CWC Article VIII Scientific Advisory Board as one of the main mechanisms whereby the OPCW can interact in its work with particular organs of civil society.

21 September In Brussels, the heads of state and government of the 15 European Union countries convene an extraordinary meeting of the European Council to discuss the terrorist attacks in the US [see 11 Sep] and to consider an EU response thereto. The Council endorses the measures taken by the meeting of the Justice and Home Affairs Council [see 20 Sep] and expresses solidarity and cooperation with the US. The Council also instructs the EU's General Affairs Council to coordinate Union efforts to combat terrorism. To that end, the Belgian presidency of the EU subsequently drafts a 'road map' of measures and initiatives to be taken, among which is listed "possible adjustment of EU policies on non-proliferation and disarmament".

21 September US Senators William Frist and Edward Kennedy write to President Bush calling for additional funds to accelerate programmes under the *2000 Public Health Threats and Emergencies Act* [see 14 Jun 00] which has remained largely unfunded. The package sought by the two senators amounts to \$1 billion. Much attention is focused on the deterioration of the US public health service which has "decayed to an alarming extent" according to the associate executive director of the American Public Health Association. However, others question whether focusing on bioterrorism is an effective use of funds. Professor Jeanne Guillemin of Boston College says that by highlighting bioterrorism "you put your emphasis on emergency rather than ordinary care. ... to use the idea of biodefense in order to shore up the public-health system, I think is wrong-headed."

22 September In France, Health Minister Bernard Kouchner issues new regulations on the acquisition, transport &c of certain pathogenic micro-organisms (the causative agents of anthrax, brucellosis, smallpox and haemorrhagic fevers, and *Clostridium botulinum*) and toxins (botulinum toxins, staphylococcal enterotoxin B, saxitoxins, ricin and diphtheria toxin). Each transaction will now require the authorization of the director general of the Agence Française de Sécurité Sanitaire des Produits de Santé (AFSSPS). Any acquisition or transfer must also be reported in a special register and signed by the mayor or by the superintendent. An annual report is required for every agent, pathogenic micro-organism and toxin. The report is to include data about the quantities acquired, consumed, processed and transferred. The report is to be submitted no later than 15 February to the director general of the AFSSPS.

23 September In Japan, unidentified officials of the Ministry of Economy, Trade and Industry say that export controls are to be tightened as an anti-terrorism measure. The change would introduce a "catch-all" provision into Japanese export control law, as called for, they say, by the United States.

24 September In China, at an archive in Jilin Province, documents are released into the public domain about the biological-warfare work of Unit 731 of the Japanese Imperial Army. The documents comprise 630 pages of Japanese

military police papers dating from the years between 1939 and 1945. Contained within the documents is a list identifying 277 Chinese, Soviet and Korean prisoners on whom Unit 731 conducted live biological warfare experiments.

24 September The World Health Organization (WHO) warns member states that they may need to strengthen their capacity to respond to biological or chemical attack. In Washington, addressing the 43rd Directing Council of the Pan-American Health Organization, WHO Director General Gro Harlem Brundtland says "we must prepare for the possibility that people are deliberately harmed with biological or chemical agents". At the same time, the WHO posts on its website a preliminary draft for a second edition of its 1970 publication *Health Aspects of Chemical and Biological Weapons: Report of a WHO Group of Consultants*. Explaining this action to *Foreign Policy* afterwards, Dr Brundtland says: "just after the September 11 attacks, we decided to push forward a revision of a 1970 manual discussing the health aspects of biological and chemical weapons. That publication was being revisited and updated, and it was due to be published in December 2001. So we quickly, over two or three days, went through the text as it stood and placed the revised text on the Web, because it was necessary to get this information out." Some two months later, WHO publishes a revised draft, still incomplete but now entitled *Public health response to biological and chemical weapons: WHO guidance* and labelled "prepublication issue for restricted distribution".

25 September In Romania, investigative reporting by the Bucharest *Evenimentul Zilei* fails either to confirm or refute a recent Italian newspaper report about terrorists being recruited from among people who had studied microbiology at Romanian and Hungarian universities. The allegation is summarized thus: "Citing sources from an East European country's secret services, the Italian daily *Corriere della Sera* wrote that the al-Qaeda organization recruited and trained Arab and Egyptian students who studied microbiology in Romania for war against the United States. According to these sources, in May 1998 representatives from al-Qaeda purchased three laboratories to manufacture chemical substances from Yugoslavia. At the same time, other agents working for bin Laden purchased pesticides and radioactive materials from Ukraine. Under the guise of a humanitarian organization, the chemical load was transported to a factory in Zenica, Bosnia to one of the terrorists' bases in Kandahar, Afghanistan [see also 17 Sep Afghanistan]. Once the equipment and raw materials had been purchased, bin Laden's people hired Ukrainian biologists and chemists for huge fees. Bin Laden's collaborators gave this core of experts the task of training seven technicians of Saudi and Egyptian origin, who were very carefully selected among foreign students taking university microbiology courses in Hungary and Romania."

25 September In the UK, it is reported that the Secretary of State for Health, Alan Milburn, has told the National Health Service to review its contingency plans for dealing with the release of a biological agent [see also 17–19 Sep]. The chief executive of the NHS has been contacting hospitals asking them to upgrade their major incident contingency plans which had previously been designed to cope with hundreds, rather than thousands, of casualties. The new contingency plans would also include preparations to deal with chemical and biological attacks, guidance on which was first circulated to hospitals in March 2000. Even prior to 11 September, many hospitals have decontamination units and the NHS has been buying protective suits on an "unprecedented scale". It is also reported that local emergency planning officials warned a

meeting to review the UK's ability to withstand a mass terrorist attack that the country is ill-prepared for dealing with a chemical or biological incident. According to the Emergency Planning Society, the UK's budget for civil defence has fallen by 44 per cent since 1991.

On the same day, UK Prime Minister Tony Blair tells reporters that "there is no evidence of any specific threat that we have, and I think it's also important that we are not alarmist, but responsible in the way that we handle these things."

25 September US Attorney-General John Ashcroft [see 16 Sep] tells the Senate Judiciary Committee that terrorist follow-up to the events of 11 September may include the detonation of bombs on lorries carrying dangerous chemicals: "Intelligence information available to the FBI indicates a potential for additional terrorist incidents. ... Our investigation has uncovered several individuals, including individuals who may have links to the hijackers, who fraudulently have obtained or attempted to obtain hazardous material transportation licences." On 17 September, the FBI had arrested two men in Chicago and Detroit who had, or were seeking, licences to drive dangerous chemicals, and Justice Department officials later reveal that 20 people have been arrested for using false identification documents to obtain or try to obtain hazardous materials licences. On 26 September, a scare about a possible lorry bomb causes police to block bridges and tunnels into New York and to search all heavy vehicles. The Department of Transportation subsequently asks state law enforcement agencies to pull over every truck with hazardous goods placards in order to check the drivers' credentials and paperwork. There are around 30,000 licensed tankers in the US.

25–26 September In Pfinztal, Germany, the Fraunhofer Institute for Chemical Technology hosts the *1st European Symposium on Non-Lethal Weapons*. The symposium is attended by approximately 150 scientists, jurists and medical practitioners in addition to representatives of military and police forces from almost 20 countries; 30 papers and 45 posters are presented. The symposium programme includes discussion of international law and disarmament issues in addition to technical subjects.

25–28 September In The Hague, the OPCW Executive Council reconvenes [see 27–28 Jun] for its twenty-sixth regular session [for further details see *Progress in The Hague* above].

The London *Times* carries an editorial on the CWC which concludes: "What is needed now is a strategy to counter diversion of chemicals for terrorist use, continued cooperation with industry, and strong pressure on the 19 countries that have refused to sign ... to join the convention. The OPCW can never eliminate the threat, but it can effect a reduction of the risks. The rigid enforcement of all its provisions sounds undramatic; but it will do far more to protect Western cities and undergrounds than the mass sale of gas masks."

27 September In Moscow, the new Russian chemdemil programme [see 14 Jun] is criticised at a press conference by Dr Lev Fedorov, president of the Union for Chemical Safety, because it addresses only the problems of destroying stockpiled chemicals and chemical weapons production facilities, failing to address the problem of destroying old chemical weapons buried in Russia [see 6 Aug] and because it envisages the transport of chemical weapons across Russia. The *Moscow Times* reports on one such old chemical weapons dump, at Kuzminki on the outskirts of Moscow [see 24 Feb]. The paper states that local government agencies and the defence ministry have recently decided to establish a task force to investigate claims that old chemical weapons are buried in

the area. According to archival documents known to Fedorov, attempts were made to clear the area in the late 1930s but were abandoned. Samples taken recently by Fedorov from Kuzminki tested positive for mustard gas in experiments undertaken by the Academy of Sciences, so the *Moscow Times* reports. Fedorov's archival research has revealed that chemical weapons were dumped at Kuzminki from 1918 until 1961 and that there are two other such dumps within Moscow, one at Ochakovskoye Shosse in the southwest and one at Bogorodsky Val in the northeast. The latter dump he says is particularly dangerous as it is close to the Yauza river, a popular recreation site, and it was also used after the Second World War when nerve gases were produced.

27 September US Biotechnology Industry Organization President Carl Feldbaum tells reporters that BIO has asked its member companies to furnish lists of materials that could be used in a biowarfare attack. This is for the measures that biotech and chemical companies are now taking to secure their products against terrorists. Similarly, security has been stepped up at chemical facilities, and the American Chemical Council has established a group of security experts to work on preventative measures. BIO has also asked its members what technologies they might be working on which could be used to defend against a biological or chemical attack. In addition, four Democrat congressmen have asked President Bush to allocate \$7 million to assist the Department of Justice in completing a study on the vulnerability of the country's chemical facilities which was due to be finished by mid-2000.

27 September In the United States, a sample of 1055 adults is polled by Harris Interactive for its views on the post-11-September situation. Asked about the likelihood of a terrorist attack using biological or chemical weapons in the United States in the next 12 months, 53 percent say that it is likely.

27–28 September In France, a sample of 940 adults is polled by Ifop for its opinions on terrorism. Asked about the likelihood of chemical or biological weapons being used in France by terrorist groups in the coming months, 6 percent think it certain, 35 percent probable and 10 percent not at all probable. On the question of whether more information should be available on the risks of chemical and biological weapons, 53 percent think that it should, while 40 percent think not — lest terrorists be given ideas or a psychosis be created.

28 September In Bulgaria, the defence and foreign ministries deny a report in the London *Guardian* linking the country with the research and stockpiling of biological weapons. On television, Foreign Minister Solomon Passy says that the report is totally untrue. The newspaper had stated: "In a 1995 study, the CIA reported that 17 countries were suspected of researching and stockpiling germ warfare agents, including Iraq, Iran, Libya, Syria, North Korea, Taiwan, Israel, Egypt, Vietnam, Laos, Cuba, Bulgaria, India, South Korea, South Africa, China and Russia". The "1995 study" is not identified. The Foreign Minister goes on to say that Bulgaria has been invited to take part as a member in the impending regular session of the Australia Group, which is made up of countries that, he says, are absolutely flawless in enforcing the international standards and norms for chemical and bacteriological weapons.

28 September The United Nations Security Council adopts resolution 1373 reaffirming [see 12 Sep] that the 11 September attacks, like all acts of international terrorism, constitute a threat to international peace and security. Acting under Chapter VII of the UN Charter, the Security Council by resolution 1373

decides that all states shall prevent and suppress the financing of terrorist acts and should refrain from providing any form of support, active or passive, to terrorists. In this connection, the resolution calls upon all states to, among other things, find ways of intensifying and accelerating the exchange of operational information regarding "the threat posed by the possession of weapons of mass destruction by terrorist groups." Furthermore, the resolution notes with concern "the close connection between international terrorism and transnational organized crime, illicit drugs, money-laundering, illegal arms-trafficking, and illegal movement of nuclear, chemical, biological and other potentially deadly materials, and in this regard emphasizes the need to enhance coordination of efforts on national, subregional, regional and international levels in order to strengthen a global response to this serious challenge and threat to international security".

In order to monitor the implementation of resolution 1373, the Security Council establishes a Counter-Terrorism Committee, to be chaired by Ambassador Jeremy Greenstock of the UK. The resolution requires all states to report to the committee within 90 days, by 27 December, on the steps they have taken to implement it. In its work programme, agreed to by the Security Council on 23 October, the Committee sets out its priorities for its first 90 days which include publishing a list of contact points in governments and international organizations, establishing a pool of expertise and receiving the initial national reports, analyzing them and beginning to identify best practice and to research ways of assisting states where necessary.

28 September From the US White House, the Office of Management and Budget has just released its latest annual report to Congress on *Combating Terrorism*, as required by section 1051 of the FY98 National Defense Authorization Act (PL 105-85). The 108-page report provides funding and programmatic information on the federal government's efforts to combat terrorism, including defence against attacks with weapons of mass destruction.

28 September The US General Accounting Office transmits to Congress a report on *Bioterrorism: Federal Research and Preparedness Activities*, as requested by section 102 of the *Public Health Improvement Act of 2000* (PL 106-505). The report provides information on federal activities and funding, how these activities are coordinated and whether there are any shortcomings in the current structure, and existing evaluations of the effectiveness of these activities in preparing state and local authorities. The report had been drafted prior to the terrorist attacks on New York and Washington [see 11 Sep].

The GAO also transmits to Congress a report on *Chemical and Biological Defense: Improved Risk Assessment and Inventory Management Are Needed*. The GAO had examined whether the Department of Defense's process for assessing the risk to military operation on the basis of wartime equipment requirements was reliable and how the Department's inventory management of chemical and biological protective gear had affected the risk level. The report finds that the risk assessment process is unreliable and fundamentally flawed. It also finds that the Department's management of its inventory of protective equipment is inadequate.

28 September In the United States, amendments to the Export Administration Regulations are published in the *Federal Register* that implement understandings reached at the October 2000 plenary meeting of the Australia Group [see 2–5 Oct 00]. The amendments concern exports of medical, analytical, diagnostic and food-testing kits containing small quantities of Australia-Group chemicals that are also Schedule 2 or 3 chemicals. The amendments also allow unlicensed

exports, except to certain destinations, of mixtures containing low concentrations (less than 30 per cent by weight) of AG chemicals that are not also CWC Schedule 1 or 2 chemicals.

28–30 September In the UK, at Wiston House, there is a Wilton Park conference on *Control Regimes for Chemical and Biological Materials: Towards a Safer and More Prosperous World*. Participating are 44 specialists from 18 countries (Austria, Belarus, Belgium, Canada, China, Denmark, Egypt, Finland, France, Germany, Japan, the Netherlands, Russia, Sweden, Switzerland, Turkey, the United Kingdom and the United States), notwithstanding the many last-minute cancellations due to the events of 11 September.

29 September In Pakistan, contingency plans are being developed to cope with the possibility of biological or other unconventional weapons being used by al-Qa'ida terrorists in the event of US attack on Afghanistan. As for the Taliban regime in Afghanistan, a spokesman says that they have neither the plans nor the capability to use biological weapons: "The West and America both are afraid without any reason. We are not so advanced technologically."

29 September The US chemical-weapons destruction programme is likely to cost \$9 billion more than projected and not to be completed until well after 2007 according to the 6 September findings of a Defense Department review now reported in the *Los Angeles Times*. The newspaper reports that senior defence officials have concluded that the cost of the chemdemil programme will ultimately rise to about \$24 billion, up from an earlier estimate of \$15 billion. According to the paper, the DoD review confirms that Army officials had long realized that the \$15 billion estimate and the 2007 deadline were far too optimistic; an unidentified official is quoted as saying: "People have known for a long time that wasn't going to happen." The *Los Angeles Times* cites Deputy Assistant Secretary for Chemical Demilitarization Henry Dubin as saying that Under Secretary of Defense for Acquisition, Technology and Logistics Pete Aldrich had signed a revised set of estimates for the programme on 26 September, but Dubin is unable to provide further information about the final projections.

