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## THE SCIENTIFIC ADVISORY BOARD OF THE ORGANIZATION FOR THE PROHIBITION OF CHEMICAL WEAPONS: THE ROLE OF SCIENCE IN TREATY IMPLEMENTATION

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At its Second Session, the Conference of the States Parties to the Chemical Weapons Convention, the principal organ of the Organization for the Prohibition of Chemical Weapons (OPCW), directed the Director-General of the OPCW to establish the Scientific Advisory Board. In so doing, the Conference fulfilled its obligation under paragraph 21(h) of Article VIII of the Convention to adopt terms of reference of the Scientific Advisory Board.

The idea of a scientific advisory council was first mooted in 1987 by France's delegation to the Ad Hoc Committee on Chemical Weapons of the Conference on Disarmament, in acknowledgement of the threat posed by emerging scientific and technological developments to the effective implementation of the Convention, particularly of its verification regime. In order to avert this, it was proposed that the constitution of the OPCW provide a role for the scientific community in ensuring that the Convention remain a dynamic instrument capable of adapting to the latest scientific and technological developments. The underlying idea was that:

[the] scientific community has a universal calling, and ... must be in a position to transcend divergences in culture and in interest between States in order to provide an objective assessment of scientific and technological developments as they affect the Convention." [France, CD/916, 17 April 1989].

One could hardly dispute the need for dispassionate scientific advice in relation to a treaty the implementation of which relies in large part on scientific and technological know-how. However, the economic and social impacts of every scientific development coupled with the fact that a scientific finding inevitably attributes power to those proclaiming it, or more accurately to those with the means to exploit and benefit from its development, put into question the "neutrality" of science and its role as an impartial dispenser of "truth". This is especially true in areas of science that remain uncertain or controversial, and in this regard one needs only to look at the way in which scientific studies on global warming have been manipulated in the climate change debate. Conversely, it is precisely this ambiguity of science that makes the independence of a scientific advisory body, acting at arms length from governments and the

political organs of international institutions, all the more critical.

The article examines the birth of the Scientific Advisory Board, and whether, under the structure created by the *Terms of Reference* adopted by the Conference, it can live up to the above-mentioned expectations.

### **Relevant provisions of the Convention**

The Convention refers to the Scientific Advisory Board in Article VIII.21(h) and 45. From the convoluted language of these provisions, these elements can be drawn:

- As directed by the Conference, the Director-General is to establish the Scientific Advisory Board for the purpose of enabling him, in the performance of his functions, to render specialised advice to the Conference, the Executive Council or states parties, in areas of science and technology relevant to the Convention.
- The Director-General is responsible for the organization and functioning of the Scientific Advisory Board.
- The members of the Scientific Advisory Board are appointed by the Director-General in consultation with states parties, in accordance with terms of reference approved by the Conference.
- The members are appointed as independent experts serving in their individual capacity, on the basis of their expertise in the particular scientific fields relevant to the implementation of the Convention.
- The Director-General may also establish, in consultation with members of the Scientific Advisory Board, temporary working groups of scientific experts to provide recommendations on specific issues.

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- States parties may submit lists of experts to the Director-General.

It follows that the Scientific Advisory Board is to provide expert advice to the Director-General, who in turn advises the political organs. This relationship underscores the Board's independence, since the Director-General, as head of the Technical Secretariat, is an independent international civil servant answerable only to the Conference and the Executive Council, whom the Convention forbids from receiving instruction from any Government or source external to the OPCW {Article VIII.46}. The Convention further requires states parties to respect the "exclusively international character" of the responsibilities of the Director-General and other members of the Technical Secretariat, and not seek to influence them in the discharge of their responsibilities {Article VIII.47}. While members of the Scientific Advisory Board are not staff members of the Secretariat, the fact that the Convention gives the Director-General principal jurisdiction over its organization and functioning is a clear indication of the apolitical nature of the Board, which is to operate outside of the realm of influence of the OPCW's political organs and of its member states.

As stated above, access to the latest scientific and technological information is critical to the effective implementation of the Convention's verification regime. The Convention expressly recognises this in Article VIII.6: "In undertaking its verification activities, the Organization shall consider measures to make use of advances in science and technology". It further enjoins the Conference to convene special sessions to undertake reviews of the operation of the Convention, taking into account any relevant scientific and technological developments {Article VIII.22}. In addition, the Convention requires that the model agreements for the inspection of chemical weapons facilities and facilities producing Schedule 1 chemicals "include provisions to take into account future technological developments" {Part III.8 of the Verification Annex}. The Scientific Advisory Board will inevitably have a role to play in these matters. But this role is intended to be exclusively *consultative* and does not involve any decision-making responsibilities.

### ***A commentary on the Terms of Reference***

The *Terms of Reference* of the Scientific Advisory Board {annexed to C-II/DEC.10} were elaborated by member states through a series of informal consultations leading up to the Second Session of the Conference. The main points of contention related to the Scientific Advisory Board's composition, its functioning and, to a lesser degree, its role. Underlying the divergence of views on these constitutional issues were concerns regarding the degree of freedom of the Director-General in the appointment process and the relationship of the Scientific Advisory Board to its temporary working groups.

### ***Composition***

The provisions of the *Terms of Reference* on the composition of the Scientific Advisory Board are the result of protracted discussions between states parties. Under paragraph 3 of the *Terms of Reference*, the Director-General is required to appoint 20 members "from a list of nominees put forward by the States Parties", to serve "in their individual

capacity as independent experts". Paragraph 4 of the *Terms of Reference* provides criteria for the selection of board members, based on their qualifications, expertise and activity in relevant institutions, with preference to be given to persons "who are knowledgeable about the relevant scientific and technological developments, and who are familiar with the implementation of the Convention". In appointing members, the Director-General is also to make efforts at maintaining a balance between the areas of research, development and applications.

That the issue of the Scientific Advisory Board's composition was the last to be resolved before the draft *Terms of Reference* were submitted to the Conference for approval is indicative of the level of controversy surrounding the foregoing provisions. This played itself out as a tug-of-war between, on the one hand, those advocating a degree of discretion for the Director-General in the appointment process and, on the other hand, proponents of a requirement for equitable geographic distribution among the five regional groups referred to in Article VIII.23 of the Convention (the provision dealing with the composition of the OPCW's Executive Council).

Not surprisingly, division on this issue ran along the North-South divide. Developing states parties argued that an appointment process which gives preference to persons having access to the most recent scientific and technological developments unfairly advantages developed states parties. Developed states parties strongly resisted what they claimed was an attempt to politicise the constitution of the Board. In the end a compromise of sorts was reached: the *Terms of Reference* require the Director-General to appoint twenty members to the Scientific Advisory Board in consultation with states parties from a list of nominees provided by states parties, taking into account "the need for a comprehensive spread of relevant fields of scientific and technological expertise", and resulting in "a *fair distribution* of appointments from the regions" {paragraph 5, emphasis added}. It seems that states parties agreed that the Director-General could be trusted to make an appropriate selection, while recognising that science and technology is not the preserve of a particular regional group.

A related, though less contentious, issue was the extent to which the Director-General should be given a free hand in the selection of experts to serve as members of the Board. In the result, while the Convention only requires the Director-General to appoint members in consultation with states parties and while states parties *may* submit lists of experts to the Director-General, the *Terms of Reference* further oblige the Director-General to appoint members "from a list of nominees put forward by States Parties" {paragraph 3}, thus shrinking the pool of experts from which appointments can be made. The shortcomings of this additional requirement have taken little time to manifest themselves. Following a round of nominations ending in mid-April 1998, resulting in a list of 87 nominations, the Director-General has had to call upon states parties to submit additional candidates because of his inability to fulfil the *Terms of Reference*'s requirement that there be a balance between the areas of research, development and application, due to a shortage of expertise in many of the relevant scientific and technological fields. In his note to states parties on the sub-

ject, the Director-General remarked that “the overall number of genuinely eminent persons, such as full members of National Academies of Science, across the entire spectrum of nominations submitted thus far is still insufficient to allow a balanced and well-justified selection”.

The question of the appointment process of the Scientific Advisory Board is of course critical to the Board’s independence and impartiality. The *Terms of Reference* also provide for specific measures in this regard. In accordance with rules of procedure to be provided by the Director-General, a Board member must disclose to the Director-General any activity that may affect his or her impartiality or appearance of impartiality {paragraph 8(d)} and may be dismissed from his or her office “for just cause” {paragraph 8(f)}. It would also appear that a Board member may not communicate with a state party directly, but only through the Technical Secretariat {paragraph 8(e)}.

However, these laudable measures for the preservation of the Scientific Advisory Board’s independence and impartiality may be circumvented by budgetary constraints. In its decision approving the Board’s *Terms of Reference*, the Conference decided that the OPCW would be responsible only for costs associated with the annual meeting of the Board, and that any other meetings (i.e., *ad hoc* meetings of the Board or meetings of its temporary working groups) are to be held at no cost to the OPCW. In the result, a Board or working group member will be required to get funding from his or her Government, institution or employer to pay for his or her travel and *per diem* expenses, thereby arguably compromising his or her appearance of impartiality. A potential solution to this problem is found in the *Code of Conduct of the Technological and Economic Assessment Panel* (TEAP) and its subsidiary bodies, which provide advice to the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer. The Code requires members to annually disclose their sources of funding.

Another potential problem lies in relation to the Board members’ term of office. Paragraph 6 provides for a three year term, with a possibility of two consecutive terms of service. The absence of overlapping terms of office may render difficult the construction of an institutional memory to be passed on to future Board members.

### **Operation**

In elaborating the draft *Terms of Reference*, states parties spent much time discussing the operation of the Scientific Advisory Board, and in particular its relationship with the temporary working groups established by the Director-General pursuant to Article VIII.45. States parties emphasised the need for flexibility in the provision of timely and effective scientific advice. It was acknowledged at the outset that a body of 20 experts could not properly advise on the broad range of issues relevant to the implementation of the CWC, each requiring specialised knowledge.

Consequently, the *Terms of Reference* provide for a Scientific Advisory Board functioning as a college of experts, knowledgeable about relevant scientific and technological developments and familiar with the implementation of the Convention, that “co-ordinate” the operation of a decentralised system of subject-specific temporary working

groups. It is in the latter that specific scientific and technological issues are thrashed out and recommendations are made to the Director-General. The Scientific Advisory Board as a whole meets only once a year, to elect a Chair {paragraph 8(b)} and to report to the Director-General on its activities during the previous year {paragraph 13}, consisting mainly of the activities of its working groups. It may also be convened by the Director-General in consultation with the Chair for *ad hoc* sessions, at the Director-General’s own initiative or at the request of the Executive Council or the Conference {paragraph 14}.

As provided by the Convention, the temporary working groups are established by the Director-General in consultation with members of the Board. In contrast to the composition of the Scientific Advisory Board proper, the *Terms of Reference* give the Director-General a larger pool of candidates from which to choose when appointing scientific experts to temporary working groups since, in addition to the nominees provided by states parties, he may select experts as suggested by Board members themselves {paragraph 10}. The co-ordinating role of the Scientific Advisory Board in the operation of the working groups is guaranteed by the requirement that each working group be chaired by a member of the Board, appointed for that purpose by the Chair of the Board with the approval of the Director-General. The temporary working groups provide recommendations on specific issues directly to the Director-General, within a specific time-frame {paragraph 9}.