Later, on 3 October, Secretary Aldrich meets with Congressmen from Alabama and confirms that the US will not be able to destroy all of its chemical weapons by the CWC deadline of 2007 and that the cost of the chemdemil programme will be \$9 billion more than expected. After the meeting, Aldrich tells reporters that the new projection "includes some delays, it includes some cost increases, which are unfortunate, but these are the facts as we presented them." The new estimates involve destruction continuing beyond the 2007 deadline at all eight of the currently-operating or planned destruction facilities: until 2008 at Tooele and Aberdeen; until 2010 at Pine Bluff and Newport; until 2011 at Anniston and Umatilla; while no estimated dates are given for completion at Pueblo and Blue Grass. Aldrich also expressed support for a system of financial incentives for contractors to beat targets and costs without compromising safety or the environment.

30 September In Iraq, President Saddam Hussein has recently ordered that the nuclear-weapons programme be shelved but that the CBW programmes be expanded, according to the London *Sunday Telegraph*, which attributes the information to a recent defector from the Atomic Energy Organization in Baghdad. Over the past six months, the unidentified defector has said, about three thousand physicists and chemists have been working on secret CBW projects headed by Professor Shafer Mahmoud al Jibouri, described as a chemist and secret service agent. The projects have

included tests on prisoners in Radwanja jail, west Baghdad. The newspaper also quotes an unidentified "senior Western intelligence officer" to the effect that at least 30 front companies in Italy, Thailand, the Philippines and the UAE, mainly pharmaceutical firms, are under investigation for supplying Iraq.

30 September The US Defense Department publishes the report on its latest *Quadrennial Defense Review*. Defense Secretary Donald Rumsfeld writes that its central objective has been "to shift the basis of defense planning from a 'threat-based' model that has dominated thinking in the past to a 'capabilities-based' model for the future." Among current trends identified in the report is an increasing proliferation of CBW, radiological nuclear and enhanced high-explosive, or CBRNE, weapons, on which it says: "The pervasiveness of proliferation in an era of globalization has increased the availability and expertise needed to create the military means to challenge directly the United States and its allies and friends. This includes the spread of CBRNE weapons and their means of delivery, as well as advanced conventional weapons. In particular, the pace and scale of recent ballistic missile proliferation has exceeded earlier intelligence estimates and suggests these challenges may grow at a faster pace than previously expected. Likewise, the biotechnology revolution holds the probability of increasing threats of biological warfare."

The review also envisages a "paradigm shift in force planning" away from the traditional focus on fighting two major-theatre wars simultaneously: "The approach shifts the focus of US force planning from optimizing for conflicts in two particular regions — Northeast and Southwest Asia — to building a portfolio of capabilities that is robust across the spectrum of possible force requirements." The review continues: "For planning purposes, US forces will remain capable of swiftly defeating attacks against US allies and friends in any two theaters of operation in overlapping timeframes. ... At the direction of the President, US forces will be capable of decisively defeating an adversary in one of the two theaters in which US forces are conducting major combat operations by imposing America's will and removing any future threat it could pose. This capability will include the ability to occupy territory or set the conditions for a regime change if so directed."

1 October At UN headquarters the UN General Assembly begins a five-day debate on the formulation of a long-term strategy against terrorism. Secretary-General Kofi Annan says: "The greatest immediate danger arises from a nonstate group, or even an individual, acquiring and using a nuclear, biological or chemical weapon".

1 October US Health and Human Services Secretary Tommy Thompson, in an interview with the *Wall Street Journal*, says that the supplier of the department's new smallpox vaccine — the British biotech firm Acambis plc, formerly called Peptide Therapeutics Group plc [see 22 Aug 00] — is to accelerate its production schedule. The company had originally said that the vaccine would be ready by 2004 but now it plans to deliver 40 million doses to the US government in 2002. The new timetable has been adopted following intensive discussions between Acambis, the Food and Drug Administration and the National Institutes of Health. An unidentified DHHS official says that current planning is to only use the vaccine if there is an attack and even then not on a massive scale but only people at risk. On 4 October, Acambis confirms that it has accelerated its programme but gives no further details. The total order is later increased to 54 million doses, with production beginning in December, according to one report.

1–4 October In Paris, the Australia Group meets in plenary session. Participants condemn the 11 September attacks and agree that “the Australia Group has an important role to play in reducing the threat of CBW terrorist attacks.” The Group reviews developments in CBW proliferation over the past year and affirms the continuing effectiveness of national export controls on dual-use items that can be used in CBW programmes. The Group updates its common control lists in the light of technological developments since its last meeting. The press-release on the meeting also says that participants “reiterated their commitment to fair and transparent trade in chemical and biological materials for peaceful purposes. They agreed that the non-discriminatory application of national export licensing measures allows legitimate trade to expand unhampered by proliferation fears.” The Group also “urged all countries that are not participants in the Australia Group to implement similar national measures to prevent the proliferation of chemical and biological weapons.” In addition, the Group welcomes Bulgaria [see 28 Sep] as its 33rd participant.

2 October In New York, Simon & Schuster publish *Germes: Biological Weapons and America's Secret War* by New York Times journalists Judith Miller, Stephen Engelberg and William Broad. The book traces the history of the post-second-world-war US BW programme before its termination in 1969 and details the emergence of bioterrorism as a concern within the US administration. The book is based on interviews with persons formerly involved in the American offensive BW programme and with officials responsible for overseeing domestic preparedness efforts. In addition, the book provides more detail on the recently-revealed Defense Department and CIA biodefence projects [see 4 Sep].

2 October In the US House of Representatives, Congressman Sensenbrenner introduces comprehensive anti-terrorism legislation in the form of the *Provide Appropriate Tools Required to Intercept and Obstruct Terrorism (PATRIOT) Act of 2001* (HR 2975). The legislation is a response to the package of anti-terrorism measures proposed earlier by Attorney General Ashcroft [see 19 Sep]. Under Section 305 “biological weapons”, the possession of biological agents, toxins or delivery systems “of a type or in a quantity that, under the circumstances, is not reasonably justified by a prophylactic, protective, or other peaceful purpose” would become a criminal offence punishable by imprisonment for a maximum of 10 years. The act would also prohibit “restricted persons” from possessing or transferring select agents. “Restricted persons” are defined as those under indictment or sentenced for a crime punishable by imprisonment for over one year, fugitives from justice, unlawful users of controlled substances, illegal or unlawful aliens, persons adjudicated as mental defectives or committed to any mental institution, and aliens from countries deemed to be sponsors of terrorism.

On 4 October, the *Uniting and Strengthening America Act of 2001* (S 1510) is introduced in the Senate by Senators Leahy, Daschle, Lott, Hatch and Shelby. It is another comprehensive anti-terrorism package in response to Ashcroft's proposals. At Section 801, “terrorist attacks and other acts of violence against mass transportation systems”, the act would punish with a maximum 20-year sentence anyone who places a “biological agent or toxin for use as a weapon” on a mass transportation vehicle or in a mass transportation building or facility. At Section 802, “expansion of the biological weapons statute”, the legislation has provisions similar to those in the *PATRIOT* Act. Stronger provisions for the regulation of select agents as proposed in the last Congress by Senator Biden [see 12 Dec 00] had been included in an early draft of the *USA Act* from Senator Leahy, but they do not appear in the draft as formally

introduced. In an attempt to address concerns expressed by scientists, the Senate proposal adds “bona fide research” alongside “prophylactic, protective, or other peaceful purpose”.

2 October In the United States, the American Farm Bureau Federation calls on the administration to increase efforts to safeguard agriculture and the nation's food supply from biological or chemical attack [see also 14–15 Aug]. By letter from its president, Bob Stallman, it urges President Bush to appoint an appropriate specialist within the new Office of Homeland Security [see 20 Sep].

3 October In France, in the Assemblée Nationale, French Prime Minister Lionel Jospin announces that the government has just approved *Plan BIOTOX*, the national strategy for responding to a biological attack. According to reports, it is the first time that the Prime Minister has acknowledged the existence of a chemical or biological threat. Jospin states that capabilities for detecting an aerosol or water-borne release of biological agents will be improved and that decontamination facilities will be reinforced.

On 5 October, Health Minister Bernard Kouchner releases more details of *Plan BIOTOX*, which his ministry has been developing since late 1999 in cooperation with the Ministry of Defence and the Ministry of the Interior. *Plan BIOTOX* is centred on three pillars: prevention; surveillance and warning; and intervention in cases of crisis. Kouchner calls for research on vaccines and on specific antidotes. The French government is also seeking more cooperation on prevention at the European level. Implementation of the plan will cost 1.4 billion francs: 1 billion francs for the purchase of medications against anthrax, plague and smallpox; and 400 million francs to increase the staffing of epidemiological teams and reference laboratories. Another plan, *PIRATOX*, was developed for chemical threats in the early 1990s.

Detailed information about biological agents and toxins, their associated diseases and how to treat or protect against them is now being posted on several French websites, including those of the Institut de Veille Sanitaire (focused on “guides for epidemiological investigation” for botulism, brucellosis, anthrax, diphtheria, viral haemorrhagic fevers, plague, tularaemia, smallpox and the toxins ricin, saxitoxin and staphylococcal enterotoxin B), the Agence Française de Sécurité Sanitaire des Produits de Santé (focused on therapy for anthrax, plague, tularaemia, brucellosis, viral haemorrhagic fevers, smallpox and botulinum toxin), the Société Française d'Anesthésie et de Réanimation, the Société de Pathologie Infectieuse de Langue Française, the University of Paris 5 and the Institut Pasteur.

3 October In the US Senate, Senator Edwards introduces the *Biological and Chemical Weapons Preparedness Act of 2001* (S 1486). The bill would amend the *Public Health Service Act* by directing the Secretary of Health and Human Services to develop a coordinated plan for achieving a number of biological or chemical preparedness goals by 2010: first responders will have adequate response capacity, training, and technology; sophisticated electronic disease surveillance and information exchange; and development of the healthcare and public health workforce in key biopreparedness priority areas. The bill requests \$1.6 billion in funding, \$200 million more than the package proposed by Senators Frist and Kennedy [see 21 Sep], although S 1486 additionally includes provisions related to agro-terrorism and food security. The bill is referred to the Senate Health, Education, Labor and Pensions Committee. A similar bill (HR 3242) is introduced in the House of Representatives by Rod Blagojevich on 7 November.

In the following weeks, many bills relating to bioterrorism are introduced into the Senate and the House of Representatives. Like S 1486, many of them deal with the threat of agricultural bioterrorism, including the *Protecting the Food Supply from Bioterrorism Act of 2001* (S 1551), the *Agricultural Bioterrorism Countermeasures Act of 2001* (S 1563) and the *Food Supply Protection Act of 2001* (HR 3174). Most of these bills call for increased funding for the Department of Agriculture and for tighter regulation of food handling and processing facilities. Other legislative proposals aim to improve local and state preparedness for dealing with a bioterrorist incident, through the provision of federal grants, training programmes and awareness-raising activities. Examples include the *Biological and Chemical Attack Preparedness Act of 2001* (S 1508), the *State Bioterrorism Preparedness Act of 2001* (S 1520/HR 3153) and the *Public Health Emergency Planning and Information Act of 2001* (S 1574). There are also a number of miscellaneous proposals such as the *Protecting America's Children Against Terrorism Act of 2001* (S 1539/HR 3106), the *Bioterrorism Awareness Act of 2001* (S 1548) and the *Biological Agent-Environmental Detection Act of 2001* (S 1560). Some of these proposals are later written into comprehensive bioterrorism preparedness legislation, of which Senator Edwards' *Biological and Chemical Weapons Preparedness Act of 2001* is a precursor.

3 October In the US House of Representatives, the Committee on Energy and Commerce returns [see 20 May 99] to its consideration of the *Antiterrorism and Effective Death Penalty Act of 1996* [see 15 Apr 96] in response to Attorney General John Ashcroft's antiterrorism proposals to Congress [see 19 Sep]. The committee reports favourably on a bill (HR 3016) introduced earlier by its chairman, Billy Tauzin, to amend the *Antiterrorism and Effective Death Penalty Act*. According to Tauzin, the bill "closes loopholes and stiffens penalties for the possession of substances such as anthrax and other deadly biological agents and toxins that could be used for bioterrorist attack." Whereas the 1996 Act currently only regulates the transfer of select agents, HR 3016 would amend it to apply additionally to possession. The bill criminalizes the possession, use or control of a select agent "in a manner constituting reckless disregard for the public health and safety" and also criminalizes the possession of a select agent by an unregistered person, or the transfer of a select agent to an unregistered person.

The bill would amend the current US Code definition of "for use as a weapon" as follows; "The term 'for use as a weapon' includes the development, production, transfer, acquisition, retention, or possession of any biological agent, toxin, or delivery system, other than for prophylactic, protective, or other peaceful purposes." [Note: In regard to 'delivery system', this definition departs from Article I of the BWC which prohibits states parties from ever developing, producing, stockpiling, or otherwise acquiring "weapons, equipment or means of delivery designed to use such agents or toxins for hostile purposes or in armed conflict" with no exceptions for prophylactic, protective or peaceful purposes.]

The bill includes the following provision on the disclosure of information: "Any information in the possession of any Federal agency that identifies a person, or the geographic location of a person, who is registered pursuant to regulations under this section ... and any site-specific information relating to the type, quantity or identity of a biological agent or toxin ... or the site-specific security mechanisms in place to protect such agents and toxins, shall not be disclosed" under the Freedom of Information Act. The US-German Sunshine Project later point out detrimental effects such a provision would have on the transparency of US biodefence research and on US ability to

submit meaningful returns under the BWC CBMs. The bill requires the Secretary of Health and Human Services to report to Congress not later than one year after its enactment on the compliance by government and private entities with the regulations of the *Anti-Terrorism and Effective Death Penalty Act*.

Although HR 3016 is not pursued, an identical bill, the *Bioterrorism Enforcement Act of 2001* (HR 3160) is considered on the floor of the House of Representatives and passed on 23 October. Measures relating to biological weapons, although not including the provisions relating to the disclosure of information, are also included in the two anti-terrorism packages currently being considered in the Senate and the House [see 2 Oct] which eventually become law as the *USA PATRIOT Act of 2001* on 26 October.

3 October The *Los Angeles Times* reports that some federal agencies have removed information from their websites which could benefit terrorists planning further attacks. Among those affected is a CDC report on the dangers of chemical plant terrorism and EPA information on risk-management programmes for communities living near chemical plants. In addition, the Federation of American Scientists decides to remove a number of pages giving details of the locations of US military facilities.

4 October The UK government publishes information pertaining to the responsibility for the terrorist attacks in the US on 11 September. The document includes a number of "clear conclusions" reached by the government: "Usama Bin Laden and Al Qaida, the terrorist network which he heads, planned and carried out the atrocities on 11 September 2001; Usama Bin Laden and Al Qaida retain the will and resources to carry out further atrocities; the United Kingdom, and United Kingdom nationals are potential targets; and Usama Bin Laden and Al Qaida were able to commit these atrocities because of their close alliance with the Taleban regime, which allowed them to operate with impunity in pursuing their terrorist activity." The document also includes the following: "From the early 1990s Usama Bin Laden has sought to obtain nuclear and chemical materials for use as weapons of terror." The report makes no mention of possession of, or attempts to acquire, biological weapons [but see 14 Sep UK]. The information is later circulated as a document of the UN Security Council.

4 October At UN headquarters, the First Committee (Disarmament and International Security) of the 56th UN General Assembly, begins its work, which is due to end on 9 November, by electing its officers and adopting a work programme. Ambassador André Erdos of Hungary had been elected as committee chairman on 13 September.

4 October In Florida, a London-born man is diagnosed as suffering from pulmonary anthrax, the first confirmed case in the state since 1974. The patient — 63-year-old Robert Stevens, a photo-editor employed by American Media Inc of Boca Raton — dies next day. At first there is supposition that he had somehow become exposed to naturally occurring anthrax bacteria, but then spores of the bacterium are found inside the AMI building, including spores on the computer-keyboard of the dead man and up the nose first of one mailroom clerk, who subsequently develops pulmonary anthrax, and then of another.

4-7 October In Ferney-Voltaire, France, the World Medical Association holds its 160th Council meeting, at which the American Medical Association submits a policy proposal on biological weapons. The proposal calls for the establishment of an international consortium of medical and public health

leaders to monitor the threat, to help train physicians and other healthcare workers in response methods, and to build up adequate supplies of vaccines and pharmaceuticals. The meeting is attended by David Heymann of the WHO, who encourages greater collaboration between the WHO and national medical associations worldwide. WMA Secretary General Delon Human says that the association is developing a communication network between individual physicians and national medical associations to more effectively respond to potential threats.

The WMA Council also urges the adoption of "an effective verification protocol" to the Biological Weapons Convention, the education of physicians and public health workers about emerging infectious diseases and potential biological weapons and increased laboratory capacity to identify biological pathogens. The meeting approves a resolution urging national medical associations worldwide to take an active role in promoting an international ethos condemning the development, production, or use of toxins and biological agents that have no justification for prophylactic, protective, or other peaceful purposes. The Council also urges all physicians who participate in biomedical research to consider the implications and possible applications of their work and to weigh carefully in the balance the pursuit of scientific knowledge with their ethical responsibilities to society.

5 October In The Hague, the OPCW publishes its *Annual Report 2000*. This is a glossy version, with a foreword by the Director-General, of the report on the implementation of the CWC that had been adopted by the Conference of the States Parties at its session in May [see 17 May].

5 October In London, *Tribune* reports on the corporate links, including a French connection, between DynCorp Aerospace Operations (UK) Ltd, which has a US State Department contract involving chemical-spray eradication of coca cultivations in Colombia [see 4 Jan], and DynPort Vaccines [see 12 Nov 97], which is among other things a supplier of anti-BW vaccines to US armed forces.

6 October In Afghanistan, Northern Alliance forces are being trained in the use of CBW weapons by American and British experts, and a Taliban soldier has recently fallen victim to the weapons. So reports the Islamabad *Khabrain*, quoting Dr Sultan Bashiruddin, described as a prominent nuclear scientist and president of the Organization for the Renaissance of Islamic Brotherhood.

7 October US military aircraft begin attacking targets in Afghanistan on the basis that Osama Bin Laden and other Al-Qaeda members are believed to be in the country as guests of the Taliban government. The operation, known as *Enduring Freedom*, is directed primarily against air defences and command and control centres and is supported by cruise missiles fired from longer ranges by aircraft, surface ships and submarines. UK forces also participate by providing in-flight refuelling for US Navy aircraft and by launching cruise missiles from a Royal Navy submarine in the Indian Ocean.

Both the US and the UK inform the UN Security Council of their actions by letter to its president, in accordance with Article 51 of the UN Charter. The US letter raises the possibility of military operations being extended beyond Afghanistan: "There is still much we do not know. Our inquiry is in its early stages. We may find that our self-defence requires further actions with respect to other organizations and other States." The UK letter emphasizes the objectives of the military campaign: "this military action has been carefully planned, and is directed against Usama Bin Laden's Al-Qaeda terrorist organization and

the Taliban regime that is supporting it. Targets have been selected with extreme care to minimize the risk to civilians."

8 October In Pretoria High Court, where the trial of Brigadier Wouter Basson [see 30 Aug] is now in its 23rd month, senior prosecutor Anton Ackerman applies to subpoena three foreign witnesses: Swiss military intelligence chief Peter Regli and two of Basson's alleged "financial principals", Dieter Dreier and Yusuf Murgham. The court turns down the application. [For further detail, see *Proceedings in South Africa*, above.]

8 October The European Union, represented by Ambassador Jean Lint of Belgium, enters the general debate of the First Committee of the UN General Assembly with a statement that, on the Biological Weapons Convention, includes the following: "The Member States of the European Union have taken an active part in the negotiations of the ad hoc Group on a legally binding Protocol establishing a verification and compliance regime. According to the statement by the Foreign Ministers of the European Union ... [see 11 Jun], a Protocol including the essential principles set out in the EU's Common Position ... [see 17 May 99] would strike the right balance between compliance requirements and the national security interests and the economic interests of the States Parties. Such a Protocol would thus effectively strengthen the Convention and increase confidence in its strict application. We regret the fact that the ad hoc Group was unable to finalise the work on a Protocol strengthening the Convention, or even to adopt a procedural report [see 17 Aug]. In the light of this failure, the EU reiterates the fundamental importance it attaches to the preservation and reinforcement of multilateral disarmament and non-proliferation regimes and to compliance with the ad hoc Group's terms of reference. Convinced that the biological weapons threat calls for an appropriate multilateral response, the European Union will retain and build on the experience it has acquired over many years of negotiations, including the composite text. It points to the importance it attaches to the process of strengthening the Convention, for which the next focal date will be the November [Review] Conference in Geneva." On the Chemical Weapons Convention, the EU statement emphasizes the importance of the destruction obligations laid down in the Convention and welcomes the presentation by Russia of its revised chemdemil programme at the most recent OPCW Executive Council session [see 25-28 Sep].

8-17 October The UN General Assembly First Committee [see 4 Oct] conducts its general debate before entering its thematic discussions. Included in most of the interventions are comments on biological weapons. More than thirty address the BWC Protocol negotiation [see 3 Aug]. According to one observer, most of the statements expressed "varying degrees of neglect" at the failure of the Ad Hoc Group to reach agreement on a protocol to the BWC in time for the 5th Review Conference. Many also expressed support for the work of the Ad Hoc Group, the continuing validity of its mandate and the importance of multilateral disarmament negotiations.

9 October In Slovakia, the Economy Ministry publishes a report on arms exports, which also addresses exports of dual-use goods including two potential precursors of chemical-warfare agents, namely sodium sulphide and triethanolamine. The report states that there has only been one actual export of these chemicals to what the Slovak news agency TASR calls a "risky country": sodium sulphide to Syria. But orders had been placed by Iran and Libya for sodium sulphide, and by Egypt, Pakistan and Syria for triethanolamine, and the Ministry is now advising cancellation of the contracts. It has plans for improved import/export controls on "materials of special specification."

9 October UK Foreign Office Minister Ben Bradshaw says on Australian television that he believes the al-Qaeda network to have biological weapons. He is reported as saying: "We know that the Al Qaeda network has been trying to get hold of biological and chemical weapons for the last 10 years. We believe they've probably got some. What we're not sure about is whether they've got a delivery mechanism." Bradshaw continues: "There is no specific threat that we are aware of. ... We know that they have been trying to accumulate biological and chemical weapons. We fear that they might have succeeded in doing this. We know that Bin Laden has operatives in more than 65 countries of the world and we do not doubt their will to use these weapons, if they're given an opportunity." These remarks stand in contrast to the evidence published earlier by the UK government, which makes mention of attempts by al-Qaeda to procure chemical and nuclear materials, but not biological [see 4 Oct UK].

Later the same day, *Channel 4 News* broadcasts details of a draft government contingency plan for tackling the "deliberate release of chemicals and biological agents". The plan, drawn up by the Cabinet Office, includes the following: "Although the threat of such action is low, the consequences are potentially enormous. It is likely that the number of casualties would far exceed that resulting from any previous major incident in this country". Interviewed on the programme is Robin Cook, the leader of the House of Commons, who says that the "war cabinet", which held its first meeting this morning, had discussed the CBW threat to the UK. He continues: "People shouldn't feel alarmed. We are not aware of any specific threat from Osama bin Laden in the UK, whether biological or anything else. The possibility of a biological attack is assessed as low. There are well-developed and practised systems for local authorities to respond to such a threat. It's important to keep it in perspective. We are not aware of a specific threat, we are not anticipating it and we think it is a low risk, but it is very important we are ready."

The next day, UK Home Secretary David Blunkett plays down fears that al-Qaeda have biological weapons amid reports of irritation in Whitehall that Bradshaw was not "singing from the same hymnsheet" as other ministers. Blunkett calls for calm saying: "We do not know that what happened in Florida [see 4 Oct] came from a terrorist attack – it may well have come from a madman who wished to cause fear and dissension." Speaking the same day at a lobby briefing, the Prime Minister's official spokesman states that the government believes there is no current specific threat and that it does not think that al-Qaeda has the means to deliver chemical or biological weapons. He also cautions against scare-mongering by the press.

9 October In the US Senate, the Public Health Subcommittee of the Health, Education, Labor, and Pensions Committee holds hearings to examine effective responses to the threat of bioterrorism. The subcommittee chairman is Senator Edward Kennedy who, together with subcommittee member Bill Frist, recently [see 21 Sep] proposed an increase in anti-bioterrorism funding building on legislation passed in 2000 [see 20 Sep 00]. Mohammad Akhter, the executive director of the American Public Health Association calls for the re-examination of mass vaccination against smallpox and anthrax, beginning with emergency workers: "We discontinued smallpox immunizations because the threat was low. Now the threat has risen to higher levels once again, and it is time to re-examine that policy. We should appoint a high level of experts to look at the risk level and truly re-examine once again whether we should immunize our people against anthrax and smallpox."

9 October At the US Defense Department daily press briefing on the attacks against Afghanistan, US Secretary of Defense

Donald Rumsfeld is asked if he has evidence of al-Qaeda or the Taliban attempting to produce chemical or biological weapons. Rumsfeld responds as follows: "Well, without getting into evidence, there's—terrorist networks have had relationships with a handful of countries. Among those handful-plus of countries are nations that have active chemical and biological programs. Among those countries are nations that have tested the weaponization of chemical and biological agents." He is then asked if Iraq is one such nation: "Oh, there's no question. We have—the world knows that Iraq used chemicals on its own people, let alone on its neighbors, at a previous period. Absolutely."

9 October US Postal Inspector Dan Mihalko tells reporters that, prior to 11 September, his office had investigated more than 60 mailed anthrax-contamination threats during the current year, and many more during previous years; all were hoaxes. He was responding to questions stimulated by the mounting belief that the two cases of inhalation anthrax at the Florida office of American Media Inc [see 4 Oct] had been due to mailed anthrax spores.

9 October In Florida, anti-crop biological-weapons research was conducted for the US Air Force at Boca Raton during 1952–59 according to an investigation by *Palm Beach Post* reporter Eliot Kleinberg, who had interviewed veterans of the programme. The work included field trials of aircraft spray systems for the plant fungus that causes stem rust of rye. The fungus, grown during summertime at an army airfield in Pocatello, Idaho, came from stores at Dugway Proving Ground, Utah.

10 October In Germany, Bayer AG announces that it will reopen a mothballed plant in order to increase production of ciprofloxacin by 25 percent from 1 November in the light of the ongoing anthrax campaign in the US. In the week ending 28 September (before the first confirmed anthrax case), sales of Cipro in New York had increased 27 per cent on those for the same week in the previous year. Cipro gained FDA approval for post-exposure treatment of inhalation anthrax during the previous year [see 28 Jul 00]. Bayer's exclusive rights to Cipro in the US do not expire until 2003, thus preventing the production and sale of cheaper generic versions. As demand for Cipro from the general public increases over the following days, there are calls, including from members of Congress, for the government to overrule Bayer's patent and allow other manufacturers to undertake licensed production. In addition, manufacturers of generic versions of Cipro in India, where patent rules are less strict, offer cheaper versions of the drug to the US government. The US government soon confirms that it is in negotiations with Bayer but does not initially rule out the option of ordering from other suppliers.

Later in Canada, the government places an order for 1 million generic Cipro tablets from a local company with which Bayer is in a patents lawsuit. Bayer, with support from the Pharmaceutical Research and Manufacturers of America, criticises the Canadian move and threatens legal action. The Canadian government is eventually reverses its policy and agrees to buy Cipro from Bayer at \$1.30 a dose.

On 24 October, after threatening to pass legislation allowing licensed production of Cipro by other companies, Secretary for Health and Human Services Tommy Thompson announces that he has agreed terms with Bayer for the supply of extra doses of the drug. Whereas the US government had previously paid a discounted price of \$1.77 per dose, under the new agreement it will buy 100 million doses at 95 cents each, with the option to buy a further 100 million at 85 cents and a third 100 million at 75 cents. Bayer also agrees to donate 2 million doses to the DHHS for emergency workers and a further 2 million for postal workers.

10 October The Federal German government announces that it will be establishing a biological warfare information centre at the Robert Koch Institute to act as a clearing-house for information about potential threats and to co-ordinate risk assessment and potential countermeasures. The announcement coincides with fears gripping Berlin after a powder-containing envelope labelled "Attention! This will change your life" had been found earlier in the day in the garage of a furniture store. This is later shown to be a hoax. Next day, ten hoax envelopes labelled "The holy war has begun" are delivered in Wiesbaden.

10 October In Munich, a Libyan man, Mohamed Lased Ben Heni, is arrested as a suspected member of the Salafist Group for Faith and Combat, described as a militant offshoot of the Armed Islamic Group (GIA) that is backed by Osama bin Laden. Other suspected members are arrested in Milan, where transcripts of telephone conversations intercepted by Italian antiterrorist police are part of the evidence being compiled by prosecutor Stefano Dambruoso and are subsequently quoted in newspapers. These transcripts disclose an active interest in the use of chemical weapons, and one of the charges against those arrested in Milan is that of importing chemical weapons into Italy. One theory, reported in the London *Sunday Times*, is that the "suffocating gas", presumed to be cyanide, which the men were discussing was to be used to attack the American embassy in either Rome or London [see also 17 Feb and 16 Sep]. However, Dambruoso denies that any such evidence emerged from his investigation. He acknowledges the references to "suffocating gas" but not to the location of the targets. On 6 November, Dambruoso requests that the men be brought to trial. They are charged with, among other things, dealing in chemical weapons and chemical agents. More documents are also discovered linking the men to Al-Qaeda and its training camps in Afghanistan.

10 October US Assistant Secretary of State for Arms Control, Avis Bohlen, addresses the UN General Assembly First Committee during its general debate [see 8–17 Oct]. She relates US thinking on alternatives to the BWC Protocol, which the US had earlier rejected [see 25 Jul]. Much of her statement is on biological weapons, particularly the danger of them falling into terrorist hands: "There is intense concern that some of these terrorists and criminals may continue to seek to acquire and use weapons of mass destruction. This gives the international community important and persuasive reasons to redouble our non-proliferation and arms control efforts. We must also strengthen other mechanisms intended to ensure that toxic and dangerous materials remain under appropriate control and are used solely for legal and constructive purposes. The United States Government is actively examining these questions, and we would welcome ideas and views of others on how best to achieve these goals." She continues: "This possibility must give new urgency to our efforts to combat the threat of biological weapons — and by weapons I mean here biological agents used with lethal intent. A first step must be to strengthen the norms against use of biological weapons, to make clear and doubly clear that this form of terrorism, like all others, is unacceptable. We believe that the international community ... must equally clearly state that any use of biological weapons — whether by a state, an organization or an individual — would be a crime against humanity to which the international community will respond. We must also make clear that transfer of BW and other toxins to those who would use them is similarly unacceptable.

On the negotiations to draft a protocol to the BWC, she states the following: "Last July, we made clear that we could not support the protocol, because the measures that were proposed to enforce the ban against possession and development

are neither effective or equitable — and given the inherent properties of biological products it seems all but certain that they can never be made so. This continues to be our view. But in addition, the events of September 11 have reinforced our view that the priority focus must be on use. The international community must here and now state our abhorrence of use, as suggested above; we must all strengthen our national laws criminalizing use and transfer, and we must all agree that use and transfer are crimes to which our many mutual treaties of extradition would apply. We must give ourselves the means to question and challenge in the event of suspected use. And we must be able to distinguish an outbreak of illness caused by BW from a naturally occurring illness. And in the unthinkable event that a major BW incident occurs somewhere, we need to pool as much as we can our knowledge and expertise to minimize the effects. That is why the United States is working closely with many nations to improve our common preparedness to mitigate and respond to BW attacks, and why we intend to expand this cooperation, especially in the area of medical consequence management."