### **Role and functions**

The basic function of the Scientific Advisory Board is to assess and report to the Director-General developments in scientific and technological fields relevant to the Convention. Paragraph 2 of the *Terms of Reference* provides a non-exhaustive list of types of issues that may be brought to the Board. These include the provision of advice on changes to the Annex on Chemicals, including its Schedules, proposed by states parties. In this regard, the wording of paragraph 2(b) of the *Terms of Reference* makes clear that the Board cannot propose changes to the Annex on Chemicals at its own initiative, since only states parties are competent to do so pursuant to Article XV of the Convention. However, nothing would seem to prevent the Board from studying the development of “novel agents”, regardless of any proposed changes to the Schedules.

At its Second Session, the Conference identified two specific issues for the consideration of the Scientific Advisory Board. In the first instance, the Conference directed the Director-General to task the Scientific Advisory Board to address the scientific and technical aspects of the issue of when ricin production should be declared {C-II/DEC.5, 5 December 1997}. In the second, the Conference noted that the Scientific Advisory Board will elaborate guidelines on the evaluation of new and emerging verification technologies relevant to inspection equipment, to be approved by the Executive Council {C-II/6 (1998 Programme and Budget), note [070] (p. 116-117), Item A(c)(ii)}.

### **Experience of other scientific advisory bodies**

At the time of writing, the Scientific Advisory Board was not yet up and running. Nonetheless, it may be possi-

ble to gauge its prospects for success by comparing its constitutional structure to that of the scientific advisory bodies of other inter-governmental organisations, in light of the experience of these bodies.

#### *The International Atomic Energy Agency — SAC*

The principal scientific advisory body of the International Atomic Energy Agency (IAEA) was the Scientific Advisory Committee (SAC), established in 1958 for the purpose of advising on the annual review of the IAEA's technical programmes. The SAC consisted of "eminent scientists" nominated by the Director General "with the concurrence of their respective Governments" and appointed by the Board of Governors.

The factors underlying the composition of the SAC are similar to those of the OPCW's Scientific Advisory Board: members were appointed in their personal capacity, on the basis of experience and activity in the relevant scientific fields while attempting to achieve a degree of balanced representation from the different regions represented by the Agency's respective member states. However, in contrast to the Scientific Advisory Board, the appointing authority of the SAC membership was the IAEA's executive organ, the Board of Governors. It is difficult to determine conclusively how this might have affected the SAC's work, though it has been said that its deliberations had been the scene of political skirmishes relating to "every major internal battle in the Agency" and its influence on the Board of Governors ranged "from negligible to almost decisive" {see P C Szasz, *The Law and Practices of the International Atomic Energy Agency*, IAEA, Vienna, 1970, at p 244}.

With time, the existence of a single body of eminent experts proved unworkable in view of the scientific developments in the nuclear field and consequent changes on the IAEA's technical programmes. In 1988, the Board of Governors reviewed the role of the SAC and decided to suspend its activities. Instead, review of the IAEA's technical programmes (e.g., fusion research, theoretical physics, safeguards, nuclear safety, transport, etc.) was entrusted, on a trial basis, to a number of special advisory bodies, thereby privileging a sectorial approach. In 1990, the Board of Governors assessed the sectorial reviews procedure and decided to continue to apply this decentralised system of subject-oriented advisory bodies, in spite of the criticism that the specialised advisory groups were "paying too much attention to their own sectors without taking account of the others or of the global priorities". In light of this criticism, it is perhaps felicitous that in its Scientific Advisory Board the OPCW has opted to retain a core of state-nominated experts akin to the SAC, while taking a subject-specific approach to scientific and technological advice.

#### *The Montreal Protocol on the Protection of the Ozone Layer — TEAP*

Pursuant to Article 6 of the Montreal Protocol on Substances that Deplete the Ozone Layer, the Meeting of the Parties has established three standing panels of experts — the Scientific Assessment Panel, the Environmental Effects Assessment Panel, and the Technological and Economic Assessment Panel (TEAP) — to report to it on their assessment of the control measures imposed by the Protocol on

the production and consumption of substances that deplete the ozone layer. The TEAP, which analyses technical options for and economic costs of controls on the use of ozone-depleting substances, is the most important of these panels. Members are appointed by the Meeting of the Parties, from nominations made by individual parties or by the panel itself, as experts acting in their personal capacity.

The TEAP operates largely through seven standing Technical Options Committees (TOCs), each covering a specific issue, and through temporary subsidiary technical bodies. Geographical balance is an important aspect of the appointment process for both the TEAP and the TOCs, consistent with the differentiated responsibilities of developed and developing parties under the Protocol. Each TOC is headed by two co-chairs appointed by the Meeting of the Parties, one from a developed state party and one from a developing state party. The co-chairs are also members of the TEAP. All other members of a TOC are nominated by individual parties or the TEAP and appointed by the TOC's co-chairs themselves, in consultation with the TEAP.

Though chaired by TEAP members, the TOCs operate independently from the TEAP. The TOCs and the temporary subsidiary bodies report to the TEAP which forwards the reports "without modification" to the Meeting of the Parties, together with any comments it wishes to provide {paragraph 4.3 of its *Terms of Reference*}.

As far as scientific advisory bodies are concerned, the TEAP has been hailed for its success in providing timely and effective advice to the Meeting of the Parties, the Protocol's political organ. It is on the basis of TEAP reports that the Meeting of the Parties has adopted adjustments to and reductions of permissible production and consumption of controlled substances and amendments to the Annex listing controlled substances to be reduced or phased-out. The success of this model — consisting of several subject-specific standing committees and temporary bodies co-ordinated by a panel of experts appointed by states parties — is encouraging for the OPCW's Scientific Advisory Board which is similarly structured.

#### *Framework Convention on Climate Change*

In contrast to the TEAP, the Subsidiary Body for Scientific and Technological Advice (SBSTA) under the Framework Convention on Climate Change (FCCC) cannot boast of a good report-card. It is perhaps no coincidence that it is set up as a subsidiary organ of the Conference open to participation by all states parties and composed exclusively of government representatives. In the result, political disputes have frequently dominated its meetings.

Five years after entry into force of the FCCC, the SBSTA has been incapable of setting up panels similar to the TEAP to study and advise on specific issues. The intention behind the creation of such panels was precisely to provide objective scientific advice in the face of the highly politicised nature of the discussions taking place in the SBSTA. The initiative failed largely due to disputes between developed states parties and developing states parties as to whether membership in the panels should be based on equitable regional distribution and whether experts should be appointed in a personal or in a representative capacity. The reasoning behind either side of the debate is virtually

identical to that which took place in relation to the composition of the OPCW's Scientific Advisory Board, described above, with the exception that debate in the SBSTA has resulted in paralysis. In order to fill the resulting vacuum, the Climate Change Secretariat has had to compile a roster of experts from which it draws consultants to assist it in its work.

### **Conclusions**

This article has addressed some of the challenges involved in setting up a system for the provision of objective and effective scientific advice within a process that is inherently political.

It would be too much to hope for purely objective scientific advice, given the political implications of scientific findings and the sometimes ambiguous premises on which they are founded. But decision-making organs of international organizations need to have timely access to credible information on the latest scientific and technological developments relevant to the implementation of the treaties which they oversee. This is a functional necessity: without such information, implementation measures and aspects of the treaty itself would fade into obsolescence and irrelevance. Past experience shows that it is clearly to the advantage of an international organization to have a scientific advisory body which is as de-politicised as possible, and at a minimum this requires, firstly, a membership composed of persons acting in their personal capacity and not as representatives of their governments or of non-state interest groups, and secondly, a functional structure which shields the body and its members from the influence of the international organisation's political organs and its member States.

The states parties to the Chemical Weapons Convention were well aware of these facts. As provided by paragraphs 21(h) and 45 of Article VIII and as detailed in the *Terms of Reference* of the Scientific Advisory Board adopted by the Conference, Board members are appointed by the Director-

General of the OPCW in their individual capacity as independent experts. Expert advice on scientific and technological developments that could affect the operation of the Convention is provided to the Director-General who in turn advises the political organs of the OPCW.

Pursuant to its *Terms of Reference*, the operational structure of the Scientific Advisory Board is that of a core of eminent scientists of international standing which provide recommendations on specific scientific issues through temporary subject-specific working groups while maintaining an overall co-ordinating role in the advisory process. In this, the OPCW has opted for both a holistic and a sectorial approach to scientific advice, an approach which has proven highly successful in the case of the Technology and Economic Assessment Panel set up by the Parties to the Montreal Protocol on the Protection of the Ozone Layer.

Over and above the issues that have been flagged in this article in relation to the protection and enhancement of the Board member's independence and impartiality, which are fundamental to the integrity of the advisory process, questions remain as to transparency. What has not been addressed in the *Terms of Reference* is whether, for instance, meetings of the Scientific Advisory Board are open to observation by relevant international agencies or scientific institutions, or whether its reports are accessible to the public. Some form of public access to the Board's reports and recommendations would be a welcome means of promoting a transparent, and therefore accountable, process of scientific advice.

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*Until June 1998, Kathleen Lawand was Legal Officer in the Legal Division of the OPCW. This article is based on a paper presented at the Ninth Workshop of the Pugwash Study Group on Implementation of the Chemical and Biological Weapons Conventions, May 1998. The views expressed are those of the author in her personal capacity.*

## **Developments in the Organization for the Prohibition of Chemical Weapons**

This quarterly review of the activities of the Organization for the Prohibition of Chemical Weapons (OPCW), from mid March to early June 1998, covers some major landmarks in the Organization's development. Over a period of weeks starting at the end of March, the OPCW moved into its new headquarters building in The Hague. After years of operating out of temporary and dispersed accommodation, all the constituent elements of the Organization are now housed under one roof (except for the OPCW Laboratory and Equipment Store which remains at Rijswijk, outside The Hague). The first anniversary of the entry into force of the Chemical Weapons Convention fell on 29 April. The new OPCW headquarters were officially opened on 20 May by Queen Beatrix of the Netherlands at

a ceremony attended by many dignitaries, representatives of member states, the media and non-governmental organizations. Finally, this period also witnessed the first rotation in the membership of the Executive Council as those members which had been elected for one year were either replaced or re-elected for another term. The tenth session of the Council, scheduled for 16–19 June, will be the first with the new member states present and the new officers in position. It will also be the first to take place in the Ieper Room, the new Executive Council chamber.

The membership of the Organization has continued to grow during the period under review. Three additional states, Lithuania, Benin and Gambia, have deposited their instruments of ratification with the Secretary-General of the

United Nations. These three ratifications bring the total number of states parties to 110, with 58 signatory states yet to ratify the Convention.