Bohlen has the following to say on the CWC: "The U.S. is also fully engaged in international efforts against chemical weapons. Our goals remain the worldwide destruction of existing stocks of chemical weapons and full compliance with the prohibition of the development, production, stockpiling and use of these weapons of mass destruction. We are also assisting the Russian Federation in its stockpile destruction program. We note that it is not only chemical weapons activities that are of concern. In Japan, terrorists made and used nerve gas. It is essential that Chemical Weapons Convention (CWC) member states put in place national laws and other regulations that help to keep materials for making chemical weapons out of unauthorized hands and ensure effective prosecution of those who make or use chemical weapons."

10 October In Washington, the US Health and Human Services Secretary, Tommy Thompson, and his UK counterpart, Alan Milburn, sign an agreement on *Collaboration in Improving Public Health Responses to Emergencies*. A Department of Health and Human Services press release notes that areas of collaboration will include joint scenario planning, disease surveillance and early diagnosis, treatment for novel diseases and appropriate vaccine capacity. According to Milburn, "We will jointly review our surveillance systems, review all possible threats, no matter how remote, test our contingency plans and strengthen them where necessary, in order to seek new and innovative ways of providing even higher standards of public protection." Other countries are also reportedly interested in joining the initiative.

10 October The US Sentencing Commission, which is an independent agency in the judicial branch of the US government, announces that it is seeking to increase penalties for offences that involve the use of nuclear, biological or chemical weapons, or any other weapon of mass destruction, as well as any threats, attempts or conspiracies to use such weapons. To this end the Commission has already proposed an amendment to the federal sentencing guidelines. The amendment had been transmitted to the Congress on 1 May and would automatically take effect on 1 November unless the Congress passed disapproving legislation.

10 October In Florida, where there is intensive screening for anthrax of people known to have visited or worked in the AMI building in Boca Raton [see 9 Oct], federal authorities are now conducting a criminal investigation into the origin of the spores. Quoting unidentified law-enforcement sources, the *Miami Herald* reports that it was an Ames strain of *B anthracis* that had

killed Robert Stevens; a typing that is subsequently confirmed for each of the three people by now found to have been exposed. Throughout the United States alarm about possible bioterrorism is intensifying and spreading rapidly. In Washington, DC, the State Department building is partly evacuated after an unknown powder falls from an envelope in the mailroom; Fire Department spokesman Alan Etter says "We're walking a fine line between prudence and panic here".

11 October In Japan, the government decides to enact legislation enabling ratification of the International Convention for the Suppression of Terrorist Bombings [see 15 Dec 97].

11 October In Israel, the population is prepared for a biological or chemical attack, according to the results of a survey conducted for the IDF Home Front Command by the Technion. The survey was carried out the previous summer and follows up a similar survey carried out at the time of the Gulf war, interviewing many of the same people. The survey finds that more than 95 per cent of the population have gas masks and that the skill level in their use is 90 per cent. A report on the survey in the *Jerusalem Post* also claims, without attribution, that 26 countries have biological and chemical weapons and the means of delivering them, while 12 others are in the process of acquiring or producing them.

11 October In Ankara, Turkish State Minister Mehmet Kececiler speaks at a news conference about a recent attempt to smuggle half a ton of sodium cyanide into Syria. A truck containing the chemical had been stopped by Turkish customs officers at the Cilvegozu border crossing on 27 September. The minister stresses the vigilance of the customs directorates regarding transfers of substances that can be used in the manufacture of CBW and nuclear weapons.

11 October Italy has activated its emergency plan for bioterrorism, so Health Minister Girolamo Sirchia announces at a press conference in Rome. Its key element, he says, is the creation of a network of doctors for rapid detection of disease. He also states that 5 million doses of smallpox vaccine are available.

11 October In the US Senate, Senator Bill Frist introduces a resolution (S Res 171) expressing the sense of the Senate concerning the provision of funding for bioterrorism preparedness and response. It is co-sponsored by 25 other Senators. The resolution expresses the sense of the Senate that the US should make a substantial new investment in bioterrorism preparedness and response, including: "(1) improving State and local preparedness capabilities, hospital response capabilities, disaster response medical systems, and the National Pharmaceutical Stockpile program; (2) upgrading the capabilities of the Centers for Disease Control and Prevention (CDC); (3) targeting research for therapeutics and vaccines for bioterrorist agents and food safety activities; and (4) increasing international cooperation in securing biological agents, increasing surveillance, and retraining biological warfare specialists." The resolution is eventually incorporated into the *USA PATRIOT Act of 2001* which is signed into law on 26 Oct [see 2 and 3 Oct].

11–12 October In Glion, Switzerland, a meeting on *The Future of Biological & Toxin Arms Control* is convened by the Geneva Forum, which is a joint initiative of the Quaker United Nations Office in Geneva, the United Nations Institute for Disarmament Research (UNIDIR) and the Programme for Strategic and International Security Studies of the University of Geneva Graduate Institute of International Studies (IUHEI).

The meeting is attended by 22 representatives of governments and non-governmental organizations. The main purpose of the meeting is outlined in a later summary as generating "useful and practical suggestions on how to strengthen the biological and toxin arms control regime despite recent setbacks and thus help in the formation of long-term government policies." The summary lists a number of short-term priorities relating mainly to the future of the Ad Hoc Group and the composite text and to preparations for the forthcoming Fifth Review Conference. Longer-term priorities listed include the establishment of a mechanism to monitor compliance with the BWC, the beginning of multilateral trial inspections and the closer involvement of the biotech industry in strengthening the BWC.

11–12 October In Knokke, Belgium, the directors general for civil protection from the 15 European Union member states convene in extraordinary session. As mandated by the Justice and Home Affairs Council [see 20 Sep], they consider responses to a large-scale terrorist attack inside or outside the EU in the light of the 11 September attacks in the US. Among a number of measures agreed upon is the establishment of a group of nuclear, chemical and biological experts available 24 hours a day to assist any country which requests their help, and a commitment to better coordination between health services, with a view to gathering information on serums, vaccines, antibiotics and the availability of hospital beds. These measures are to be brought into effect by 31 October. A longer-term objective is the creation of a self-tuition programme to increase the preparedness of those in charge of response operations, particularly those of a nuclear, chemical or biological nature.

12 October In Bulgaria, the deputy chief of the General Staff Battalion for Nuclear, Chemical and Biological Protection and Ecology, Col Asen Asenov, has told the *Sofia Novinar* that, in the preparation of a report to NATO, all archives since 1945 had been checked for evidence of Bulgaria having received, stored, developed or used chemical or biological weapons, and that "nothing of this kind had been done".

12 October In the Czech Republic, the government is planning to introduce legislation to implement the Biological Weapons Convention. The Prague *Hospodarske Noviny* reports that the state does not have full control over dual use biological-warfare materials such as botulinal toxin, which can legally be imported for use in the cosmetics industry. The newspaper quotes the director of the State Institute for Nuclear, Chemical and Biological Protection, Stanislav Bradka, as follows: "A national control office will be set up, such as the one existing for chemical weapons. Lists of individual substances will be drawn up. There will be substances requiring a licence and substances that firms will have to report [to the control office]. As a result, there will be records on how these substances are handled." The State Nuclear Safety Office is now finalizing preparation of the bill and will ask parliament to pass it in short-track proceedings, a request that the opposition parties are not expected to oppose.

12 October In the UK, the Public Health Laboratory Service (PHLS) issues guidance on how to deal with the deliberate release of anthrax to medical professionals. More detailed guidelines are posted on the PHLS website in a provisional form, they are frequently updated over the coming weeks. The PHLS has been making contingency plans for bioterrorism for the past two years, but an added urgency has been injected into the planning following the events in the US.

Questioned later in the House of Commons, Health Secretary Alan Milburn outlines the steps which the

government has taken to protect the public against an attack with biological or chemical weapons: "First, since the atrocities took place, the chief medical officer has reviewed all our plans for protecting the public from any possible biological or chemical attack. Secondly, extensive contingency planning is already in place based on guidance that we issued to the NHS last year, well before the appalling events in New York, Washington and elsewhere in America. New guidance has been issued and we are planning to issue still further guidance. Thirdly, we have taken the appropriate steps to secure additional supplies of drugs and equipment for use in an emergency. Fourthly, we have cascaded details to doctors about how they can access information from the Public Health Laboratory Service website on signs and symptoms of anthrax. Finally, ... I signed in Washington last week [see 10 Oct] a joint United Kingdom–United States agreement on protecting our people from bio-terrorism by pooling our intelligence, our expertise and our planning." Milburn continues: "We have taken those steps not because there are specific threats against us, but because it would be foolish to be anything other than vigilant. I believe that we should take great comfort from the fact that in this country we have some of the very best public health experts in the world, and in our emergency services we have people who have a hugely impressive track record of dealing with extremely demanding situations. We shall, of course, keep all our plans under active review."

The Chief Medical Officer, Liam Donaldson, states that there is no evidence of an "immediate threat or risk" but stresses that adequate planning is underway. An unidentified "senior health source" is reported as saying that the NHS has stockpiled additional vaccines and antibiotics and is now "ready and prepared" to respond to a major BW incident. Donaldson is reluctant to provide further information: "There are some areas where we do have to be cautious about information. We do not want to give information that may help terrorists." He goes on: "I think we are very well prepared. We have one of the best public health systems in the world."

12 October In England, at the University of Sussex, a private workshop on *The General Purpose Criterion of the Chemical Weapons Convention* is convened by the Harvard Sussex Program. Participants are from industry, government, the UK CWC National Authority Advisory Committee, and HSP.

12 October In New York City, Mayor Rudolph Giuliani announces that anthrax tests are being done at NBC News offices in the Rockefeller Center and at the Times Square headquarters of the *New York Times*. An NBC employee has contracted cutaneous anthrax having, on 25 September, handled a white-powder-containing envelope, so the company has just disclosed. Three days later, ABC News announces that it has been affected by anthrax: the 7-month-old child of one its employees who had probably been in the ABC newsroom on 28 September has contracted cutaneous anthrax. Subsequently there are reports of cutaneous anthrax cases at CBS News and the *New York Post*. The NBC and *Post* cases are later correlated with letters that had been postmarked at a Trenton, New Jersey, facility on 18 September.

12–14 October In Georgia, at Musgrove on St Simon's Island, a conference on *Biological Weapons: Threat Assessment, Arms Control, and Demilitarization* is convened by Global Green USA. The invitees — mainly but not only Americans — are from the non-governmental organization, foundation, government and academic worlds, the purpose being to identify strategies that NGOs might adopt to address concerns surrounding nonproliferation and demilitarization of facilities once associated with biological weapons.

13 October In South Korea, military authorities are reported by the Seoul *Choson Ilbo* to estimate that 10 per cent of the cannon projectiles held by North Korea are for chemical or biological payloads, as are 50–60 per cent of North Korean Scud missiles.

13 October In the UK, the *British Medical Journal* carries a European Commission-funded report on the surveillance of infectious diseases within the European Union. The article is based on studies of five past outbreaks of meningococcal disease, salmonella food poisoning, shigella food poisoning, legionnaire's disease and influenza H5N1, each of which involved more than one EU member state. The study reports a number of inadequacies in EU disease surveillance and response including: failure to identify and report cases; failure to inform other countries, inadequate preparedness planning; inadequate funding arrangements; failure to link information to action; failure to provide capacity for international outbreak investigation; and failure to share lessons. Among the article's conclusions is the following: "Untoward events, natural or deliberate, such as those due to terrorism or biowarfare may appear simultaneously in multiple locations. Recognition of the nature of the event requires alert clinical services and effective reporting to national surveillance authorities. Early recognition that the event is of international importance requires swift exchange of rumour, data, and information between national authorities." An accompanying editorial calls for the establishment of a small European centre for surveillance of infectious diseases which would coordinate the activities of national networks, develop broader European strategies and provide the European Commission with technical advice on public health issues.

13 October In Carson City, Nevada Governor Kenny Guinn tells a news conference that an envelope received from Malaysia at a Microsoft office in Reno had contained anthrax contamination, though no one in the office had tested positive for anthrax exposure. In Kuala Lumpur next day, Malaysian Foreign Minister Syed Hamid Albar expresses shock and states that "As a matter of policy, the government ... will extend its fullest support and cooperation to the US authorities". He observes that Malaysian authorities had not confirmed that "the letter did indeed originate from Malaysia, or that it was not tampered with in the United States itself". On subsequent retesting, the envelope's contents prove negative for anthrax.

14 October In Kabul, the laboratory that had been established by the International Committee of the Red Cross in 1997 to work on anthrax, and which had been taken over by the Taliban on 16 September, presents no threat as it uses only vaccine strains of the disease organism, according to the manager of the ICRC relief effort in Afghanistan, Christophe Luedi.

14 October Germany has supplied US armed forces with pathogens for the production of biological weapons, so the Hamburg *Welt am Sonntag* reports. However, a Ministry of Economics spokeswoman refutes the allegation saying that all exports permits were granted in accordance with the export law which is "the strictest in the world". Her denials are reinforced by a Foreign Ministry spokesman who says that Germany produces "neither chemical nor biological weapons". [Note: The story seems to be a recycled version of one which was first reported on earlier in the year. It cites the 1999 export controls report issued by the German government which lists an export of "chemical and biological agents" worth DM 77.4 million to the US. However, it would appear that the subcategory "chemical and biological agents" in German export control law is a very

broad one and includes protective clothing. The entry in the 1999 report actually refers to an export of protective clothing for tropical climates from Blücher GmbH to the US Marine Corps.]

14 October French health minister, Bernard Kouchner, announces that France is going to resume production of smallpox vaccine amid the current concern over bioterrorist attacks. The government is going to procure three million doses to add to its existing stockpile of five million doses which Kouchner says are available and are not out-of-date. The vaccine will be produced by Aventis Pasteur. Kouchner also says that the health authorities have at their disposal a "very sufficient" stockpile of antibiotics for the treatment of anthrax. He adds that government is not considering the mass vaccination of the population against smallpox as the vaccine itself can be quite dangerous. At the request of the Health Ministry, the Comité Technique des Vaccinations reports on 6 November that there are currently no grounds for the vaccination of health workers and emergency personnel against smallpox.

15 October In Israel, postal authorities send six suspect envelopes from two undisclosed locations for examination at the Israel Institute for Biological Research at Nes Ziona. On television, Defence Minister Binyamin Ben-Eliezer warns that the country could face a nonconventional terrorist threat, "mainly biological", if the campaign in Afghanistan [see 7 Oct US] continues.

15 October UK Home Secretary David Blunkett delivers a statement to the House of Commons on the legislative steps needed to give the government sufficient additional powers "to counter the threat from international terrorism". An emergency Bill is currently in preparation, which, among other things, will give powers in relation to the movement, possession and use of biological, radiological and nuclear materials similar to those provided for chemicals under the Chemical Weapons Act 1996.

15 October In Ottawa, part of the Canadian Parliament is sealed off after an employee develops a rash after opening an envelope containing white powder. The Canadian government is today publishing a security bill that would provide it with additional powers against terrorists.

By now, several countries besides the United States, Germany [see 10 Oct], Israel [see 15 Oct] and Canada have been afflicted by white powder or 'anthrax letter' scares, and there are many more over the coming weeks. Those countries where, by the end of October, the authorities have publicized — or at least not suppressed — information about such incidents include Argentina, Armenia, Austria, Australia, Bahamas, Bahrain, Belgium, Brazil, Bulgaria, China, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Hong Kong SAR, Hungary, India, Ireland, Italy, Japan, Jordan, Kazakhstan, Kenya, Lithuania, Malaysia, Mexico, the Netherlands, New Zealand, Norway, Pakistan, Poland, Portugal, Russia, Saudi Arabia, Serbia, Slovakia, South Africa, Spain, Sri Lanka, Sweden, Switzerland, Thailand, Trinidad, Uganda and the United Kingdom. Only in domestic US incidents, in envelopes mailed from the United States to Kenya and Argentina, and in episodes in the Bahamas and Pakistan, have actual anthrax-causing bacteria reportedly been found. In the Kenyan case, however, re-testing by the CDC did not confirm the initial finding. The same happened in the Bahamian case. In the Pakistani episode, a preliminary finding is later denied then reiterated. The Argentine anthrax spores are found to be a harmless vaccine strain. Countries where there appear to have been no reports of anthrax letters but where authorities announce their preparedness to respond to incidents of

biological or chemical terrorism include Greece, Nigeria, the Philippines, South Korea, Taiwan, Turkey and Ukraine.

15 October US National Security Adviser Condoleezza Rice comments on the US position on the BWC protocol [see 10 Oct US]. she says: "I think that anyone who really thinks that the biological weapons protocol as it is currently drafted would stop the likes of people that we're worried about right now from getting biological weapons would have to really think twice. We do not believe that the protocol ... serves the interests of the United States or anyone else that is trying to stop the spread of biological weapons." She continues: "We're working with our allies to think about ways that we might strengthen the regime against these weapons, but inspection continues to be a huge problem because these are easy to hide."

15 October In the United States, the threatening-mail campaign against abortion [see 19 Feb 99 and 14 Jan 01] has been continuing. The Planned Parenthood Federation of America today announces that 90 of its clinics in at least 13 states had received envelopes containing threatening letters and an unidentified powdery substance. The National Abortion Federation announces similar threats at at least 80 of its clinics. No anthrax bacteria have been identified in these powders.

At a news conference next day, FBI Director Robert Mueller says that, during the first half of October alone, the FBI has received 2300 reports of suspected anthrax attacks.

15 October In Washington, a letter opened in the office of the Leader of the US Senate, Senator Tom Daschle, has been found to contain a powder testing positive for anthrax, both on preliminary and on confirmatory testing. The US Capitol mail service is suspended. It is President Bush who first discloses the Daschle letter, when appearing briefly before reporters with Italian Prime Minister Silvio Berlusconi. Asked about a possible link to Osama bin Laden, President Bush says: "I wouldn't put it past him, but we don't have any hard evidence".

Senator Daschle next day tells reporters, after attending a closed briefing on what had in the meanwhile been learned about the powder during its examination at Fort Detrick, that the letter had contained "a very strong form of anthrax, a very potent form of anthrax that was clearly produced by someone who knows what he or she is doing". Another senator at the briefing is quoted, unidentified, in the *Washington Post* as saying that the anthrax had been characterized as "weapon grade" — a strange expression that is also used by House Minority Leader Richard Gephardt and widely repeated. An unidentified federal official is quoted as saying that the particles of the Daschle powder are "especially small". Some clarification is later provided by the commander of the US Army Medical Research and Materiel Command, Maj-Gen John S Parker, who tells a news conference that tests had shown the anthrax organisms to be a "common variety" that could be killed by a range of antibiotics, and that, under the microscope, "the sample was pure spores"; he declines, however, to comment on particle size. The Daschle letter had been postmarked at Trenton, New Jersey, on 9 October.

On the House of Representatives side of the US Capitol complex, buildings are closed to enable a "methodical sweeping" to check for evidence of anthrax, and later all Congress office buildings are closed, after it is found from nasal swabs that some 30 Capitol Hill workers have been exposed to anthrax spores. The House adjourns for five days.

Russian health authorities offer to supply the United States with vaccines against anthrax "if the necessity arises".

16 October In Bratislava, the Chief of the Defence Ministry Military Health Service, Igor Combor, tells reporters that about

a thousand Slovak military personnel are to be vaccinated against anthrax. The vaccine, to be acquired from Britain, will cost around US\$0.2 million. Combor also states that no biological weapons remained in Slovakia after the 1993 split of Czechoslovakia. The former Czechoslovak Army had gathered such weapons on the territory of the current Czech Republic, and had "had to destroy them in the 1970s in accordance with an international convention".

16 October In Luxembourg, EU Justice and Home Affairs ministers again [see 20 Sep] meet to consider anti-terrorism measures, including the creation of a special task force and an EU counter-terrorism intelligence unit, new provisions for extradition of suspect terrorists among EU member states, and cooperation with US authorities.

Later, in the European Parliament, President Nicole Fontaine calls for an EU summit of health and internal ministers to plan an EU initiative against bioterrorism.

17 October In the UK, where the latest anthrax-letter scares have been at the London Stock Exchange and a Royal Mail sorting office in Liverpool, the government releases provisional guidelines to the emergency services and medical personnel on how to cope with the deliberate release of chemical or biological weapons. Guidance from the Public Health Laboratory Service and the Chemical Incident Response Service is provided on how to manage incidents and outbreaks caused by chemical or biological weapons and how to determine whether illnesses have been caused naturally or by deliberate action. Additionally, the PHLS posts on its website interim guidelines for action in the event of a deliberate release of smallpox, botulism and plague, in addition to the information on anthrax already posted [see 12 Oct]. The information is frequently updated over the next few weeks.

17 October At UN Headquarters in New York, the International Committee of the Red Cross addresses the First Committee of the General Assembly. The statement includes the following: "The Fifth Review Conference of the Biological Weapons Convention should strongly reaffirm the long-standing public abhorrence of the use of any form of biological weapon by any party to a conflict for any purpose whatsoever. It should also reaffirm the international community's total rejection of this form of warfare, contained in both the 1925 Geneva Protocol and the BWC. States Parties are urged, at the upcoming Review Conference, to spare no effort to strengthen the BWC. This is particularly urgent to ensure that rapid advances in the fields of microbiology, genetic engineering and biotechnology are used to benefit humanity and are not turned against it."

17 October President Bush transmits to the Congress his proposals for spending the final \$20 billion of the \$40 billion in emergency supplemental appropriations that the Congress had approved three days after the events of 11 September [see 14 Sep]. The package includes \$1.6 billion to the Department of Health and Human Services for programmes to respond to chemical and biological threats. Of this amount, \$643 million would be used to acquire medicines, supplies and equipment for the National Pharmaceutical Stockpile to treat an additional 12 million persons, \$509 million would be used to accelerate production of the smallpox vaccine, \$34.6 million to expedite the work of the FDA on bioterrorism vaccines, \$175 million for state and local efforts related to bioterrorism, \$88 million to expand the capacity of DHHS to respond to bioterrorism incidents, and \$61 million would be used to enhance the frequency and quality of imported food inspections. The emergency appropriation of \$1.6 billion is in addition to the

Department's regular FY 02 budget request of \$345 million for bioterrorism preparedness [see 16 Aug]. The Department of Agriculture would receive \$14.1 million for the design and construction of a facility for storing and researching biohazardous material at Ames in Iowa and \$13.9 million to increase bioterrorism preparedness.

Later, on 23 October, within a \$1.7 billion release of emergency funding, President Bush allocates \$3 million to the Department of State for an international component in the next TOPOFF biological terrorism exercise [see 20-30 May 00].

17 October US President Bush announces his intention to nominate Dale Klein to be Assistant to the Secretary of Defense for Nuclear, Chemical and Biological Defense Programs.

17 October US Secretary for Health and Human Services Tommy Thompson transmits to the Congress his Department's draft anti-bioterrorism legislation, the *HHS Bioterrorism Prevention and Emergency Response Act of 2001*. The proposal includes measures to clarify the current regulations governing transfers of select agents and provides new authority to regulate the possession, use and transfer of those select agents which the Secretary of Health and Human Services finds to be a threat to national security. In addition, the proposed legislation would exempt any information provided in accordance with its provisions from being disclosed under the Freedom of Information Act [see 3 Oct].

17 October In the US Senate, the Governmental Affairs Committee and its International Security, Proliferation and Federal Services Subcommittee convene a hearing on *Federal Efforts to Coordinate and Prepare the United States for Bioterrorism: Are They Ready?* Secretary for Health and Human Services Tommy Thompson announces that President Bush has today requested an additional \$1.5 billion to combat bioterrorism [see 17 Oct President Bush]. Thompson adds: "Bioterrorism has not ... been a high fiscal priority in the past. And we need to move aggressively. ... President Bush has, from his first days in office, made a serious commitment to addressing the issue of bioterrorism." Thompson also announces that the FDA is approving new labelling for the use of several antibiotics, including doxycycline, to treat anthrax. The FDA later issues a *Federal Register* notice clarifying that the doxycycline and penicillin G procaine are currently approved for use in treating all forms of anthrax infection and encouraging companies to update the labelling of these products with this previously unspecified information.

17 October The US pharmaceutical industry establishes a Task Force on Emergency Preparedness chaired by the CEO of Aventis Pharma, Richard Markham, and including the CEOs of American Home Products Corporation, Merck & Co, Inc, Pfizer Inc and Pharmacia Corporation, the chief operating officer for pharmaceutical operations of GlaxoSmithKline and the president of PhRMA. Its announcement states that "As the country deals with the challenges of bioterrorism, the pharmaceutical industry has created a Task Force on Emergency Preparedness to assist the federal government in any way that we can. ... The members of the task force, and all members of PhRMA, are at the service of President Bush and all federal agencies in his administration to answer questions and provide whatever other assistance is needed. We will work with the government on how best to address the public health challenges the government has identified to date." The task force is beginning its work today by meeting with Health and Human Services Secretary Tommy Thompson and with members of Congress. On 22 October, PhRMA announces the addition of three new members to the task force: the president

of the pharmaceutical division of Bayer Corporation; the chairman and CEO of Bristol-Myers Squibb Company; and the senior vice-chairman of Johnson & Johnson.

18 October In Washington, the Board on Health Promotion and Disease Prevention of the Institute of Medicine meets to review the links between agent orange and acute myelogenous leukemia. The meeting is the seventh under the IoM's *Review of the Health Effects in Vietnam Veterans of Exposure to Herbicides: Third Biennial Update* project.

18 October The US Federal Bureau of Investigation joins with the US Postal Service in offering a "reward of up to one million dollars for information leading to the arrest and conviction of those responsible for terrorist acts of mailing anthrax". The announcement is made at a White House press briefing on homeland security, described as the first of many such opportunities to be taken by the newly installed Director of the Office of Homeland Security [see 20 Sep Washington], Governor Tom Ridge. Five people have now been infected by anthrax and a sixth possible case is being evaluated; many more have tested positive, through nasal swabs, for exposure to anthrax bacteria. Some particulars of the first four of these cases — two of inhalation anthrax, one fatal, in Florida, and two of cutaneous anthrax in New York — are described next day in a report from the CDC in its *Morbidity and Mortality Weekly Report*, which states that "These are the first confirmed cases of anthrax associated with intentional exposure in the United States and represent a new public health threat". It is also reported next day, by Governor Ridge, that the anthrax bacteria in the Daschle (Washington), NBC (New York) and AML (Florida) letters were of the same strain.

18 October In New Orleans, the US Department of Commerce, in cooperation with the Defense Threat Reduction Agency, hosts a seminar on the Chemical Weapons Convention. According to the advance publicity, the seminar is to provide updated approaches to inspection preparation for Schedule 2, Schedule 3 and Unscheduled Discrete Organic Chemical plant sites based on lessons learned from recent inspections, including declaration issues that have affected on-site verification activities. The publicity also states that some 650 US facilities are currently subject to inspection under the *CWC Regulations* that implement the CWC in the United States [see 30 Dec 99].

19 October In Geneva the Director General of the World Health Organization, Gro Harlem Brundtland, announces that she has asked the WHO Smallpox Advisory Group to review guidelines on smallpox vaccination. The current guidelines, last updated in 1998, recommend that only individuals at risk of exposure should be vaccinated. Brundtland has now asked the advisory group whether this recommendation should be modified to take account of any potential situation in which smallpox is released deliberately to cause infection.

The results of the review are announced on 26 October. The primary guidelines remain as before; mass vaccination is not recommended: "Existing vaccines have proven efficacy but also have a high incidence of adverse side-effects. The risk of adverse events is sufficiently high that mass vaccination is not warranted if there is no or little risk of exposure. Individual countries that have reason to believe that their people face an increased risk of smallpox because of deliberate use of the virus are considering options for increasing their access to vaccines. The vaccines would be given to people who are at risk of exposure to smallpox, including health and civil workers, and would be used in a search and containment exercise should an outbreak occur." Further advice and background

information on smallpox is made available on the WHO website, including a slide set of training materials on smallpox. The WHO also announces that it has re-established a team of technical experts in smallpox who are available to assist countries in the investigation of and response to outbreaks.

19 October In Ghent, Belgium, the heads of state and government of the 15 European Union member states gather for an informal meeting of the European Council. Among the declarations adopted is one on EU follow-up to the 11 September attacks and the fight against terrorism. The declaration announces that the EU is prepared to engage with the US in a number of reciprocal initiatives which include "enhancement of the joint efforts with regard to non-proliferation and export controls regarding both arms and chemical, bacteriological and nuclear substances capable of being used for terrorist purposes." The declaration goes on: "The European Council has examined the threats of the use of biological and chemical means in terrorist operations. These call for adapted responses on the part of each Member State and of the European Union as a whole. No attack of this kind has occurred in Europe. The authorities will maintain increased vigilance and cooperation between the intelligence, police, civil protection and health services will be stepped up. In tandem with the measures already taken, the European Council asks the Council and the Commission to prepare a programme to improve cooperation between the Member States on the evaluation of risks, alerts and intervention, the storage of such means, and in the field of research. The programme should cover the detection and identification of infectious and toxic agents as well as the prevention and treatment of chemical and biological attacks. The appointment of a European coordinator for civil protection measures will be part of the programme."

19 October In Washington, White House science adviser Jack Marburger convenes a meeting of the dozen or so federal officials who are in charge of the \$90 billion that federal agencies spend each year on research and development in order to discuss how their research programmes can contribute to the 'war on terrorism' [see also 26 Sep]. The meeting reportedly serves as a briefing for the White House Office of Science and Technology Policy on the strengths and weaknesses of relevant research programmes.

19 October US "hot tests" at sea of live BW agents during the 1960s [see 25 Feb 98 and 3 Aug 00] are described in the *Hartford Courant*, which reports that the Defense Department last month began to issue 'fact sheets' on some of the tests to veterans' hospitals and organizations. Some US Navy personnel involved in the tests are attributing to them their subsequent poor health. Thus far there have been three fact sheets, each on a set of trials — Autumn Gold, Copper Head and Shady Grove — conducted during 1963–65 under Project SHAD (Shipboard Hazard and Defense).

21 October In Iraq there has been a massive relocation of CBW weapons and factories since the death from anthrax of Robert Stevens in Florida [see 4 Oct] according to the London *Sunday Telegraph* quoting "a senior Western intelligence official" who has reportedly said: "The entire contents of their chemical weapons factories around Baghdad have been moving through the nights to specially built bunkers" chiefly in the northeast region of Hemrin. Factories for chemical weapons and missiles are said to have been relocated to the areas of Baiji and al Safar in the north-west. A "US government source", again unidentified, tells reporters next day that "Iraq is moving some of its chemical weapons industry to underground bunkers".

22 October In Tashkent, Uzbek and US officials sign an agreement between the US Defense Department and its Uzbekistan counterpart whereby the United States will spend up to \$6 million dismantling the former Soviet biological weapons test site on Vozrozhdeniye Island [see 19 Apr]. The work will involve removing anthrax buried on the island and decontaminating the soil. In addition, the US will also help Uzbekistan upgrade security at sites where biological agents and toxins are stored. The agreement is an extension of an earlier umbrella security agreement [see 6 Jun] signed between the two countries. According to Stratfor.com, the \$6 million budget is insufficient to decontaminate the island and the team being sent will likely be a "test-and-guard" team to examine any samples and to protect the agents buried there. The *Washington Post* reports that a US team had, earlier this month, travelled to Kazakhstan to help decommission a former BW facility where anthrax spores were found in a pipe.