Now that a year has passed since the entry into force of the Convention, many commentators have felt that this is an appropriate moment to analyse the activities of the OPCW. Numerous articles have appeared in the international press and the Director-General himself has made a number of speeches in various forums on the first year of operations. While assessing the events of the past year is a valuable exercise, the implementation of the Convention continues. The inspection of chemical weapons-related sites in Russia is currently occupying time and resources, as is the drafting of facility agreements, combined plans for destruction and verification and bilateral agreements on privileges and immunities. The Secretariat is also undertaking the analysis of chemical industry information submitted by states parties and is surveying the information on administrative and legislative measures submitted thus far. States parties and the Secretariat are additionally involved in ongoing consultations on issues which could not be resolved by the Preparatory Commission, some of which must be resolved at the tenth session of the Executive Council when it meets in June. Some of these issues require urgent resolution as they are having, or soon will have, an impact upon the implementation of the Convention.

### **Executive Council**

The Executive Council met once during the period under review, for its ninth session from 21–24 April. This was the last meeting of the Council as it was elected by the first session of the Conference of the States Parties (CSP) last year. New members were elected during the second session of the CSP in December 1997, and took their seats from 12 May. The outgoing members of the Council were: Bangladesh, Belarus, Bulgaria, Malta, the Netherlands, Norway, Oman, Romania, Suriname and Uruguay. The new members are: Belgium, Cuba, Czech Republic, Finland, Iran, Pakistan, Russia, Slovak Republic, Switzerland and Venezuela.

The terms of office of the Chairman and Vice-Chairmen of the Council also expired on 12 May. Over the next year the Council will be chaired by Mr Krzysztof Patulej (Poland) who replaces Ambassador Prabhakar Menon (India), with the representatives of Cameroon, China, Mexico and Switzerland as Vice-Chairmen. These officers will remain in their posts until 11 May 1999, when the next rotation in the membership of the Council will take place.

*Receipt of declarations and notifications* Once again the Director-General informed the Council on the submission of initial and annual declarations and notifications. The situation has not improved substantially on that reported in the previous quarterly review, with a sizeable minority of states parties still in technical non-compliance with the Convention. The Director-General reported that, as of 16 April, 79 declarations had been submitted to the Secretariat by states parties. Therefore, a significant number of initial declarations are still outstanding, while many of those which have been submitted are incomplete and do not fulfil all the requirements of the Convention. By 20

May, the number of initial declarations submitted to the Secretariat had increased by one to 80, meaning that 26 per cent of initial declarations were still outstanding.

As of 20 May, the Secretariat had received declarations of projected activities and anticipated production of Schedule 1 chemicals in 1998 from 20 states parties, submitted in accordance with Part VI.16 and 20 of the Verification Annex (VA). In accordance with VA Parts VII.4(c) VIII.4(c), 11 states parties had submitted annual declarations of anticipated Schedule 2 and/or 3 activities in 1998. Annual declarations of activities in 1997 for Schedule 1, 2 and 3 chemicals and Discrete Organic Chemicals (DOCs) had been received from 47 states parties. As of 20 May, the Secretariat had been notified of 119 transfers of Schedule 1 chemicals, involving 6 sending states parties and 24 receiving states parties.

The Director-General also reported on the status of notifications submitted to the Secretariat, of which many were required within 30 days after entry into force of the Convention. However, as of 20 May, over one year later, the Secretariat had only received the following: 60 notifications of points of entry for inspection teams; 47 notifications of standing diplomatic clearance numbers for non-scheduled aircraft; 77 notifications concerning national authorities; and 34 notifications of legislative and administrative implementing measures. Only 37 states parties had provided information on assistance, which was required 180 days after entry into force under Article X.7. Once again, the Director-General pointed out the operational consequences resulting from the slow rate of submission of notifications.

As reported in the previous quarterly review, the Secretariat has undertaken a number of steps to rectify the situation relating to declarations and notifications. One such measure is the establishment of a network of experts from states parties and the Secretariat who can assist in the preparation of declarations. The Director-General informed the Council that, under this procedure, two on-site assistance missions had been organised in response to requests from states parties, and he encouraged other states parties to make use of the mechanism. In addition, Sweden, with active OPCW support, organised a regional meeting in Stockholm on 15–16 April to promote and facilitate ratification and implementation of the Convention. The meeting was attended by officials from the national authorities of Denmark, Finland, Norway and Sweden, in addition to government and national authority officials from Estonia, Latvia, Lithuania and Ukraine. The purpose of the meeting was to provide information on implementing the Convention and to act as a forum for the exchange of experience between national authorities. Further seminars are being planned to facilitate implementation of the Convention.

Expressing its strong dissatisfaction with the slow rate of submission of declarations and notifications, the Council asked the Director-General to again contact the member states concerned, requesting them to explain the absence or incomplete nature of their initial declarations. The responses collected by the Secretariat will in future appear in the Director-General's *Status of Implementation Report* (SIR) which is submitted to each session of the Council. However, many of the members of the Executive Council themselves have not yet complied with all the declaration

and notification requirements of the Convention, despite their urging other member states to do so. While all but one of the Council members had submitted their initial declarations by 20 March, the situation with regard to notifications was less satisfactory. Out of the 41 members of the Council (before the change in membership on 12 May), 6 had not submitted information on their national authority, 21 had not submitted implementing legislation, 21 had not provided information on assistance, 9 had not submitted notification of their points of entry and 14 had not provided notification of standing diplomatic clearance numbers for non-scheduled aircraft.

**Transparency and confidentiality** As at previous sessions of the Executive Council, transparency and confidentiality featured heavily during its ninth session. This time, most discussion focused on the internal transparency of the Organization, especially the nature of information disseminated to states parties. The dissemination of "data required by states parties to be assured of the continued compliance with this Convention by other States Parties" is regulated by paragraph 2(b) of the Confidentiality Annex, one of the principal transparency mechanisms of the Convention.

Paragraph 2(b)(i) provides for the dissemination of "the initial and annual reports and declarations provided by states parties under Articles III, IV, V and VI, in accordance with the provisions set forth in the Verification Annex". This allows states parties to receive detailed information related to national chemical weapons programmes, while confidential commercial information remains protected. As of 20 May, 18 states parties had, under paragraph 2(b)(i), requested information, either regarding all states parties or, in some cases, one particular state party. However, only 12 states parties had responded to the Director-General's request to provide details of their handling procedures for confidential information, in accordance with paragraph 4 of the Confidentiality Annex.

Paragraph 2(b)(ii) requires that states parties are routinely provided with "general reports on the results and effectiveness of verification activities". In contrast to paragraph 2(b)(i), which provides for the dissemination of specific information, paragraph 2(b)(ii) only entitles states parties to "general reports", meaning that reporting does not normally mention states parties by name. The Secretariat provides this general information to each session of the Council in the form of the SIR. In addition, the Secretariat also produces an annual report entitled the *Verification Implementation Report* or VIR. Much of this information is derived from the final inspection reports submitted by the inspection teams on their return to The Hague. As of 20 May, 79 per cent of all final inspection reports had been classified as Protected or Highly Protected. The VIR for 1997 was submitted to the ninth session of the Council, and provoked a debate on the amount and specificity of information which should be presented in such reports. While some Council members pressed for more specific information, including the names of states parties, to be included in the SIR and VIR, others considered that this would go beyond what is required by the CWC. In the end, the Council took note of the Director-General's suggestion that, for transparency purposes, the SIR and VIR would, in the fu-

ture, contain as much detailed information on verification activities as possible within the provisions of the Confidentiality Policy and the Media and Public Affairs Policy. According to delegations in The Hague, in future, with their consent, states parties would be named to demonstrate a spirit of cooperation and constructive dialogue.

**Facility agreements** As suggested in the previous quarterly review, the ninth session of the Council had before it a large number of facility agreements. In addition to the agreement for a Schedule 1 facility in the UK and the agreement for a facility declared by Italy under VA Part IV(B) which were pending from earlier sessions, the Council was also presented with two further agreements for Schedule 1 facilities, one in the Netherlands and one in Norway. Also submitted were 22 facility agreements for chemical weapons-related sites in the USA; 9 for chemical weapons production facilities (CWPFs) and 13 for chemical weapons storage facilities (CWSFs).

Progress on the drafting of facility agreements has been delayed partly by a lack of resources within the Secretariat, but primarily by the failure of the Preparatory Commission to develop model agreements as required by the Convention. According to VA Part III.8:

facility agreements shall be based on models for such agreements and provide for detailed arrangements which shall govern inspections at each facility. The model agreements shall include provisions to take into account future technological developments and shall be considered and approved by the Conference pursuant to Article VIII, paragraph 21(i).

However, the first session of the CSP was unable to approve any such model agreements, and therefore the Secretariat has had to negotiate each facility agreement individually with the state party concerned. Not only is this process time-consuming and resource-intensive for the Secretariat, it has also resulted in differences between the texts of the agreements submitted to the Council so far. The logic behind providing for model agreements was to maintain the consistency of facility agreements. With agreements currently being negotiated on a case by case basis, it is more difficult to ensure consistency and the Council has had to spend more of its time considering each facility agreement. Discussions on the relevancy of model agreements are still ongoing. On one side it is argued that they are required by the CWC and would ensure consistency in the application of verification procedures in all states parties. On the other, it is argued that, in the light of the approval by the Council of a number of agreements, there is no point in continuing to develop model agreements.

Despite this divergence of views, all of the facility agreements pending before the ninth session of the Council were approved, subject to the Secretariat receiving no objection from a member of the Council by 10 May. No objections were received before the specified deadline, and therefore the facility agreements were approved. It is likely that around 11 facility agreements will be submitted to the tenth session of the Council.

**Destruction plans** The Council has begun to consider plans for destruction of chemical weapons and CWPFs sub-



mitted by states parties. The Convention requires states parties possessing chemical weapons or CWPFs to prepare various types of destruction plans and submit them to the Organization. When submitting their initial declaration, states parties possessing chemical weapons or CWPFs are required to also submit general plans for destruction, under Article III.1(a)(v) and III.1(c)(v) respectively. The required content of the general plans for destruction of chemical weapons and CWPFs is laid down in VA Parts IV(A).6 and V.6, and should include, for example, a general schedule for destruction, the names and locations of facilities and methods of destruction. In addition to these general plans, those states parties possessing chemical weapons or CWPFs are also required to submit detailed plans and reports on destruction for every year in which destruction activities take place. In the case of chemical weapons, states parties are required to submit a detailed plan for destruction not less than 60 days before each annual destruction period begins (VA Part IV(A).29), and to submit a report on the implementation of that plan within 60 days of the destruction period ending (VA Part IV(A).36). Similar measures apply to states parties declaring CWPFs. They are required to submit an annual plan for destruction not less than 90 days before the destruction period begins (VA Part V.8), and to submit a report on the implementation of that plan within 90 days of the period ending (VA Part V.9). Further measures apply to the destruction of CWPFs whereby states parties must, 180 days before destruction is due to begin, provide the Secretariat with a detailed plan for the destruction of each facility. As part of this plan, the state party concerned must also propose measures for the verification of destruction. After negotiations between the state party and the Secretariat and the preparation of a verification plan by the Secretariat, the combined plans for destruction and verification are presented to the Executive Council for its consideration and approval, in accordance with VA Part V.37.

Reporting on the status of these numerous plans and reports, the Director-General told the Council that, of the four states parties to declare the possession of chemical weapons under Article IV (India, Russia, the USA and one other), all but one had submitted their general plans for destruction. With regard to CWPFs, three states parties declared their facilities as destroyed and did not submit destruction plans. Detailed plans are still required from the remaining states parties which made declarations under Article V. The Director-General recommended to the Council that two detailed destruction plans for CWPFs submitted by the USA should also serve as the combined plans for destruction and verification. The Council, while noting that this arrangement would not set a precedent, agreed and the combined plans were approved, subject to no objections being received from members of the Council by 11 May. It was later reported that no objections were received before the deadline. The Director-General also notified the Council that the Secretariat had recently received a destruction plan for the Aum Shinrikyo Satyam 7 facility in Japan and would draw up a verification plan before submitting the completed combined plans for destruction and verification to the Executive Council for consideration and approval.

The Director-General reminded states parties which have declared the possession of Old/Abandoned Chemical

Weapons (O/ACW) that, in accordance with VA Part IV(B).7 and 17, the requirements for both general and annual destruction plans detailed above also apply to O/ACW produced between 1925 and 1946. Of the six states parties which have declared possession of O/ACW, only two had submitted general destruction plans by the time of the ninth session of the Council. According to VA Part IV(B).6, two states parties which have only declared pre-1925 stocks of O/ACW, should inform the Secretariat of the steps being taken to dispose of them.

At the request of the state party concerned, the Council decided to postpone consideration of a request for the conversion of a CWPF for purposes not prohibited under the Convention until its tenth session in June.

*Confidentiality Commission* The Director-General informed the Council of another resignation from the Confidentiality Commission, that of Mr Wang Xiaoyu (China). In accordance with the authority delegated to it by the CSP, and as proposed by the Asian group, the Council appointed Mr Gong Chunsen (China) to fill the vacancy. The Commission will meet next during 7–10 September.

*Transfers of saxitoxin* The Council once again considered the transfer of saxitoxin for medical, diagnostic and research purposes. A background paper, prepared by the Secretariat, described how the implementation of paragraphs 3–6 of VA Part VI has resulted in conflicts with existing mechanisms for the transfer and re-transfer of saxitoxin for legitimate purposes. Implementation of these provisions is also producing results contrary to Articles VI.11 and XI.1. The Council reconsidered the proposals submitted to its eighth session, but was once again unable to reach agreement. Instead, it was decided that the issue would remain on the Council's agenda as a matter of urgency, and the Council also noted the need for action under Article XV to resolve these problems by amending the CWC.

*Chemical industry declaration issues* After a year of operations, the Secretariat is now able to begin to analyse the chemical industry declarations and notifications which it has received. As of 31 December 1997, 265 Schedule 2, 394 Schedule 3 and 3,589 DOC plant sites had been declared to the OPCW. All of these figures are much lower than those used in budgetary planning assumptions. They also mean that at the current rate of Schedule 2 inspections (six per month), from July onwards all remaining initial Schedule 2 inspections will be conducted in three states parties. In order to widen the number of states parties receiving chemical industry inspections, the Director-General informed the Council that the Secretariat was beginning the planning of Schedule 3 inspections.

One possible reason for these lower figures could be that states parties are applying different low concentration limits. The Director-General reported to the Council on this subject, in accordance with decisions of the CSP and of the last session of the Council. As of 15 April, only 24 states parties had indicated to the Secretariat their application or non-application of low concentration limits. There was a wide variation in the limits used by these states parties.



Analysis by the Secretariat revealed no relationship between the number of declared sites and the concentration limits used, or between the number of production plants declared as against the number of processing and consumption plants declared. This leads the Secretariat to believe that Schedule 2 processing and/or consumption plant sites may be underdeclared.

Another problematical area is the aggregate national data (AND) on the transfers of Schedule 2 and 3 chemicals submitted by states parties. Corresponding amounts of chemicals should be submitted to the Secretariat by both the exporting and the importing state party, but this has not been happening. For example, 91 per cent of Schedule 2 transfers and 92 per cent of Schedule 3 transfers reported in 1997 could not be reconciled on the basis of data from the exporting and importing states parties. This would seem to suggest that incomplete AND declarations are being received from states parties and that there are wide variations in the collection and declaration of AND by states parties. The Council endorsed the Director-General's suggestion that states parties involved in exporting or importing Schedule 2 and 3 chemicals hold bilateral discussions with their trading partners to resolve these discrepancies.

*End-use certificates* As reported in the previous quarterly review, the Council took up the subject of Schedule 2 and 3 transfers to states not party to the Convention. At its eighth session the Council had decided that end-use certificates were required to be completed by the competent governmental authorities, not by the end-users themselves. At its ninth session the Council decided that, in cases of transfers to intermediary traders who are not the actual end-users, the exporting state party should, before authorising the transfer, obtain a statement from the trader specifying the name and address of the end-user. The Council recommended that the third session of the CSP should approve this decision.

The Director-General informed the Council that about 8 per cent of all chemical transfers reported to the Secretariat involved states not party.

*Financial issues* The Director-General reported to the Executive Council on the status of assessed contributions to the 1998 OCPW budget. As of 20 May, only 56.1 per cent of the total assessments of NLG 122,454,704 had been received from member states. Of the then 108 member states, 38 had paid in full, 25 had paid partially and 45 had not paid anything. Contributions to the Working Capital Fund stood at 93.9 per cent, but 33 member states had not paid their assessments, while 4 had paid only partially. Assessments to the 1997 budget stood at 98 per cent with 60 member states having paid in full, 11 having paid partially and 34 having paid nothing. Collection rates for the Preparatory Commission phase were fairly high, at 99.2 per cent for 1993 and 98.7 per cent for the period from 1994–97. The Director-General has sent reminder letters to those member states which have not paid, or have only partially paid, their contributions to the 1998 budget. The Council again urged those member states with contributions outstanding, in whole or in part, to meet their financial obligations forthwith. However, the members of the Executive Council

themselves have not set a good example. For example, in relation to contributions to the 1998 budget, of the 41 members of the Council (before its membership changed in May), only 13 had paid in full. Of the rest, 16 had paid partially, while 12 had paid nothing at all.

As reported in the previous quarterly review, the 1997 budget was closed with a surplus of NLG 36.1 million (41 per cent). In accordance with Financial Regulation 6.3, this surplus will be allocated in 1999 to those member states which have paid their contributions to the 1997 budget in full. Following preparation by the Secretariat, the 1997 financial statements of the OPCW were examined by the External Auditor, V K Shunglu (India) and his team. His report and opinion, along with the audited statements, were submitted to the Executive Council, in accordance with the financial regulations.

The Advisory Body on Administrative and Financial Matters (ABAF), established by the Council under Financial Regulation 15.1, met for its second session on 14–16 April. The ABAF adopted its rules of procedure and considered the Director-General's report on the implementation of the 1997 budget. The Chairman of the ABAF is Mr Arnold Cals (Netherlands) and the other members are: Mr Marcos Benito Derizans Paiva (Brazil), Mr Liu Zhixian (China), Mrs Anna Hynková (Czech Republic), Mr Peter Döllekes (Germany), Mr B N Jha (India), Mr Reza Najafi (Iran), Mr Gianfranco Tracci (Italy), Mr Kazuo Tsukada (Japan), Mr Armando Arriazola Peto-Rueda (Mexico), Mr Gye-hyan Kwon (South Korea), Mr Victor A Vislykh (Russia), Ms Gamze Artun (Turkey), Mr Dudley Lashmar (UK) and Mr Christopher Park (USA). The ABAF also considered the draft overview and introduction to the 1999 budget and discussed the impact which the introduction of the Euro might have on future OPCW budgets. The ABAF will meet for its third session on 27 July–1 August.

The Council also considered the draft financial rules of the Organization, but was unable to reach agreement on a few remaining points. The Council requested the Chairman to appoint a Friend of the Chair to facilitate informal consultations, with a view to taking a decision at the tenth session of the Council.

*UN draft relationship agreement* The Director-General reported that an agreement on the basis of the current draft was unlikely as a number of aspects made it inconsistent with UN legal practice. Rather than being seen as a political agreement, the Director-General told the Council, the agreement should simply be seen as a practical working arrangement between the secretariats of the two organisations. However, the Council decided to approve the draft and authorised the Director-General to negotiate an agreement with the UN on the basis of the draft.

### **Actions by Member States**

*Ratifications* During the period under review, three states deposited their instruments of ratification with the UN Secretary-General in New York. They were: Lithuania, which deposited on 15 April (entry into force on 15 May); Benin, which deposited on 14 May (entry into force

## CWC Ratifications and Accessions

*deposited since CWC entry into force*

Cuba — 29 April 1997  
Turkey — 12 May 1997  
Singapore — 21 May 1997  
Kuwait — 28 May 1997  
Guinea — 9 June 1997  
Slovenia — 11 June 1997  
FYR of Macedonia — 20 June 1997  
Trinidad and Tobago — 24 June 1997  
Burkina Faso — 8 July 1997  
Ghana — 9 July 1997  
Brunei Darussalam — 28 July 1997  
Qatar — 3 September 1997  
Guyana — 12 September 1997  
Pakistan — 28 October 1997  
Jordan — 29 October 1997  
Iran, Islamic Republic of — 3 November 1997  
Russian Federation — 5 November 1997  
Nepal — 18 November 1997  
Venezuela — 3 December 1997  
Mauritania — 9 February 1998  
Lithuania — 15 April 1998  
Benin — 14 May 1998  
Gambia — 19 May 1998

*Original states parties (in date order):*

Fiji, Mauritius, Seychelles, Sweden, Norway, Australia, Albania, Maldives, Cook Islands, Spain, Bulgaria, Germany, Sri Lanka, Mexico, Turkmenistan, Uruguay, Paraguay, Lesotho, Greece, Tajikistan, Mongolia, Armenia, Finland, Oman, Romania, France, Switzerland, Croatia, Monaco, Netherlands, Denmark, Peru, Algeria, Austria, Poland, Ecuador, South Africa, Japan, Canada, Argentina, Slovak Republic, El Salvador, Georgia, Namibia, Italy, Côte d'Ivoire, Morocco, Czech Republic, Brazil, Papua New Guinea, United Kingdom, Ethiopia, Costa Rica, Ireland, Republic of Moldova, Belarus, Chile, New Zealand, Latvia, Uzbekistan, Saudi Arabia, India, Portugal, Cameroon, Hungary, Swaziland, Philippines, Belgium, Bosnia and Herzegovina, Lao People's Democratic Republic, Niger, Saint Lucia, Luxembourg, Tunisia, Togo, Bangladesh, China, Equatorial Guinea, Kenya, United States of America, Zimbabwe, Bahrain, Iceland, Mali, Malta, Republic of Korea, Suriname

*As of 3 June, 110 states had deposited instruments of ratification or accession.*

on 13 June); and Gambia, which deposited on 19 May (entry into force on 18 June).

**Nominations to the Scientific Advisory Board** As of 14 April, states parties had nominated 87 individual candidates to serve on the Scientific Advisory Board (SAB). The breakdown of states parties which had submitted candidates was as follows:

- African group — 5 member states (12 per cent)
- Asian group — 7 member states (17 per cent)
- Eastern European group — 9 member states (21 per cent)
- Latin American and Caribbean group — 6 member states (14 per cent)
- Western European and Others group — 15 member states (36 per cent)

However, the Director-General reported to the Council that, taken together, the nominations received to date did not reflect a balance between the areas of research, development and application. He also reported that too few genuinely eminent persons had been nominated to permit a balanced and well justified selection. The Director-General stressed the importance of the SAB for the future viability of the Convention and for the international prestige and authority of the OPCW.