22 October In Kabul, Taliban Information Ministry spokesman Abdul Hanan Himat tells a Reuter's news agency reporter that chemical and biological weapons are being used by the US-led forces that are now in the third week of their air attacks on targets in Afghanistan. He says he has learnt this from "doctors in Herat and Kandahar", continuing: "The effects are transparent on the wounded; a state of poisonousness is one of them". The reporter states that the accusation could not be independently confirmed. A week later, the Taliban public health minister, Mulla Mohammad Avas, and two Kabul doctors reiterate and expand the accusation at a press conference. They speak of numerous cases of people dying inexplicably after air raids with signs and symptoms that could be attributable to chemical weapons. According to Dr Waziri, a surgeon at the Wazir Akbar Khan hospital in the city, "Most of the victims have had respiratory problems and internal bleeding for which there is no apparent cause". He says that tissue or other samples had not been taken. There is apparently no press-reporting of any attention during the news conference to the possibility of blast, rather than toxic, injury. In Quetta, Pakistan, two days later there is a large demonstration against the alleged use of CBW weapons, reportedly on the call of Taliban supreme commander Mulla Omar.

22 October In France during the past week there were about a thousand bioterror alerts across 58 departments, so French Health Minister Bernard Kouchner tells a news conference. In no case had either anthrax infection or anthrax bacteria been detected. Prosecutions for hoaxing had been initiated against 13 people.

22 October In the United Kingdom, the status of the investigation by the Wiltshire Constabulary, operation Antler, into past experiments at Porton Down on volunteers [see 24 Aug] is described to the House Commons by a Home Office minister: "A full inquiry has now been carried out into the death of an individual during an experiment in 1953, resulting in a report being forwarded to Her Majesty's coroner for Swindon and the county of Wiltshire. The coroner has since made recommendations to the Attorney-General. Following a thorough investigation into the circumstances relating to a number of allegations made by volunteers who attended Porton Down and participated in experiments, between 1939 and 1989, a number of reports have now been forwarded to the Crown Prosecution Service. Investigations into other allegations continue and further files will be submitted in due course". The minister also says that the cost of the inquiry, as at the end of September, stood at £1,333,930, towards which the Home Office had made a grant of £0.87 million.

22 October In Washington, two postal workers have just died, probably (as is later confirmed) from inhalation anthrax. Announcing this, the Director of the Office of Homeland Security, Governor Tom Ridge, also states that two other postal workers have contracted inhalation anthrax. All four workers were from the Brentwood postal facility, which handles mail for Capitol Hill and many other places in the Washington area, all of whose 2000-plus workers have now been put on antibiotics, and where environmental testing is in progress. The two who died had been to see their doctors the day previously, complaining of flu-like symptoms. The Daschle letter [see 15 Oct] remains the only piece of anthrax-contaminated mail to have been found in Washington, but anthrax bacteria have been detected in the separate mail rooms of the House and Senate and also, 15 blocks away from the Capitol, in a local sorting office. The postal system itself has evidently become contaminated, and anthrax spores are being detected in the mailrooms of more and more office buildings.

22 October The US Department of Commerce Bureau of Export Administration announces new impositions of civil penalties upon exporters that have violated Australia-Group- and CWC-related export controls. One is a \$496,000 civil penalty imposed on Entegris Inc of Minnesota in regard to the unlicensed export by a company it now owned, Fluoroware Inc, of diaphragm valves and components to Taiwan and Israel on 124 occasions between February 1996 and December 1998. Another is a \$48,000 civil penalty imposed on A.X.O. Chemical Inc of Miami for unlicensed export of triethanolamine and hydrofluoric acid to the Dominican Republic on 13 occasions between July 1997 and May 1999.

22 October US Assistant Secretary of State for Arms Control Avis Bohlen [see 10 Oct] and Special Negotiator for Chemical and Biological Arms Control Don Mahley arrive in Europe for a tour of European capitals to inform allies of US proposals [see 25 Jul] on strengthening the BWC. They start in London, and travel on to Paris, Berlin and Brussels. While in Brussels, the US delegation meets with representatives of CODUN, the European Union working party on global disarmament and arms control. According to unidentified State Department officials, the US initiative includes a proposal to make the use, production, import and export of biological weapons a criminal activity in countries currently without such laws. Other proposals mentioned include funding more research into illnesses caused by biological weapons and expanding the sharing of information and expertise to curb the threat. Referring to the Ad Hoc Group, one official says that the intention is to "not limit ourselves to this multilateral disarmament forum ... You can't just use arms control instruments. We're looking at things the international community can do in common." Secretary Bohlen encounters concern over the expression "biological agents used with lethal intent" that she had employed in the UN General Assembly First Committee [see 10 Oct], but it transpires that they were her own words and were not to be understood as desire on the part of the Bush Administration to exclude non-lethal biological agents from the scope of the BWC. Later, Bohlen and Mahley also visit Japan, Australia and Canada.

23 October In Kuala Lumpur, Malaysian Science, Technology and Environment Minister Datuk Seri Law Hieng Ding opens a two day *International Conference on Ethics in the Biotechnology Century*. Law denies any links between Malaysia, Osama bin Laden and the recent anthrax campaign in the US [see also 13 Oct]: "Nobody has done it before in Malaysia. There is no evidence to link Malaysia. Here, everything is peaceful."

23 October In Luxembourg, the 15 agriculture ministers of the European Union meeting as the Agriculture Council are briefed by the European Commissioner for Health and Consumer Protection, David Byrne, on EU responses to bioterrorism. Byrne says that he has already met with several ministers for health and that the Commission will this week be raising the issue with agricultural experts in the Standing Committee on Foodstuffs and both the Standing Veterinary Committees on Public Health and Veterinary Health. According to Byrne: "The intention is to begin a process for the urgent review of our present defence systems against any potential bio-terrorism attack in the areas of animal and food production." Byrne goes on to explain that, at an EU level, powers and preparedness in the agricultural area are much more comprehensive than in the area of human health, as the latter has traditionally been left to member states whereas experiences such as BSE and foot-and-mouth have created a very effective system for agriculture. Byrne adds: "This approach has its limitations as we are now finding in relation to bioterrorism. ... We have a Community measure in place for the storage and rapid distribution of vaccines for Class I animals diseases such as foot and mouth disease. However, we have no similar systems for human diseases."

23 October In the UK, a programme on the CWC and BWC is broadcast on BBC Radio 4 *File On Four*. During the course of the programme, US Assistant to the Secretary of Defense for Nuclear, Chemical and Biological Defense, Anna Johnson-Winegar, says that the US is unlikely to meet even the extended 2012 deadline for the destruction of its chemical weapons stockpile and associated facilities: "The results of our recent Defense Acquisition Board review have given us now a more realistic schedule that we can look to, and it appears that we will not be able to meet the April 2007 deadline. It would really be quite ambitious for us to be able to expect to complete the destruction of the weapons, even with the five year extension [to 2012]." She continues: "We're doing everything that we can to maintain an aggressive schedule, but I think it's high time that we introduce some reality into the schedule."

On the subject of strengthening the BWC, Johnson-Winegar says: "I think that an inspection regime should be part of such a convention. Again that's my personal and professional opinion, and how good the treaty would be without an inspection regimen is subject to your interpretation." When asked if US national security would be better protected by having an effective BWC with teeth, Johnson-Winegar replies: "There's certainly a lot of support for that feeling, yes."

Also interviewed is OPCW Director-General José Bustani who reveals that the OPCW has been unable to implement more than half of the industry inspections planned for 2001 due to the current financial crisis. He states: "The budget is not realistic as it depends on money that is supposedly to be paid, but does not necessarily come the same year. As well, some countries do have delays, important delays in paying, one of them being the United States itself that only paid two days ago two million Euros that were required for us to proceed our activities. We will not be in a position anyway to fulfil the totality of our programme of work this year." He concludes: "I think that some member states, and in particular I believe that the United States still have to come to terms with the fact that the OPCW is here to stay and it should be supported politically as well as financially as a valid instrument of international peace and security."

23 October UK Foreign Office Minister Ben Bradshaw, responding to a parliamentary question about the last meeting of the BWC Ad Hoc Group [see 17 Aug], writes: "The meeting concluded without agreement on a Protocol text or a future negotiating process. We continue to support the strengthening

of the BTWC and have regular discussions with like-minded partners about further options to achieve this objective."

23 October In London, the scientific journal *Nature* publishes on its website a "special online focus" on anthrax and other potential bioweapons, stating that "Recent events have confirmed that bioterrorism is no longer a threat but a reality". The focus includes pre-publication of two research papers on anthrax toxin, both scheduled for the 8 November print edition, as well as a collection of research, news and feature articles from the *Nature* electronic archive.

23 October In Ireland, the Department of Health and Children posts its *Protocol for dealing with suspected anthrax in Ireland*, which comprises version 4 of its interim guidelines. The guidance is updated over the following weeks.

23 October At the United Nations General Assembly in New York, the chairman of the First Committee [see 4 Oct] introduces into it a draft resolution on global efforts against terrorism [see 1 Oct] in the area of disarmament and non-proliferation. The draft is revised on 6 November. The revised draft recalls the connection between international terrorism and, inter alia, the illegal movement of chemical and biological materials made in Security Council resolution 1373 [see 28 Sep]. It also reaffirms multilateralism as "a core principle" in disarmament negotiations, emphasizes that progress is urgently needed in disarmament and non-proliferation in order to help maintain international peace and security and to contribute to global efforts against terrorism, and, finally, the draft calls on all UN member states to renew and fulfil their individual and collective commitments to multilateral cooperation in the area of disarmament and non-proliferation. The draft is adopted by the Committee without a vote on 6 November. The General Assembly adopts the resolution also without a vote on 29 November.

23 October The US Congress reconvenes, though several House and Senate office buildings remain closed [see 15 Oct] for environmental testing and decontamination. Of the approximately 5,000 people on Capitol Hill tested for anthrax exposure, 28 were positive.

23 October In the US House of Representatives, the Subcommittee on National Security, Veterans' Affairs, and International Relations of the Committee on Government Reform convenes a hearing on *Biological Warfare Defense Vaccine Research & Development Programs*. Secretary of Health and Human Services gives more details of how the additional \$1.5 billion requested last week [see 17 Oct] by President Bush for bioterrorism preparedness will be spent. In particular, he says that the National Pharmaceutical Stockpile will be expanded to include 12 rather than the current 8 "push packs" and that the current stock of drugs to treat inhalation anthrax should be increased from 2 million doses to 12 million. Also testifying is Anna Johnson-Winegar of the Department of Defense. She reviews the recently-submitted Department of Defense *Report on Biological Warfare Defense Vaccine Research & Development Programs* [see 7 Sep] and concludes as follows: "the DoD vaccine program is technically very complex and our requirements are diverse and challenging. For the near-term, our vaccine-dependent medical readiness for force protection against BW and terrorist use of BW agents will be limited. Over the long-term we are committed to effective immunization as our cornerstone of force protection. Realization of this goal will require changes in our business practices, expanded participation by the pharmaceutical industry complemented by a GOCO/COCO vaccine capability, and a long-term national commitment to the program's

success." Also testifying are representatives of the biotech industry: Stephen G Sudovar, president and CEO of EluSys Therapeutics, Inc. on behalf of the Biotechnology Industry Organization; and Una S Ryan, president and CEO of AVANT Immunotherapeutics, Inc.

23 October At Yale University, a symposium on *Averting Hostile Exploitation of Biotechnology* is sponsored by the Institution for Social and Policy Studies as part of the Yale Bioethics Project. The principal speakers are Harvard molecular biologist Matthew Meselson, Yale political scientist Paul Bracken, and Yale molecular biophysicist William Summers.

23 October The US Defense Department project [see 4 Sep] to develop for protective purposes the genetically modified form of the anthrax bacterium developed by Russian scientists [see 1 Dec 97] has now been approved and will be run under contract at the West Jefferson, Ohio, laboratory of the Battelle Memorial Institute, so the *New York Times* reports.

24 October In Bratislava, during an international conference on *Democracy Threatened and Strengthened — the Fight Against Organized Crime, Drug Trafficking and Terrorism*, German terrorism specialist Rolf Tophoven cautions against hysterical reaction to the possible threat of bioterrorism but warns that there could be no response to an attack by nerve gas spread through municipal pipelines.

24 October In the United Nations General Assembly First Committee (Disarmament and International Security), the representative of Canada, Christopher Westdal, introduces a draft resolution on the CWC, sponsored also by Poland and Uruguay. The draft emphasizes the importance of universality, notes the ongoing work of the OPCW, stresses the vital importance of the full and effective implementation of and compliance with the CWC and stresses the importance to the Convention that all possessors of chemical weapons and production or development facilities should be among its states parties. The draft is later adopted by the Committee without a vote. The General Assembly adopts the resolution also without a vote on 29 November.

24 October In the US House of Representatives, the Appropriations Committee completes its mark-up of the FY 2002 Defense Appropriations Bill. It has established a new account called *Counter-Terrorism and Defense Against Weapons of Mass Destruction*, for which it has appropriated \$11.8 billion, which is \$1.4 billion more than the administration had requested. The new account consolidates several previous ones including national and theatre missile programmes, Nunn-Lugar Cooperative Threat Reduction, chemical and biological weapons defence, counterproliferation, arms-control technology and Defense Threat Reduction Agency.

25 October In Italy, a formal inquiry has been opened at the NBC defence establishment at Santa Lucia di Civitavecchia [see 27 Nov 00] where there is a warehouse into which a newspaper reporter, Antonio Maria Mira of *Avvenire*, had recently gained easy access and found himself in the presence of much old mustard gas.

Reporting this, the Riete weekly *Tiberiade* notes various other places in the country where there may still be chemical weapons. The magazine states, without citing any authority, that, back in the days of the US binary munitions programme [see 11 Jul 90], there had been plans for the forward deployment of the new chemical weapons at 16 depots in Italy. The first two of these were built, so *Tiberiade* reports, at San Vito al Tagliamento and at Morsano al Tagliamento.

25 October At UN Headquarters in New York, the Department for Disarmament Affairs hosts a symposium on terrorism and disarmament. The symposium is opened by Under Secretary-General for Disarmament Affairs, Jayantha Dhanapala. Speaking on the use of biological weapons by terrorists, Paul Wilkinson, a terrorism expert from the University of St Andrews says: "If one is dealing with a very high grade of biological weapon, in which case the Biological Weapons Convention, so heavily criticized by many, should be revisited. Moreover, I hope in those countries that have become disappointed or disillusioned with the effort at arms control in that field, and disarmament, should revisit that problem and attempt to adapt this international legislation more strongly to the prevention of the proliferation of these materials into the hands of terrorists." Addressing the dangers of chemical terrorism, Mikhail Berdennikov from the OPCW says: "An effective anti-terrorist strategy dealing with chemical terrorism has to address all ... possible scenarios and terrorists should be prevented either from producing or using chemical weapons, as well as from acquiring and using hazardous chemicals as means of inflicting casualties. It is obvious that the lion's share of the work to protect against chemical terrorism lies with national governments. However, we believe that international organizations such as the OPCW do have a role in reducing the risks and the levels of risks involved, in particular, in the longer term." The issue of biological weapons is addressed by the chairman of the BWC Ad Hoc Group, Tibor Tóth of Hungary: "For the first time, we are witnessing in real time the breach of an important norm. There is a question, what is *ground zero* in terms of the moral, political and legal destruction. ... Here I would like to remind you that the prohibition regime of the Biological Weapons Convention is a multi-layered arrangement. There are outer layers, like recent codification efforts, for example, in the context of the Ad Hoc Group negotiations to strengthen the Convention. There are layers like review conferences, which take place every five years. Then, there is the very important layer: the Convention itself, the 1975 Biological Weapons Convention, which contains important prohibitions, such as non-development, non-production, non-acquisition, non-transfer or non-weaponization of agents. There is an inner core layer, that is, the 1925 Geneva Protocol, which prohibits under certain circumstances the use of both chemical and biological substances. There are certain precursors of the 1925 Geneva Protocol, both legally binding and customary, the 1899 Hague Convention, which is itself based on certain customary rules. Some date back for centuries, because the use of poisonous materials was historically considered to be repugnant to the conscience of mankind." Tóth continues: "In my judgment, *ground zero* is at least affecting as many layers as there are up to the 1925 Geneva Protocol. So all these elements are being challenged by this occurrence of use, and they might be going beyond that as well. That point can be made probably independent, whether we are speaking about a domestic incident or whether the perpetrators are not nationals of this country. From the point of view of challenging and undermining these rules, be it legally binding or customary rules, I think the situation is very similar."