The need to establish the SAB is becoming more urgent. It has already been assigned two tasks by the CSP: addressing the scientific and technical aspects of ricin production, and participating in the development of guidelines for the evaluation of equipment on the basis of new and emerging technologies. It is highly likely that further issues will also be assigned to the SAB during the year. In light of these facts, the Director-General asked states parties to submit additional nominations by 31 May.

### **Actions by the Technical Secretariat**

**Declaration processing** As reported in the previous quarterly review, the eighth session of the Council approved the Director-General's recommendation that, subject to the installation of the Electronic Data/Document Management System (EDMS) in the new building, the Secretariat be allowed to begin loading declaration data onto the system in preparation for a full audit. The audit team checked the installation of the EDMS on 14–15 May and the Director-General wrote to eight states parties (Belgium, France, Hungary, Italy, Japan, the Netherlands, Switzerland and the USA) asking them for permission to load their declaration data onto the EDMS. Once this data has been loaded, the full audit will take place in late summer or early autumn this year. The Director-General reminded the Council that the EDMS is the most secure means of processing confidential information available to the Organization. In addition to allowing the Secretariat to control and monitor the handling of confidential material, the system will also dramatically reduce, but not eliminate, the need to use hard copies of information, thereby increasing the security of confidential information submitted to the Secretariat.

**Inspections** Inspections have continued at the rate of approximately two per week during the period under review,

with much attention currently focused on chemical weapons-related inspections in Russia. After one year of operations the Secretariat has now reached the stage at which it can begin to assess the information which it has received during the course of its on-site verification activities. The January document entitled *OPCW verification activities: a preliminary assessment of some operational issues which have arisen during the first eight months since entry into force* was incorporated into the *Verification Implementation Report 1997* mentioned above. This drew states parties' attention to a number of issues which had arisen during the course of inspections and which were included in the final reports of the inspection teams.

The procedure for dealing with such "uncertainties" is laid out in VA Part II.64 and 65. The graduated approach outlined in these paragraphs involves, firstly, the Director-General approaching the state party concerned for clarification. By initially confining the issue to bilateral discussions, it is hoped that any problems can be resolved without having to formally involve the members of the Council and name the state party concerned. However, if the "uncertainties" cannot be resolved, or if the facts established suggest that obligations under the Convention have not been met, then the Director-General should inform the Council without delay, including identifying the state party. While many issues have indeed been resolved bilaterally, the Director-General informed the Council that this point had been reached in relation to one such issue, involving access to an OCW site declared under VA Part IV(B). After noting the Director-General's report on the issue and a statement by the state party concerned, the Council decided to return to the issue at its next session.

As of 15 May, the Secretariat had carried out 165 inspections in 25 states parties. The breakdown of these inspections was as follows: 56 to CWPFs; 28 to CWSFs; 26 to Schedule 1 facilities; and 25 to Schedule 2 facilities. The three continuously-operating CWDFs in the USA are subject to permanent monitoring by inspection teams on six-weekly rotations from The Hague. Two further American CWDFs are non-continuous and a further two CWDFs are expected to begin operations soon. Between entry into force and 1 May, OPCW inspectors had witnessed the destruction of approximately 1,115 metric tonnes of nerve agents and 1,468 metric tonnes of declared Category 3 chemical weapons. CWDFs in the other three possessor states are likely to begin operations in early 1999.

**Challenge inspection exercise** During 2–6 February, a challenge inspection exercise (CIE) was carried out in the UK. The CIE allowed OPCW inspectors to gain valuable training and experience in the steps which need to be taken to ensure inspection mandates are fulfilled, the political and technical difficulties which might be encountered, negotiating skills during managed access scenarios and in the implementation of a number of OPCW standard operating procedures. The Director-General will seek budgetary provision and the support of individual member states to run two CIEs in each year.

**International Cooperation and Assistance** The Secretariat is organising a nine-day course for personnel involved

in the implementation of the Convention. The course will be held at the Netherlands Defence College, Ypenburg during 24 August–1 September. The course, which is designed for the personnel of national authorities, is divided into four separate modules. Module A focuses on introductory aspects for participants with a limited knowledge of the Convention, Modules B and C deal with declaration and inspection issues respectively and Module D covers example applications. The Secretariat will be able to sponsor a limited number of participants from member states. An invitation to the course, with annexes, has been posted on the OPCW website.

The Secretariat is also organising a second meeting to coordinate the provision of assistance under Article X. The first meeting took place on 26 January and this second meeting will take place on 15 June. The meeting is intended to provide an overview of the offers of assistance made so far, to identify types of assistance for which no offers have yet been made, to discuss how the provision of assistance from several member states can be coordinated, to consider whether it would be possible to insure personnel and equipment and to discuss possible guidelines for the use of the Voluntary Fund for Assistance. Further details of this meeting are on the OPCW website.

**Official visits** The Director-General visited Budapest, Hungary on 26–27 April where he met with Mr Laszlo Kovacs, the Minister of Foreign Affairs, and with personnel of the Hungarian national authority. He also visited the Institute of Military Engineering, a facility which manufactures protective equipment and a private commercial facility producing dual-use chemicals. On 11–13 May, the Director-General undertook a visit to Spain. In Madrid he met with Mr Abel Matutes, the Minister of Foreign Affairs and other representatives of the ministries of foreign affairs, defence and industry, in addition to staff of the Spanish national authority. During the visit he also signed an agreement with the Spanish government for the training of the second group of OPCW inspectors, Training Group B. The Director-General also visited the headquarters of the chemical company, Repsol Química.

During June, the Director-General is scheduled to travel to Jordan, Slovakia and Slovenia. Later this year he is scheduled to visit China and various other member states.

**Outreach activities** The Secretariat has continued to arrange outreach activities to member states. As previously reported, a regional seminar on the national implementation of the Convention for industrial verification was held in Tokyo, Japan on 18–19 March. The seminar was attended by seven states parties (China, India, Japan, Jordan, Mongolia, South Korea and Saudi Arabia) and five signatory states (Indonesia, Marshall Islands, Myanmar, Thailand and United Arab Emirates), in addition to representatives of the Japanese Ministry of International Trade and Industry (MITI), the Japanese Chemical Industry Association (JCIA) and the Secretariat of the OPCW.

Another such seminar will be held in Amman, Jordan on 24–25 June, preceded by a half-day national authority training course for Jordanian participants. Further regional seminars are planned for Saint Lucia and China later in the year.

On 14 May, as part of the implementation of the Brussels Project, the Secretariat arranged a workshop for members of delegations based in Brussels and not in The Hague. The workshop, held in the new OPCW headquarters building in The Hague, was attended by 16 states parties (Armenia, Burkina Faso, Georgia, Jordan, Lesotho, Mauritius, Moldova, Morocco, Namibia, Nepal, Papua New Guinea, Slovenia, Trinidad and Tobago, Turkmenistan, Uzbekistan and Zimbabwe), one contracting state (Benin) and eleven signatory states (Central African Republic, Chad, Congo, Gabon, Guatemala, Madagascar, Nicaragua, Rwanda, Senegal, Tanzania and Ukraine). Participants in the workshop were briefed on the status of implementation of the Convention and on the ninth session of the Executive Council. They also heard presentations by various divisions of the Secretariat on current and future work.

**Staffing** As of 22 May, the Organization had a total of 423 staff members. Of this total, 386 are on fixed term contracts, of whom 250 are in the professional and higher categories and 136 are in the general service category. Recruitment is still ongoing, as the total number of posts approved in the 1998 budget was 491.

The Director-General informed the Executive Council that he has, for operational reasons, created a new branch in the Inspectorate, entitled the Inspection Review Branch. Mr Raoul Fernandez (Argentina) has been appointed as its Head, having moved from the Policy Review Branch in the Verification Division.

Inspector Training Group B, consisting of 81 trainees, was completed on 29 May. The trainees completed Module B of the course on 17 April and then commenced with the four-week Module C training, which focused on practical inspection skills. Areas covered in Module C included; mission planning, equipment operation, planning and managing inspections, procedures with escorts and health and safety issues. Module D, the final part of the course, involved on-site trial inspection training. This final module lasted for two weeks, and took place at chemical weapons-related and industrial facilities in China, Italy, Romania and Spain. All 81 trainees successfully completed the 20 week training course and have been offered contracts with the OPCW to begin work on, or after, 1 July. The new recruits consist of: 31 chemical weapons/munitions specialists; 28 chemical production technologists; 12 chemical production logisticians and 10 paramedics. Alongside the recruitment of inspectors who successfully completed Training Group A in 1997, this wave of recruitment should bring the total number of inspectors close to the budgeted figure for 1998 of 205. If necessary, Training Group C will start in 2000, to account for natural turnover in the Inspectorate.

### **Future work**

**Unresolved issues** Much attention is still focused on the remaining unresolved issues, particularly as some must be addressed and resolved by the tenth session of the Council in June. The Final Report of the Preparatory Commission listed 63 unresolved issues, some of which have since been resolved. In all, around 40 issues are currently being tackled by approximately 15 facilitators, appointed by the

Chairman of the Committee of the Whole, Ambassador Bjorn Barth (Norway). Under the decision of the second session of the CSP on the procedure for addressing unresolved issues, once an issue has been resolved by the facilitators, it should be submitted to the Executive Council for immediate implementation. During the period under review, the Committee of the Whole met on 20 April and 27 May to review the progress of the facilitators. The Secretariat has also informed member states of the issues which it views as requiring urgent consideration. These issues divide into three main categories: issues which require urgent resolution for operational reasons; issues of particular importance to the OPCW; and issues which require attention, but which are not currently being addressed by a facilitator. The Committee will meet again on 15 June, the day before the tenth session of the Executive Council begins.

Many issues relating to the chemical industry remain unresolved. Debate of a procedural nature is ongoing as to whether some of these issues, for example low concentrations and aggregate national data, should be transferred to the Executive Council for resolution. Aspects of both of these issues are already being dealt with by the Council, as reported above. Further unresolved industry issues relate to unscheduled DOCs and whether the term "production by synthesis" used in VA Part IX includes biochemical and biologically mediated processes. During the Preparatory Commission, the Expert Group on Chemical Industry Issues could not reach agreement on this issue, but discussions raised three possible options, that DOCs included chemicals produced biologically and/or biochemically, that DOCs included those produced biochemically but not biologically or that DOCs excluded chemicals produced both biologically and biochemically. Without agreement between member states on one of these three options, this issue might well be referred to the Scientific Advisory Board for its advice on the implications of each option.

The issue of the costs of verification under Articles IV and V and the costs of verification of OCW are particularly urgent due to the implications for the OPCW budget. Discussions among member states, coordinated by the facilitators, have been ongoing, and at the ninth session of the Council the facilitators were also appointed friends of the chair on these issues. According to Article IV.16 and 19, states parties which possess chemical weapons and CWPF are obliged to meet the costs of their destruction. They shall also meet the costs of verification of storage and destruction, unless the Council decides otherwise. This is the so-called "possessor pays" principle. However, there was no agreement on the criteria and details for these reimbursements at the second session of the CSP, which decided that the tenth session of the Council should resolve the issues of inspectors' salaries and the attribution of costs related to the inspection of O/ACW.