25 October In Washington, at the latest Homeland Security press conference, new information is released about the physical characteristics of the anthrax-letter powders [see 15 Oct Washington]. General Parker of USAMRIID says that the Daschle-letter powder can drift in the air and that the *New York Post* powder is clumpy. Also, the Daschle powder contains additives whose identity is still being determined. Further: "When we look at these spores underneath a microscope, they are uniform in size and highly concentrated and highly pure. And these individual spores are very light, and if given some

energy from, say, wind or clapping or motion of air in a room, they will drift in the air and then fall to the ground.” Governor Ridge says that, in all cases, the anthrax bacteria are of an Ames strain. He also says: “It appeared that the *New York Post* sample was clumpy and rugged and the Daschle sample was fine and floaty”. This difference is later attributed to the *Post* letter having got wet during the process of delivery.

At a subsequent Homeland Security press briefing, on 29 October, General Parker is again asked about the additive in the Daschle sample and says that the presence of aluminium in it has now been definitively excluded, which means that the additive cannot, as some had surmised, be the bentonite that Iraqi bioweapons designers had favoured.

25 October From Washington, the National Security Archive (a non-governmental organization) posts on its website *The Nixon Administration's Decision to End U.S. Biological Warfare Programs*, which is a compilation of documents, mostly US state papers obtained under the Freedom of Information Act, detailing the 1969–70 decision by the United States to abandon its biological weapons. The 25 documents now posted recount the growing awareness within the Nixon administration of criticisms of its policy on chemical and biological weapons, which led the President's National Security Advisor, Dr Henry Kissinger, to initiate a fullscale policy review by the National Security Council during the summer of 1969. The documents set out the various policy options for biological weapons, such as whether the United States should or should not ratify the 1925 Geneva Protocol, whether it should maintain an offensive R&D programme, and whether it should maintain a capacity for the use of incapacitating biological agents. Following the submission of the NSC study, President Nixon ordered unilateral US renunciation of biological weapons, later extended to toxin weapons as well. He announced the termination of the offensive BW programme during a visit to Fort Detrick on 25 November 1969. The documents also relate to the associated decisions by the administration to submit the 1925 Geneva Protocol to the Senate, and to support the draft BW convention proposed by the UK in Geneva.

Some of the documents and the information they contain have long been in the public domain. But not all; particularly notable is a memorandum to the President from Defense Secretary Melvin Laird dated 6 July 1970, to which is attached an inventory of the biological agents and munitions that were now to be destroyed. The stockpile comprised about 5000 US gallons (some 19,000 litres) each of VEE virus and Q Fever rickettsiae in liquid suspension; 365 kg of tularemia bacteria in dry-powder formulation; 100 kg of anthrax bacteria also in dry form; 72,000 kg of wheat-rust fungus; 846 kg of rice-blast fungus; 4450 toxin- or simulant-filled M1 munitions; 71,696 toxin-, bioagent- or simulant-filled M2 munitions; 21,150 bioagent- or simulant-filled M4 munitions; 90 simulant-filled M5 munitions; and 168 bioagent- or simulant-filled M32 munitions. [Note: Since the biological agents had a strictly limited shelf life, meaning that freshly made supplies would have presumably had to be rotated through the stockpile rather rapidly, the quantities held at any one time would have borne some relation to the consumption of agent anticipated during the period between commencement of biological warfare and the return to production of the various still-warm production and filling facilities at Pine Bluff Arsenal and elsewhere. Note also the absence of US Air Force munitions from the stockpile.]

25–28 October In San Francisco, the Infectious Diseases Society of America holds its 39th annual meeting. The gathering of 4,500 infectious-disease specialists is dominated by discussion of the current anthrax cases on the east coast. Concerns are raised about the possibilities for the misuse of

scientific knowledge. Thomas Inglesby of the Johns Hopkins Center for Civilian Biodefense Studies says: “We should be cognizant of the power of our own science. ... We have to have a conversation among ourselves about this. If we don't, people who are not scientists will impose rules on scientists.”

26 October In the US Congress, following intensive negotiations between the Senate and the House of Representatives, bipartisan agreement is finally reached on comprehensive anti-terrorism legislation [see 2 Oct]. Later this day, the *USA PATRIOT ACT of 2001* is signed into law by President Bush (PL 107-56). With respect to biological weapons, Section 817 of the legislation creates two new criminal offences. The first prohibits “restricted persons” from possessing select agents; at the urging of Congress, the Administration had accepted a narrower definition of “restricted person” than it initially proposed [see 19 Sep]. The second new offence prohibits the possession of any biological agent, toxin or delivery system of a type, or in a quantity, that “is not justified by a prophylactic, protective, bona fide research, or other peaceful purpose” [see 3 Oct]. Section 801 of the act includes the provisions relating to attacks on mass transportation systems from the Senate's package [see 2 Oct]. At Section 1013, the act includes the text of an earlier Senate resolution expressing support for increased funding for bioterrorism preparedness and response [see 11 Oct].

Speaking after passage of the act, Senator Leahy expresses his concerns with some of the bioterrorism-related provisions, particularly the second of the two new criminal offences: “I remain troubled by the subjectivity of this new criminal prohibition, and question whether it provides sufficient notice under the Constitution. I also share the concerns of the American Society of Microbiology and the Association of American Universities that this provision will have a chilling effect upon legitimate scientific inquiry that offsets any benefit in protecting against terrorism. While we have tried to prevent against this by creating an explicit exclusion for ‘bona fide research’, this provision may yet prove unworkable, unconstitutional, or both. I urge the Justice Department and the research community to work together on substitute language that would provide prosecutors with a more workable tool.”

27 October In Taipei, at Hsiaoanmen subway station, more than a thousand military, police, medical and environmental-protection personnel participate in an exercise of responses to terrorist release of toxic gas into the city's Mass Rapid Transit system. The drill lasts for 90 minutes and had been preceded by rehearsals on the two previous days. Afterwards, Premier Chang Chun-hsiung says that the primary objectives had been to test the government's response capability, to sensitize the public to chemical/biological terrorist threats, and to familiarize them with the necessary countermeasures.

27 October From Tel Aviv, *Middle East Newsline* reports that the Israel air force has recently staged an exercise at the Ramat David airbase to test its readiness for a Syrian chemical weapons attack.

29 October In New York, at the Council on Foreign Relations, the authors of the recently published book *Germs: Biological Weapons and America's Secret War* [see 2 Oct], appear on a panel to discuss the book. One of the authors, Stephen Engelberg, expresses his doubts that the current anthrax cases are linked to international terrorism: “Your average international terrorist looks for the biggest possible extravaganza. The exposures here ... have been caused by something the perpetrators may well not have known about, which is the ‘billows effect’ of a letter being pumped by the processing machine in a

mail place and then mail handlers getting the disease. That was probably unexpected." Another of the authors, Judith Miller, says that the problems being experienced in tracing the anthrax perpetrators might make biological weapons attacks more attractive to terrorists: "If [the terrorists] have some degree of assurance that we will never know who did this, it might embolden them. And that was always one reason that we became very concerned about this category of weapon."

30 October In Israel, the International Policy Institute for Counter-Terrorism publishes an "interim analysis" of the anthrax-letters campaign. As to the identity of the perpetrator, the paper puts forward three alternatives: the Al-Qaeda network, Iraq, or right-wing extremists in the US. The paper concludes that "as long as there is no proof that bin Laden's men or American extremist elements have developed the capability to produce advanced forms of anthrax — something that they have not had up to now — the Iraqi track is still valid. The regime of Saddam Hussein is the only rogue element which has used chemical weapons against its enemies on a massive scale. Saddam did not hesitate to use chemical weapons against Iran in the Iran-Iraq war, nor even against Iraqi citizens, as shown by the bombing of the Kurdish town of Halabja in northern Iraq in 1988. Furthermore, Iraq is the only state which has the motivation and the stamina to support such an operation, provided it could avoid being seen to be directly involved."

30 October In Luxembourg, the ministers responsible for research in the 15 member states of the European Union meet as the Research Council. A discussion on bioterrorism is added to the agenda. The Council notes the intention of the European Commissioner for Research to establish an expert group with members from relevant national ministries, including research and defence, as well as Commission officials. The group's mandate will be to make an inventory of ongoing research activities and existing expertise in the field of biodefence and also to identify research needs and define a European research agenda. The Commission will also call upon the expertise of its Joint Research Centre in areas such as the detection and management of chemical hazards or the detection of genetically-modified pathogens. In the longer term, research could be undertaken within the EU research framework programme. The expert group is to hold its first meeting on 12 December.

30 October In the First Committee of the United Nations General Assembly, the representative of Hungary, Tibor Tóth, introduces a draft resolution on the BWC. The draft is only a procedural resolution, rather than the traditional resolution. It calls on the Secretary-General to render the necessary assistance to the Fifth BWC Review Conference scheduled for 19 November–7 December. A more substantive draft was not introduced in order to avoid a contentious discussion of the failure of the Ad Hoc Group to adopt a protocol to the BWC and its inability to agree a final report [see 17 Aug] and because the forthcoming Review Conference is considered to be the appropriate place for a detailed discussion of BWC issues. The draft is later adopted by the Committee without a vote. The Assembly adopts the resolution also without a vote on 29 November.

30 October In the United States, the 'anthrax letter' campaign against abortion [see 15 Oct] has intensified, the Planned Parenthood Federation of America today stating that about 250 abortion clinics have received mailed anthrax threats since 15 October. The contents of none of the letters have tested positive for anthrax bacteria.

Forthcoming events

19–22 March, The Hague — Twenty-eighth session, OPCW Executive Council. Further sessions: 25–28 June, 10–13 September, and 10–13 December.

22–24 March, Wiston House, Sussex — Wilton Park conference *CBW Terrorism: forging a response*, details on www.wiltonpark.org.uk

18–20 April, Albuquerque — *Twelfth Annual International Arms Control Conference*,

details from edcleme@sandia.gov

23–26 April, Cairo — *1st International Conference and Workshop on Biological Warfare*, details from hamalaway@hotmail.com

28 April–3 May, Spiez, Switzerland — CBMTS IV, (fourth in series of Chemical and Biological Medical Treatment Symposia), details on www.asanltr.com

31 October In Russia the State Duma votes 342–0 in favour of an amendment to the law on destruction of chemical weapons that will allow the weapons to be destroyed at locations other than those where they are stored. The amendment also contains provisions for the hitherto illegal transportation of chemical weapons to distant chemdemil sites, provisions requiring the agreement of local and regional authorities before chemical weapons may be transported through their territory. The legislation now passes to the Federation Council. By reducing the number of chemdemil facilities that need to be built, the amendment could halve the costs of the destruction programme.

31 October In Arlington, Virginia, an Advance Executive Summary of the new annual report of the Gilmore Panel [see 17 Sep] is released by the RAND Corporation. The full annual report, the panel's third and final report, will be transmitted to the President and Congress by 15 December but the advisory panel has decided to release this interim report to assist in framing the public debate in the aftermath of the terrorist attacks on Washington and New York [see 11 Sep]. This interim report provides a summary of the recommendations in the forthcoming report under the following headings: improve health and medical capabilities; improve immigration and border control; clarify the roles and missions on the use of the military; improve security against cyber attacks; and improve state and local capabilities.

31 October In the United States, the month-old anthrax scare continues with little sign yet of abatement. Today, a fourth [see 22 Oct Washington] person dies from pulmonary anthrax: a New York hospital worker, Kathy Nguyen. There are now 13 further confirmed cases under treatment, of which 6 are of pulmonary anthrax and 7 of the cutaneous form. More than 30,000 people, including those who have tested positive for exposure to anthrax spores, have been placed on prophylactic antibiotics. Anthrax spores presumed to have arrived in the mail have been found in about 30 buildings or locations in Florida, New York, New Jersey and Washington, DC. In Washington these sites include premises of the Department of State, the Department of Health, the Department of Justice and the CIA; and spores have also been found at the Supreme Court, the military facility that sorts mail for the White House (but not at the White House itself) and 11 different locations on Capitol Hill.

Spores have also been found in US diplomatic pouches sent abroad. Despite the continuing intense investigation, it remains unclear whether the anthrax letters originated with those who perpetrated the 11 September attacks; with an organization or state that might have supported those perpetrators, or else have been independent of them; with a domestic terrorist group; or with a deranged individual having access, nevertheless, to rare knowledge and materials. The *Washington Post*

has just quoted an unidentified senior official as saying: "Everything seems to lean toward a domestic source. Nothing seems to fit with an overseas terrorist type operation."

This Chronology was compiled by Daniel Feakes and Julian Perry Robinson from information supplied through HSP's network of correspondents and literature scanners.

Recent Publications

Anti-Defamation League. *Beyond anthrax: extremism and the bioterrorism threat*, November 2001, 21 pp [available at <http://www.adl.org/learn/anthrax/default.asp>].

Ban, Jonathan. "Health, security, and US global leadership", *CBACI Special Report*, no 2, December 2001, 80 pp.

Baram, Amatzia. "An analysis of Iraqi WMD strategy", *The Nonproliferation Review*, vol 8 no 2 (Summer 2001), pp 25-39.

Barbera, Joseph, Anthony Macintyre, Larry Gostin, Tom Inglesby, Tara O'Toole, Craig DeAtley, Kevin Tonat, and Marci Layton. "Large-scale quarantine following biological terrorism in the United States: scientific examination, logistic and legal limits, and possible consequences", *Journal of the American Medical Association*, vol 286 no 21 (5 December 2001), pp 2711-17.

Bean, Nancy, and Stanley Martin. "Implementing a network for electronic surveillance reporting from public health reference laboratories: an international perspective", *Emerging Infectious Diseases*, vol 7 no 5 (September-October 2001), pp 773-79.

Bogart, Maj Adrian. "Weapons of mass destruction Civil Support Teams", *Army Logistician*, vol 33 no 4 (July/August 2001), pp 21-24.

Borio, Luciana, Dennis Frank, Venkat Mani, Carlos Chiriboga, Michael Pollanen, Mary Ripple, Syed Ali, Constance DiAngelo, Jacqueline Lee, Jonathan Arden, Jack Titus, David Fowler, Tara O'Toole, Henry Masur, John Bartlett, and Thomas Inglesby. "Death due to bioterrorism-related inhalational anthrax: report of 2 patients", *Journal of the American Medical Association*, vol 286 no 20 (28 November 2001), pp 2554-59.

Boyer, Peter. "The Ames strain: how a sick cow in Iowa may have helped to create a lethal bioweapon", *The New Yorker*, 12 November 2001, pp 66 ff.

Bruwer, Andre. "The United States and biological warfare: secrets from the early Cold War and Korea [review of Endicott & Hagerman (1998)]", *Medicine, Conflict and Survival*, vol 17 (2001), pp 355-68.

Chalder, T, M Hotopf, C Unwin, L Hull, K Ismail, A David, and S Wessely. "Prevalence of Gulf war veterans who believe they have Gulf war syndrome: questionnaire study", *British Medical Journal*, vol 323 no 7311 (1 September 2001), pp 473-76.

Chalk, Peter. "Infectious disease and the threat to national security", *Jane's Intelligence Review*, vol 13 no 9 (September 2001), pp 48-51.

Cordesman, Anthony. "Arms sales, arms control and regional security in the Middle East", *Disarmament Forum* [Geneva: UNIDIR], 2001 no 2 (March 2001), pp 41-48.

Croddy, Eric, and Sarka Krcalova. "Tularemia, biological warfare, and the battle for Stalingrad (1942-1943)", *Military Medicine*, vol 166 no 10 (October 2001).

Crowley, Michael. *Disease by design: de-mystifying the biological weapons debate*, London/Washington DC: British American Security Information Council, 2001, [Research Report 2001.2], 74 pp.

Dando, Malcolm. "Genomics, bioregulators, cell receptors and potential biological weapons", *Defense Analysis*, vol 17 no 3 (2001), pp 239-58.