Under the terms of the Convention chemical weapons and OCW may be treated differently from each other. For chemical weapons to be OCW they must have been produced before 1925 or between 1925 and 1946 and have "deteriorated to such an extent that they can no longer be used as chemical weapons" {Article II.5}. In accordance with VA Part IV(B).5, the first session of the CSP should have approved guidelines to determine the usability of OCW, but

these guidelines remain an unresolved issue. This means that the Secretariat cannot confirm that chemical weapons declared as OCW by states parties are, in fact, old chemical weapons. Because of this, all of the inspections which the Secretariat has so far conducted to O/ACW sites remain open. If guidelines on usability are not finalised soon, the Secretariat will have to treat all OCW as usable and therefore falling under the provisions for chemical weapons. This would have major resource implications for the Secretariat and budgetary implications for those member states declaring OCW.

States parties have yet to decide on the format for the submission of information on national protective programmes under Article X.4. Currently states parties themselves can decide what to include, making it difficult to compare declarations and perhaps encouraging some states parties to not submit any information at all. Instead of increasing transparency, such an outcome might serve to raise suspicions between member states. International cooperation issues under Article XI need resolution in order that the Secretariat can allocate resources to the relevant programmes within the budget. Trade issues have political im-

portance for some states parties and the lack of agreement could begin to hamper the implementation of the Convention in other areas.

In addition to the unresolved issues, much work still remains to be done by the Organization, both in terms of implementation of the Convention and institution building. The backlog of facility agreements is now being tackled and the first bilateral agreements on privileges and immunities have been drafted by the Secretariat. Internal discussions on the 1999 OPCW budget have also begun and the Scientific Advisory Board is getting closer to being established. Another impending issue relates to the implementation of Article VII by states parties. The Secretariat is undertaking an initial review of information submitted under Article VII.5 and is also studying the measures taken so far by states parties to implement Article VII.2 on legal assistance. These issues, and others, will assume increasing importance over the coming months.

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*This review was written by Daniel Feakes, the HSP researcher in The Hague*

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*Progress in Geneva*

*Quarterly Review no 3*

## **Strengthening the Biological and Toxin Weapons Convention**

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A further one week meeting, the tenth session, of the Ad Hoc Group to consider a legally binding instrument to strengthen the Biological and Toxin Weapons Convention (BWC) was held in Geneva from Monday 9 to Friday 13 March. As at the ninth session, held in January, negotiations focused on the rolling text of the Protocol. However, because this was a short session, the negotiators focused on three aspects only: compliance measures, the investigations Annex and measures related to Article X of the BWC.

Forty-nine states parties and 3 signatory states participated at the tenth session; a net total of five states parties fewer than in January as 7 states (Iraq, Jordan, Malta, Nigeria, Singapore, Thailand and the Ukraine) did not participate in March whilst 2 states (Kenya and Mauritius) which had not participated in January did in March.

Nine new Working Papers were presented during the March session, some 24 fewer than in the three-week meeting in January. As usual, these were presented both by states parties (South Africa 2, United Kingdom 2, Austria 1, Brazil 1) and by the Friends of the Chair (3).

Further progress was made in the March meeting with serious negotiations addressing the language in the square brackets. As it was a one week meeting there was some attempt to "put a quart into a pint pot". Sessions began an hour earlier at 0900 and 1400 to enable informal meetings without interpretation to be held prior to the formal ones. These appeared to be useful as they enabled the issues to be ventilated and discussed prior to the formal negotiation.

As only three aspects of the Protocol were addressed, instead of producing a revised version of the rolling text, re-

ports were prepared of the results of the discussions in the three areas; these were attached to the procedural report of the March meeting {BWC/AD HOC GROUP/40}.

Of the 10 meetings held, 4 were devoted to compliance measures, 2 to Article X measures, and 4 to the investigations Annex. There was no change in the Friends of the Chair who were the same as in January.

The session saw the UK, as holder of the EU Presidency, circulating on 9 March the Common Position {see *News Chronology* 4 March} which committed not only the 15 EU states but also the 14 associated states to:

Member States ... shall actively promote decisive progress in the work of the Ad Hoc Group, with a view to concluding the substantive negotiations by the end of 1998, so that the Protocol can be adopted by a Special Conference of States Parties early in 1999.

An Australian statement to the Ad Hoc Group said that the country's Minister of Foreign Affairs had a week earlier announced, as part of the response to the recent crisis caused by Iraq, an initiative to strengthen the BWC. This was:

aimed at fast-tracking the negotiations on a verification system for the Biological Weapons Convention by: - calling for the convening of a high level meeting to inject into the negotiations the necessary political commitment for urgent action ... to help secure early conclusion to the negotiations.

It is likely that a meeting will be held at foreign minister level later this year or early in 1999 to give additional political impetus to complete the negotiation of the Protocol.

The major contentious point in the March meeting was a move by members of the Western Group to introduce significant changes to Article VII of the draft Protocol concerned with the implementation of Article X of the BWC. The Protocol emerging from the January 1998 session had a title for Article VII which had no square brackets, indicating consensus, which read as follows:

ARTICLE VII SCIENTIFIC AND TECHNOLOGICAL EXCHANGE FOR PEACEFUL PURPOSES AND TECHNICAL COOPERATION

The amendment that was introduced was to put the title into square brackets by introducing the alternative “Implementation Assistance” so that the title now reads as:

ARTICLE VII [SCIENTIFIC AND TECHNOLOGICAL EXCHANGE FOR PEACEFUL PURPOSES] [IMPLEMENTATION ASSISTANCE] AND TECHNICAL COOPERATION

Given that the mandate for the Ad Hoc Group explicitly requires the Ad Hoc Group, *inter alia*, to consider “Specific measures designed to ensure effective and full implementation of Article X ...”, this amendment cast doubt upon the willingness of the Ad Hoc Group to address measures to implement Article X of the Convention. These doubts were reinforced by other amendments which placed within square brackets a whole section within Article VII entitled “Measures to avoid hampering the economic and technological development of States Parties” and the title “International Cooperation” of another section. The Non-Aligned Movement and Other Countries (NAM) group — which has long regarded implementation of Article X as an important element of the work of the Ad Hoc Group — issued a statement on the afternoon of 13 March, just before the end of the March session, in which they expressed

their concerns at attempts to reduce the scope and importance of issues related to Article X of the Convention

and went on to say that:

Substantive progress in strengthening the application and full operationalisation of Article X is crucial to the conclusion of a universally acceptable and legally binding instrument designed to strengthen the Convention. They reaffirm readiness to work with other delegations in order to achieve an appropriate balance in the Protocol.

The same NAM statement also put down markers of concern about the timescale proposals for the negotiations pointing out that the decision of the Fourth Review Conference that the Ad Hoc Group should complete its negotiations as soon as possible enjoyed consensus support from all states parties of the BWC and about any consideration of alternative texts to the existing rolling text, thereby registering dissent with the Australian statement which had included the mention that Australia might produce an alternative text (as Australia had done for the CWC and for the CTBT).

These are retrograde steps by the Western Group in regard to Article VII of the Protocol as they fail to recognise that it is possible to design measures that will aid the implementation of Article X of the Convention and directly contribute to the enhancement of transparency and the building of confidence in compliance with the Convention. Furthermore, such Article X measures can also promote

trade and serve as a powerful incentive to encourage states to become parties to the Protocol (and to the Convention). It is to be hoped that a more positive approach is adopted at the next Ad Hoc Group session in June/July.

### **The Emerging Regime**

**Compliance measures** The outcome of the discussions on compliance measures saw the development of replacement text for three elements of Section F [Visits and Investigations] of Article III Compliance Measures:

- *Visits* — In the January rolling text, there had been “Request” and “Voluntary” visits; in the March session these became “Voluntary” and “Voluntary Confidence-Building Visits” respectively with the text for the new “Voluntary Visits” being elaborated from 1 to 5 paragraphs. It is made clear that a “State Party may [request][volunteer for][invite][the Organization] to undertake visits to facilities” to help compile declarations, further the cooperation and assistance provisions, resolve specific concerns about declarations, including any ambiguity or resolve a specific concern. All the objectives of the voluntary visits are in square brackets.
- *BWC Article III (non-transfer) measures* — The entire element has now been placed in square brackets.
- *Investigations* — This element of Article III. F has been tidied up and there has been a major restructuring of the information required with “requests for [field] investigations [into alleged use of biological weapons]”. The rolling text for “Random Visits” and “Clarification Visits” was not considered during the March session.

**Measures related to Article X** As already mentioned, the title of Article VII of the Protocol was modified so as to include “[Implementation Assistance]” which was further emphasised by the inclusion of a set of alternative paragraphs for the Section A General Provisions of Article VII. These alternatives make it clear that:

the implementing organization shall provide a forum for consultation and cooperation in matters to promote implementation assistance and technical cooperation for peaceful purposes

and that:

the implementing organization should assist States Parties, on request, in obtaining implementation assistance, coordinating its efforts as appropriate with other States Parties.

The impression is left that Article VII is much more about assistance in the implementation of the Protocol rather than strengthening the implementation of Article X of the BWC.

In Section B, Measures to Promote Scientific and Technical Exchanges, the first paragraph of which states that “each State Party undertakes to implement specific measures in order to ensure that: (a) the provisions of Article X of the Convention ... are [fully and] effectively implemented”, had in January only minor square brackets within its subparagraphs. Now the entire paragraph is within square brackets.

Throughout the remainder of the revised Article VII additional square brackets have been inserted where none ex-

isted previously. Cumulatively, the message is negative. There has been a clear failure by those introducing these changes to recognise that there are indeed Article X implementation measures which will directly contribute to strengthening the Convention and will bring substantial benefits to all states parties. Two University of Bradford Briefing Papers (6 & 7) which identified potential areas for such Article X measures were distributed during the March session to the AHG delegations.

*Investigations Annex* The discussions on Section II [Field] Investigations [of alleged use of BW] of this Annex saw the production of replacement language which has tidied up the text, removed some square brackets and reordered some aspects of the Annex. Some additional timings in square brackets have, however, been introduced which result in some inconsistencies which clearly need to be resolved. For example, two alternative durations for such investigations now appear of “[30]days [84 hours]” yet later on interview requests shall be given “[not less than 48 hours before conducting it]”. This is hardly likely to be possible were the shorter duration of the investigation to be adopted.

An Appendix was also produced of a “List of Approved Investigation/Visit Equipment” which, by comparison with the CWC, would seem to be an excessive level of detail. There would also seem to be a real danger of locking the BWC Protocol into 1990s technology as there is no sign of any provision for the inclusion of new advanced equipment which will certainly be developed in the next millennium.

Finally, an informal working paper was prepared by the Friend of the Chair on the Investigations Annex in which language which had appeared on managed access in Annex D Investigations was forwarded to the Friend of the Chair on Compliance Measures for consideration in dealing with the text on managed access in Article III of the Protocol. Such a move should lead to a useful reordering and tidying up of the text.

### Prospects

The March meeting also saw the agreement of the programme of work for the eleventh session to be held on 22 June to 10 July. This made the following allocation of the 30 meetings to the various topics:

Compliance measures	6
Definitions	6
Investigations annex	4.5
Article X	4
Confidentiality	4
Legal issues	1.5
Organization	1.5
National implementation	1.5
Ad Hoc Group	1
Informal consultation	2
<hr/> Total	<hr/> 30

Since the March Ad Hoc Group meeting, there has been a flurry of meetings and occasions, notably in May, on

which the importance of the strengthening of the BWC has been emphasised. The G-8 Foreign Ministers in the communiqué issued following their meeting in London on 8–9 May said that they:

are committed to action in the following areas: — the intensification and successful conclusion of the negotiations on measures, including for effective deterrence and verification, to strengthen the Biological and Toxin Weapons Convention with the aim of the earliest possible adoption of a legally-binding Protocol.

The Swedish Pugwash Group organised an international meeting on 9 May at which international cooperation and assistance were discussed and comparisons made between the OPCW experience in the early implementation of the CWC and the implementation of Article X of the BWC. Various measures that could both implement Article X of the BWC and contribute directly to strengthening the BW were identified.

The UK, as holders of the EU Presidency, as foreshadowed in the EU Common Position issued in March, organized a seminar in Brussels on 13 May for European industry at which the various key elements of the Protocol — declarations, visits and investigations — were outlined by representatives of various EU countries (Austria/UK on declarations, Netherlands/Sweden on visits, and France/Germany on investigations) and the implications for industry examined. Observers attended from Japan and Switzerland. The presentations made it clear that the numbers of facilities to be declared within an individual EU country can probably be measured in tens rather than hundreds, that such declarations should not seek any commercially sensitive information and that the total annual number worldwide of visits would be in the order of 50 to 100 which would be spread equably between the five or six geographical blocks.

At the end of May, on 28 & 29, the Institute of Applied Microbiology in the University of Agricultural Sciences in Vienna organised a Conference entitled “A Strengthened Biological and Toxin Weapons Convention: Potential Implications for Biotechnology” which was attended by about 100 people from some 22 countries including several outside Europe such as Australia, Brazil, Egypt, Iran, Korea, South Africa and the USA as well as the WHO. Participants came from both biotechnology industry and academia as well as from governments. For the first time, the strengthened BWC Protocol was considered in the context of the other relevant controls and regulations relating to biotechnology; those resulting from the implementation of the CWC; those relating to health and safety within the European Community; those likely to result from the legally binding Biosafety Protocol nearing completion under the Convention on Biological Diversity; those associated with ensuring that medicinal and veterinary products are safe for humans and animals; and those recently introduced in the United States to inspect and monitor facilities engaged in handling, storing and transferring select agents. There was a lively discussion of all the relevant issues and a clear recognition of the importance of avoiding duplication in the collection and reporting of data.

Further indications of high level political attention to the strengthening of the BWC came towards the end of May with the Ministerial Meeting of the Coordinating Bureau of



the Non-Aligned Movement at Cartagena des Indias, Columbia on 19–20 May when the Ministers of Foreign Affairs and Heads of Delegations in their communiqué said that:

The Ministers noted the progress achieved so far negotiating a Protocol to strengthen the Biological and Toxin Weapons Convention and reaffirmed the decision of the Fourth Review Conference urging the conclusion of the negotiations by the Ad Hoc Group as soon as possible before the commencement of the Fifth Review Conference and for it to submit its report ... to be considered at a Special Conference.

The communiqué also reiterated the importance of progress in implementing Article X as being crucial for the conclusion of the Protocol to strengthen the BWC. Later, in the same week, President Clinton on 22 May 1998 announced a

major initiative to counter attacks using biological weapons. In this he said that:

we must pursue the fight against biological weapons on many fronts. We must strengthen the international Biological Weapons Convention with a strong system of inspections to detect and prevent cheating. This is a major priority. It was part of my State of the Union address earlier this year, and we are working with other nations and our industries to make it happen.

The next meeting of the Ad Hoc Group will be held in Geneva from 22 June to 10 July when further progress on the text of the Protocol can be expected.

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

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## News Chronology

## February through May 1998

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*What follows is taken from the Harvard Sussex Program CBW Events Database which provides a fuller chronology and identification of sources, all of which are held in hard copy in the Sussex Harvard Information Bank. The intervals covered in successive Bulletins have a one-month overlap to accommodate late-received information. For access to the Database, apply to its compiler, Julian Perry Robinson.*

**February** The US Defense Department submits its annual report to Congress on *Nuclear/Biological/Chemical (NBC) Defense*, the fifth such report under Section 1703 of the FY 1994 National Defense Authorization Act [see 30 Nov 93]. The purpose of the report is to provide Congress with an assessment of the overall readiness of US armed forces to fight in an NBC-warfare environment. Its 268 pages review in detail many aspects of US military preparedness for CBW, including implementation of the CWC — though not including such matters as counterproliferation active-measures [see 25 Nov 97], or chemical non-lethal weapons. As to threat assessment, the report observes in its Introduction: "Many of the components for new binary agents developed under the former-Soviet program [see 4 Feb 97] have legitimate civilian applications and are not on the CWC's schedule of chemicals". Among the accomplishments noted in the Threat Category: Nerve Agents part of the report on the medical chemical defence R & D programme during FY 1997 is determination of the subcutaneous median lethal dose in guinea-pigs and rats of "four classified novel agents".

**1–6 February** In Baghdad, there are international 'technical evaluation meetings' [see 19–21 Jan] on the accounting for Iraq's proscribed missile warheads and for the Iraqi VX chemical weapons programme [see 27 Oct 97]. In the subsequent words of UNSCOM Executive Chairman Richard Butler, "[t]he Commission had agreed to these meetings in view of Iraq's claims that it had destroyed and/or no longer had any weapons of mass destruction and, where there was disagreement between the Commission and Iraq on these issues of substance, those disagreements should be settled in technical 'seminars' with the participation of both international and Iraqi experts" {S/1998/176}. Speaking on Iraqi television {2 Feb in BBC-SWB

4 Feb} as the TEMs begin, the head of Iraq's National Monitoring Directorate, Husam Muhammad Amin, says: "Iraq has met all its commitments under resolution 687 by presenting information and destroying banned weapons. UNSCOM raises secondary points, however, which it believes to be important; therefore, certain concepts are built on these points far from reality. In order to assess these points, Iraq has proposed hosting scientists, specialists, industrialists and technicians to participate in the assessment of discussions between the two sides. We hope that these meetings will make UNSCOM admit that the missiles file, namely the warheads file, was closed long ago. ... The seminars are being held in a professional atmosphere. We hope that these files will be closed by joint seminars and that UNSCOM will sense the credibility of Iraq's announcements and then recommend the application of Paragraph 22."

The modalities of the TEMs, as previously agreed between UNSCOM and Iraqi authorities [see 12–16 Dec 97], are as follows: "(a) The Executive Chairman would invite qualified objective international experts to take part and participate in the Commission's team. They would be chosen from the countries having the necessary expertise; (b) The Commission would prepare a dossier for the team containing all the relevant information. The dossier would be made available to the Iraqi side to enable it to respond to relevant questions at the technical evaluation meeting; (c) The discussions at the meetings would be conducted in an open and continuous manner in order to enable joint evaluation of technical issues; (d) The Commission's team would advise the Executive Chairman on its findings as a result of the meetings. The Executive Chairman would then incorporate these findings in appropriate reports to the Security Council and the Government of Iraq." {S/1997/987}

For the Proscribed Missile Warheads TEM, a 19-person UNSCOM team is led by Nikita Smidovich of Russia, and includes experts not on the UNSCOM staff from China, France, Germany, Russia, the UK and the USA. The team had spent 8 days in Bahrain preparing for the meeting, with access to all pertinent UNSCOM information, during which it drafted two Commentary Notes that outlined the major issues and would serve as an annotated agenda for the TEM, one on general warhead issues, the other on CW/BW ('special') warheads. The Iraqi team is led by Oil Minister Lt-Gen Amer Rasheed.

For the VX TEM, the UNSCOM team is led by Horst Reeps of Germany and comprises another 14 experts from China, France, Iraq, the Netherlands, Russia, Sweden, Switzerland, the United Kingdom and the United States. The Iraqi team is led by Lt-Gen Amer Hammodi al-Saadi [see 21–25 Jul 97]. {S/1998/176}

At the close of the TEMs, Oil Minister Amir Rashid says on Iraqi television {7 Feb in BBC-SWB 10 Feb} that Iraq had proved that it had dug up and destroyed 70 out of 79 of its special warheads, and that it had destroyed all of its missiles and launchers. General al-Saadi tells a news conference in Baghdad that Israel had caused the race for possession of chemical weapons when it began its research in this field in the 1950s: "If Israel did not possess chemical weapons, it would not have been necessary for other countries to possess them" {Baghdad *Babil* 9 Feb in FBIS-TAC 17 Feb}.

**2 February** The World Health Organization, in a circular, asks member-states for their present views on the destruction of the world's last stocks of smallpox virus, which is currently scheduled to take place on 30 June 1999 unless disapproved by the World Health Assembly [see 24 May 96].

**2 February** In the UK Parliament, the problem of Gulf War illnesses and the responses of the Ministry of Defence [see 17 Jan] are debated in the House of Lords.

**2 February** UN Secretary-General Kofi Annan presents the report which the Security Council had requested from him on the question of increasing beyond the current level the amount of oil that Iraq is permitted to sell under "oil for food" resolution 986 (1995) [see 4 Dec 97]. He has stated in the report: "I am convinced that this sum is inadequate to prevent further deterioration in humanitarian conditions and cannot effect the improvement in the health and nutritional status of the Iraqi population the Council hoped for when it unanimously adopted the measure." He proposes that the permitted sales be raised from \$2.1bn to \$5.2bn every six months. British, French and US officials are quoted as favouring the proposal. It is embodied in resolution 1153 (1998) which the UN Security Council adopts on 20 February.

**2 February** President Clinton submits his administration's federal budget for FY 1999 to the Congress. His request includes \$464 million for the Defense Department Cooperative Threat Reduction (Nunn–Lugar) programme, up nearly \$82 million on the FY 1998 appropriation. Details on the individual elements of the programme are not yet released, but a senior Defense official says that part of the increase is to support dismantlement of a chemical weapons production facility in Uzbekistan [see 5 Jan]. {*Post-Soviet Nuclear & Defense Monitor* 9 Feb}

**2–6 February** In the United Kingdom, there is a practice CWC challenge inspection at a military airfield in North Wales for which the OPCW Technical Secretariat provides both technical

and personnel resources. Director-General José Bustani and Deputy Director-General John Gee participate.

**3 February** In Kuwait, US Ambassador Jim Larocco tells resident US citizens that an Iraqi CBW attack is "an extremely remote possibility". An American businessman attending the briefing later records the following in a memorandum on what the ambassador had said: "Gas masks are not required. No one at the American embassy has gas masks and the American embassy does not recommend any. They are not even interested in finding out a source for gas masks. The main reasons for this decision are the new interceptor missiles in place in Kuwait and the fact [that] the biological and chemical warheads are very ineffective." {London *Independent* 7 Mar} Civil defence authorities in the Kuwaiti Interior Ministry are in the process of importing 48,000 gas masks from Egypt {MENA 5 Feb in BBC-SWB 7 Feb}.