Delpuch, Thérèse. "French researcher hits US biodefense verification stance", *Liberation* (Paris), 22 August 2001, p 5, as translated into English by FBIS

Delpuch, Thérèse. "It's time to start defending against germ war attacks", *International Herald Tribune*, 5 October 2001, p 9.

Delpuch, Thérèse. "Vers une banalisation de l'arme biologique?", *Le Monde*, 25 October 2001.

Dennis, Carina. "The bugs of war", *Nature*, vol 411, pp 232-35 (17 May 2001).

Dhawan, Benu, Prabha Desikan-Trivedi, Rama Chaudhry, and Pratibha Narang. "Bioterrorism: a threat for which we are ill prepared", *The National Medical Journal of India*, vol 14 no 4 (July-August 2001), pp 225-30.

Dorey, Emma. "US rejects stronger bioweapons treaty", *Nature Biotechnology*, vol 19 p 793 (September 2001).

Fenn, Elizabeth. *Pox Americana: the Great Smallpox Epidemic of 1775-82*, New York: Hill and Wang, 2001, 370 pp.

Fidler, David. "The malevolent use of microbes and the rule of law: legal challenges presented by bioterrorism", *Clinical Infectious Diseases*, vol 33 no 5 (1 September 2001), pp 686-89.

Franz, David R, Peter B Jahrling, David J McClain, David L Hoover, W Russell Byrne, Julie A Pavlin, George W Christopher, Theodore J Cieslak, Arthur M Friedlander and Edward M Eitzen. "Clinical recognition and management of patients exposed to biological warfare agents", *Clinics in Laboratory Medicine*, vol 21 no 3 (September 2001), pp 435-73.

Fraser, Claire, and Malcolm Dando. "Genomics and future biological weapons: the need for preventive action by the biomedical community", *Nature Genetics*, vol 29 no 3 (November 2001), pp 253-56.

Geddes, Alasdair. "Infection in the twenty-first century: predictions and postulates [the 1999 Garrod Lecture]", *Journal of Antimicrobial Chemotherapy*, vol 46 (2000), pp 873-77.

Giovachino, Monica, and Neil Carey. "Modeling the consequences of bioterrorism response", *Military Medicine*, vol 166 no 11 (November 2001), pp 925-30.

Gup, Ted. "The Coldest Warrior", *Washington Post*, 16 December 2001, pp W9 ff [on the fate of Frank Olson].

Hammond, Edward. "Operation infinite contract: biotech's impossible, profitable war to defeat nature", *Sunshine Project comment*, 3 October 2001, 5 pp.

Haug, Maria. "Allied chemical weapons in the Asia-Pacific theatre during World War II", *OPCW Synthesis*, September 2001, pp 20-22.

Henderson, D A, and Frank Fenner. "Recent events and observations pertaining to smallpox virus destruction in 2002",

- Clinical Infectious Diseases* vol 33 no 7 (1 October 2001), pp 1057-59.
- Huck, Peter. "Anthrax in the home", *Sunday Telegraph Magazine*, 2 December 2001, pp 28-35.
- Jernigan, John, David Stephens, David Ashford, Carlos Omenaca, Martin Topiel, Mark Galbraith, Michael Tapper, Tamara Fisk, Sherif Zaki, Tanja Popovic, Richard Meyer, Conrad Quinn, Scott Harper, Scott Fridkin, James Sejvar, Colin Shepard, Michelle McConnell, Jeanette Guarner, Wun-Ju Shieh, Jean Malecki, Julie Gerberding, James Hughes, Bradley Perkins, and members of the Anthrax Bioterrorism Investigation Team. "Bioterrorism-related inhalational anthrax: the first 10 cases reported in the United States", *Emerging Infectious Diseases*, vol 7 no 6 (November/December 2001), pp 933-44.
- Kellman, Barry. "WMD proliferation: an international crime?" *The Nonproliferation Review*, vol 8 no 2 (Summer 2001), pp 93-101.
- Kournikakis, B, S J Armour, C A Boulet, M Spence, and B Parsons. "Risk assessment of anthrax threat letters", Defence Research Establishment Suffield technical report, DRES TR-2001-048, September 2001, 20 pp.
- Lane, H Clifford, John La Montagne, and Anthony Fauci. "Bioterrorism: a clear and present danger", *Nature Medicine*, vol 7 no 12 (December 2001), pp 1271-73.
- Leeuw, MW, RW Busker, JP Langenberg, MS Nieuwenhuizen, and R Rumley-van Gorp. "CBW defence needs in the 21st century", *Military Technology*, vol 25 no 8 (August 2001), pp 67-68.
- Leitenberg, Milton. "Just how bad can it get? [review of Miller, Engelberg & Broad (2001)]" *Los Angeles Times*, 28 October 2001.
- Lewis, Patricia. "From UNSCOM to UNMOVIC: the United Nations and Iraq", *Disarmament Forum* [Geneva: UNIDIR], 2001 no 2 (March 2001), pp 63-68.
- McGovern, Maj Thomas, and Lt-Col George Christopher. "Biological warfare and its cutaneous manifestations", in *The Electronic Textbook of Dermatology*, posted at <http://www.telemedicine.org/BioWar/biologic.htm>, 27 October 2001, 40 pp.
- Madsen, Lt-Col James. "Toxins as weapons of mass destruction: a comparison and contrast with biological-warfare and chemical-warfare agents", *Clinics in Laboratory Medicine*, vol 21 no 3 (September 2001), pp 593-605.
- Manley, Ron [interviewed]. "Reflections on the Chemical Weapons Convention", *OPCW Synthesis*, December 2001, pp 10-11.
- Marín-Bosch, Miguel. "Mexico and the regime of the Convention for the Prohibition of Chemical Weapons", *OPCW Synthesis*, December 2001, pp 4-8.
- Marty, Cdr Aileen M. "History of the development and use of biological weapons", *Clinics in Laboratory Medicine*, vol 21 no 3 (September 2001), pp 421-34.
- Mashhadi, Hassan. "Delivering assistance and protection", *OPCW Synthesis*, September 2001, pp 25-30.
- Mashhadi, Hassan. "The OPCW and the struggle against chemical terrorism", *OPCW Synthesis*, December 2001, pp 24-27.
- Mayer, Thom, Susan Bersoff-Matcha, Cecele Murphy, James Earls, Scott Harper, Denis Pauze, Michael Nguyen, Jonathan Rosenthal, Donald Cerva, Glenn Druckenbrod, Dan Hanfling, Naaz Fatteh, Anthony Napoli, Ashna Nayyar, and Elise Berman. "Clinical presentation of inhalational anthrax following bioterrorism exposure: report of 2 surviving patients", *Journal of the American Medical Association*, vol 286 no 20 (28 November 2001), pp 2549-53.
- Meier, Oliver. "Neither trust nor verify, says US", *Bulletin of the Atomic Scientists*, vol 57 no 6 (November-December 2001), pp 19-21 and 73.
- Meltzer, Martin, Inger Damon, James LeDuc, and J Donald Millar. "Modeling potential responses to smallpox as a bioterrorist weapon", *Emerging Infectious Diseases*, vol 7 no 6 (November/December 2001), 17 pp.
- Meselson, Matthew. "Bioterror: what can be done? [review of Miller, Engelberg & Broad (2001)]", *New York Review of Books*, vol 48 no 20 (20 December 2001), pp 38-41.
- Meselson, Matthew, and Julian Perry Robinson. "CBW criminalisation and universal jurisdiction", *OPCW Synthesis*, December 2001, pp 18-19.
- Moodie, Michael. "Bioterrorism: risk and response", *The World Today* [London: Royal Institute of International Affairs, Chatham House], vol 57 no 11 (November 2001).
- Murch, Randall. "Forensic perspective on bioterrorism and the proliferation of bioweapons", in Scott Layne, Tony Beugelsdijk, and Kumar Patel (eds). *Firepower in the Lab: Automation in the Fight against Infectious Diseases and Bioterrorism*, Washington DC: Joseph Henry Press, 2001, pp 203-13.
- Onishchenko, G G, L S Sandakhchiyev, S V Netesov, and S V Shchelkunov. "Bioterrorism as a national and global threat", *Moscow Zhurnal Mikrobiologii Epidemiologii i Immunobiologii*, no 6 (November/December 2000), pp 83-85, as translated into English by FBIS.
- Orent, Wendy. "The return of smallpox", *The American Prospect*, vol 12 no 21 (3 December 2001).
- Orent, Wendy. "Will the Black Death return?" *Discover*, November 2001, pp 72-77.
- Parachini, John. "Combating terrorism: assessing the threat of biological terrorism", RAND publication CT-183, October 2001, 12pp.
- Parachini, John. "Non-proliferation policy and the war on terrorism", *Arms Control Today*, vol 31 no 8 (October 2001), pp 13-15.
- Pate, Jason. "Anthrax and mass-casualty terrorism: what is the bioterrorist threat after September 11?" *US Foreign Policy Agenda (Electronic Journal of the Department of State)*, vol 6 no 3 (November 2001), 2 pp [url: <http://usinfo.state.gov/journals/itps/1101/ijpe/ijpe1101.htm>].
- Pate, Jason, and Gavin Cameron. "Covert biological weapons attacks against agricultural targets: assessing the impact against US agriculture", Belfer Center for Science and World Affairs, Discussion Paper 2001-9: Harvard University, August 2001, 30 pp.
- Patrick, William. "Biological warfare scenarios", in Scott Layne, Tony Beugelsdijk, and Kumar Patel (eds). *Firepower in the Lab: Automation in the Fight against Infectious Diseases and Bioterrorism*, Washington DC: Joseph Henry Press, 2001, pp 214-23.
- Pearson, Graham, Malcolm Dando, and Nicholas Sims. *Briefing Book: "Key points for the Fifth Review Conference"*, in the series *Strengthening the Biological Weapons Convention* [University of Bradford: Department of Peace Studies], November 2001, 173 pp.
- Pennington, Hugh. "Woolsorters' disease", *London Review of Books*, vol 23 no 23 (29 November 2001), pp 26-27 [on the history of anthrax].
- Pitschmann, Vladimir. "Chemical warfare agents in Czechoslovakia before WW II", *ASA Newsletter*, no 86 (26 October 2001), pp 21-24.
- Relman, David, and Jed Olson. "Bioterrorism preparedness: what practitioners need to know", *Infections in Medicine*, vol 18 no 11, November 2001, pp 497-515.
- Rosenau, William. "Aum Shinrikyo's biological weapons program: why did it fail?", *Studies in Conflict and Terrorism*, vol 24, 2001, pp 289-301.
- Rosenthal, Steven, Michael Merchlinsky, Cynthia Kleppinger, and Karen Goldenthal. "Developing new smallpox vaccines", *Emerging Infectious Diseases*, vol 7 no 6 (November/December 2001), pp 920-26.
- Rudduck, Martin. "Towards a safer world: the Chemical Weapons Convention three years on", *Surface Coatings International Part A*, 2001 no 7, pp 277-80.

- Scott, Douglas. "OPCW lacks funds for inspections", *Canadian Council for International Law Bulletin*, vol 28 no 1 (Winter 2001).
- Seto, Yasuo. "The sarin gas attack in Japan and the related forensic investigation", *OPCW Synthesis* June 2001, pp 14-17.
- Shroff, Sandra. "Implementation of Article XI: an industrial viewpoint", *OPCW Synthesis*, September 2001, pp 7-10.
- Sims, Nicholas. "The case for a BWC Committee of Oversight: draft mandate and commentary", *Disarmament Diplomacy* no 60 (September 2001), pp 13-19.
- Steinberg, G M, and Aharon Etengoff. *2000 Middle East arms control and proliferation report*, Ramat Gan: BESA Center for Strategic Studies and Program on Conflict Management and Negotiation, Bar Ilan University, 2001, 47 pp.
- Stern, Jessica. "Between prudence and paranoia: the middle group in the weapons-of-mass-destruction terror debate", in Deepa M Ollapally (ed), *Controlling Weapons of Mass Destruction: Findings from USIP-Sponsored Projects*, Washington DC: United States Institute of Peace, 2001, pp 60-63.
- Swanson, Don, Neil Smalheiser, and A Bookstein. "Information discovery from complementary literatures: categorizing viruses as potential weapons", *Journal of the American Society for Information Science and Technology*, vol 52 no 10 (August 2001), pp 797-812.
- Switzerland, Office federal de la sante publique, Division epidemiologie et maladies infectieuses, Service de Security biologique. "Terrorisme biologique: possibilites et limites des premiers recours", *Bulletin* no 43 (22 October 2001).
- Szöllösi-Janze, Margit. "Pesticides and war: the case of Fritz Haber", *European Review*, vol 9 no 1 (February 2001), pp 97-108.
- Tabassi, Lisa. "Legal assistance under the Chemical Weapons Convention: a proposal for an optional protocol to the Convention?" *OPCW Synthesis*, December 2001, pp 20-23.
- Talbot, David. "Detecting bioterrorism", *Technology Review* [MIT], December 2001, pp 35-37.
- Thränert, Oliver. "Multilaterale Rustungskontrolle in der Sackgasse?" *SWP-Aktuel* no 18 (October 2001), pp 1-8.
- Venter, Al J. "Anthrax among humans: the reality", *Islamic World Intelligence Report* posted at <http://www.islamicint.com>, 11 December 2001, 6 pp.
- Venter, Al J. "International terrorism targets western agricultural sectors", *Islamic World Intelligence Report* posted at <http://www.islamicint.com>, 11 December 2001, 4 pp.
- Whitby, Simon. *Biological Warfare against Crops*, Basingstoke and New York: Palgrave, 2002, 271 pp.
- Whitby, Simon, and Malcolm Dando. "The biomedical community and the Biological and Toxin Weapons Convention", *BMC News and Views*, vol 2 no 6 (15 August 2001).
- Woolsey, James. "Know thy enemy: the Iraq connection", posted on the website of the Iraqi National Congress News Center, 19 October 2001, 5 pp.
- Wright, Susan. "Double langage et guerre bacteriologique", *Le Monde Diplomatique* no 572 (November 2001), p 3.
- Zanders, Jean Pascal. "Challenges to disarmament regimes: the case of the Biological and Toxin Weapons Convention", *Global Society*, vol 15 no 4 (2001), pp 361-85.
- Zanders, Jean Pascal. "Dealing with chemical weapons dumped in bodies of water", *ASA Newsletter* no 87 (21 December 2001), p 16-21.
- Zanders, Jean Pascal. "Managing technology transfers in a proliferation environment: the case of the Biological and Toxin Weapons Convention", in Deepa M Ollapally (ed), *Controlling Weapons of Mass Destruction: Findings from USIP-Sponsored Projects*, Washington DC: United States Institute of Peace, 2001, pp 19-24.
- Zanders, J P, John Hart and Frida Kuhlau. "Biotechnology and the future of the Biological and Toxin Weapons Convention", *SIPRI Fact Sheet*, Stockholm: Stockholm International Peace Research Institute, November 2001.
- Zauritz Sepulveda, Brig-Gen Waldo. "Spotlight on National Authorities: Chile and its National Authority", *OPCW Synthesis*, September 2001, pp 31-32.
- Zilinskas, Raymond. "Rethinking bioterrorism", *Current History*, vol 100 no 650 (December 2001), pp 438-42.
- Zvedre, Yevgeniy. "The establishment of an export control system in Russia: Russia's participation in international cooperation in the field of nonproliferation and export control", *Yadernyy Kontrol* [Moscow: PIR Center], January-February 2001, pp 32-45, as translated from the Russian in FBISA-NES-2001-032.

The CBW Conventions Bulletin (formerly the *Chemical Weapons Convention Bulletin*) (ISSN 1060-8095) is edited and published quarterly by the Harvard Sussex Program on CBW Armament and Arms Limitation. The goal is to provide information and analysis towards an effective multilateral treaty regime which will eliminate chemical and biological weapons and help prevent the exploitation of biomedical technologies for hostile purposes. The Harvard Sussex Program is supported by American and British charitable foundations, including the John D and Catherine T MacArthur Foundation, the W Alton Jones Foundation, Carnegie Corporation of New York and the Joseph Rowntree Charitable Trust.

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