**3 February** The UK Defence Secretary has been asked in Parliament about the dangers of bombing installations containing harmful bacteria, and the response from his chief expert is as follows: "No specific field trials have been carried out to look at this subject. DERA's Chemical and Biological Defence Sector (CBD) at Porton Down carries out theoretical risk assessments on a range of micro-organisms that might be used as a biological weapon by an aggressor. It would, therefore, be possible to assess very quickly the specific risk associated with the release of bacteria from a bombed installation from the data already available. During the Gulf War, CBD conducted theoretical modelling, based on the worst case scenario, on the risk to military operations which might result from the destruction of enemy biological production and storage facilities. Such modelling is intended to ensure that the operational effectiveness of the UK Armed Forces is not compromised."

**3 February** The US National Academy of Sciences publishes in its *Proceedings* {95: 1224–29} the results of analyses of DNA fragments extracted from formalin-fixed samples of tissue that had been taken in 1979 from 11 victims of the outbreak of anthrax then in the Soviet city of Sverdlovsk [see 18 Nov 94]. Researchers at the Los Alamos National Laboratory used polymerase chain reaction analysis and DNA sequencing to demonstrate that at least four different strains of anthrax bacteria had been present in samples from some of the victims. If the victims had died from a natural outbreak of anthrax, only a single strain would have been expected. The extra strains might be an indication of anthrax vaccination possibly complicated by cross-contamination before samples had reached Los Alamos (a standard Soviet vaccine used two live avirulent strains of the bacterium) and/or of a mixture of strains in the original discharge from the Sverdlovsk military facility. The Los Alamos scientists are now reported to be seeking to determine whether genes for antibiotic resistance were present in any of the strains. {*New York Times* 3 Feb} One of the authors of the report, Martin Hugh-Jones of Louisiana State University, is later quoted as saying the multiple strains "were a weapons fill for sure" {*Chemical & Engineering News* 2 Mar}.

**4 February** In Israel, a Knesset Finance subcommittee approves a government request for a \$67.2 million augmentation of the budget to upgrade the country's anti-CBW defences, including emergency purchase of protective equipments for the civilian population. This is partly a consequence of the recent widely reported remarks by UNSCOM Executive Chairman Richard Butler about Iraqi BW missile warheads [see 26 Jan], after which there had been a renewed rush on gas masks. The

US government, during Secretary of State Madeleine Albright's visit, had promised to supply Israel with BW vaccines, the Israeli government having reportedly requested an emergency airlift of "6 million vaccinations and antidotes for anthrax" (*Foreign Report* 5 Feb). (An Israeli anthrax vaccine, developed at Ness Ziona [see 18 Feb 97], has recently been tested on volunteer Israeli soldiers.) Among other things, the new funding will be used to buy AP2C CW-agent detectors from France (Tel Aviv *Ha'aretz* 4 and 5 Feb as in BBC-SWB 6 and 10 Feb). Later, as the crisis over Iraq mounts, it is reported that Germany will be supplying 180,000 gas masks, that about 100,000 more have been bought from Sweden, that Switzerland has offered to lend another 25,000, that the Netherlands has lent 125,000 anti-gas kits, and that the Czech government is offering for sale 100,000 of its M-10M masks. (*Frankfurter Rundschau* 10 Feb, CTK 16 Feb, London *Daily Telegraph* 13 Feb, *Jane's Defence Weekly* 18 Feb) By mid-February the Home Front Command has distributed more than 300,000 updated gas masks (*Jerusalem Post* 15 Feb). A US shipment of BW detection equipment arrives on 22 February. An estimated 90 percent of the 5.9 million population of the currently is now thought to have gas masks. (*Lancet* 28 Feb)

Israeli authorities have in fact been downplaying the dangers. For example, the head of IDF Intelligence, Maj-Gen Moshe Ya'alon, speaks as follows on national television (19 Feb in FBIS-TAC 20 Feb) after being asked about the likelihood of Iraqi missiles being fired at Israel: "At this stage, the probability of this happening ranges from very small to almost zero. Even after a US attack, the chances of this remain very small. I will start thinking about a higher probability when I discern that Saddam is being pushed to the wall and senses a threat to his very existence. If that happens, the chances of something being fired at Israel may definitely increase."

President Mubarak of Egypt says in interview on 7 March that Prime Minister Netanyahu had telephoned him during the crisis: "I told him: In my opinion, Saddam will not attack you. If he had the weapons, he would attack another country, not you. I will not elaborate on this point." (Tel Aviv *Ma'ariv* 9 Mar in BBC-SWB)

**4 February** Chinese firms are still selling "dual-use chemicals and production equipment" to "questionable Iranian buyers" [see also 30 Oct 97], so says US Deputy Assistant Secretary of State Robert Einhorn in testimony before the International Relations Committee of the House of Representatives. (AFP from Washington 4 Feb)

**4 February** Iraq's remaining capabilities in prohibited weapons are increasingly the subject of published official speculation in countries such as Britain, Israel and the United States as the crisis over UNSCOM access to sites in Iraq heightens [see 19-21 Jan], and as US-led military action seems more probable. In the UK, the government distributes a paper to all members of Parliament which includes the following: "UNSCOM is concerned that:

- Iraq may still have operational SCUD-type missiles with chemical and biological warheads. Critical missile components, warheads, and propellant are not accounted for. Nor are 17 tonnes of growth media for BW agents — enough to produce more than three times the amount of anthrax Iraq admits it had. Key items of CW production equipment are also missing.
- UNSCOM strongly suspects that admitted Iraqi figures for production of BW agent are still too low.
- Iraq's CW programme was on an enormous scale. 4,000 tonnes of CW precursors are not accounted for. These

could produce several hundred tonnes of CW agents, enough to fill several thousand munitions. Over 31,000 CW munitions are not accounted for.

- Over 600 tonnes of VX precursors are also not accounted for. These could make 200 tonnes of VX. One drop is enough to kill. 200 tonnes could wipe out the world's population."

The government paper also states: "One hundred kilograms of anthrax released from the top of a tall building in a densely populated area could kill up to three million people". Further, the paper states that, if the current UNSCOM monitoring effort were to stop, "Iraq could produce CW and BW [weapons] in weeks, a long-range missile in a year, and a nuclear weapon in five years. ... Iraq could produce up to 350 litres of weapons grade anthrax per week — enough to fill two missile warheads. It could produce mustard CW agent within weeks."

On missiles, the 2 February issue of the secret US Defense Intelligence Agency *Military Intelligence Digest* has reported, according to a Washington newspaper, that Iraq has "several dozen" Al-Hussein missiles (the 600-km-range version of Scud) and "a few" Al-Abbas missiles (the 900-km-range version); also that "Iraq is believed to be hiding the Scud-variant SRBM at or near presidential or Republican Guard facilities, most likely near Baghdad (such as the Abu Ghurayb area), Tikrit, Bayji or secure facilities in the western part of the country". (*Washington Times* 11 Feb)

Israeli Defence Minister Yitzhak Mordechai later says in a speech: "In a large country like Iraq there are places where Saddam Hussein can store some of these arms. We are sure he has launchers for Scud missiles, two, four or five, maybe a few more. And there's no doubt Saddam has chemical and biological weapons, how much and where they are I think no one knows exactly." (AFP from Tel Aviv 10 Feb) His Intelligence chief, Maj-Gen Moshe Ya'alon, says subsequently: "We are talking about a few missile launchers, several dozen missiles, chemical and biological materials. We know he possessed these things in 1991, and he has concealed them from the UN inspectors for the last four years." (Israel TV 19 Feb in FBIS-TAC 20 Feb)

**4–10 February** In Iraq there is a further UNSCOM chemical mission, CW 44 (UNSCOM 221). (*Arms Control Reporter* 704.E-2.174)

**5 February** In the European Parliament there is a hearing on *Non-lethal Weapons: Strategic, Environmental, Ethical and Human Rights Implications* before the Sub-committee on Security and Disarmament of the Committee on Foreign Affairs, Security and Disarmament. Testifying are Robin Coupland of the International Committee of the Red Cross and Luc Mampaey of GRIP (the Brussels-based European institute for research and information on peace and security). Dr Coupland explains why the term "non deadly" in its application to weapons is ultimately a marketing slogan.

**6 February** Russian Prime Minister Viktor Chernomyrdin approves the draft of an antiterrorism treaty that is to be submitted to the Commonwealth of Independent States. The aim of the projected treaty is to avert the use, or threat of use, of nuclear, radiological or CBW weapons or other substances hazardous to human health, or the destruction of "facilities of enhanced technological and ecological danger" or of life-sustaining systems, for the purpose of affecting public security, intimidating the population, and achieving political or other self-seeking aims. The treaty would be open to all CIS member-states, but once it is in

force other countries could join, if all existing states parties consent. {ITAR-TASS 6 Feb in FBIS-SOV 6 Feb}

**6 February** In Kiev, Ukrainian and Turkish border authorities initial an agreement on coöperation to strengthen measures against smuggling, including the smuggling of psychotropic, explosive, radioactive and poisonous substances. {UNIAN 6 Feb in BBC-SWB 9 Feb}

**6 February** The UK CWC National Authority, in the person of the Secretary of State for Trade and Industry, lays a copy of its statutory annual report for 1997 before Parliament {*Hansard (Commons)* written answers 6 Feb}. Advice on its preparation had been sought from the CWC National Authority Advisory Committee [see 13 Oct 97].

**7 February** In Pakistan, a petition is laid before the Supreme Court seeking disqualification of both Prime Minister Nawaz Sharif and Opposition Leader Benazir Bhutto for violating the Constitution by not consulting Parliament before signing and then ratifying the Chemical Weapons Convention. Laid by advocate Abdul Hafiz Khokhar and drafted by Mohammad Ikram Chaudhry, the petition seeks initiation of legal proceedings against the respondents — and several others are named as well — under eight different articles of the Constitution, including Article 6 on high treason. It also pleads that the agreement of Pakistan to be bound by the CWC should be declared *ultra vires* of the Constitution, void, malafide and without lawful authority. And it pleads that President Rafiq Tarar be directed to summon a joint sitting of the Parliament to debate the issue. {*Islamabad News* 8 Feb in FBIS-NES 8 Feb}

This latest development in the CWC issue [see 4 Jan] has been preceded by expression of concern in the country's press about the non-involvement of Parliament on a matter which could, some assert, impact adversely upon the national security. A recent report in the *Pakistan Observer* {4 Feb} goes further: "Defence strategists and political observers have ... also drawn a parallel between Pakistan and Iraq. While the latter is facing a crippled economy and death and destruction of its innocent population as a result of America's open policy to subdue the rising Muslim force in the Gulf, Pakistan might also face a similar situation, God forbid, if the so-called policeman — the superpower (mainly America) in fulfilment of its policy of forming strategic alliance with India embarks upon a similar operation against Pakistan. The opportunity for such action could be easily provided by any country, particularly India, falsely accusing Pakistan of secretly stockpiling chemical/biological weapons." Opposition parties, especially the Jamaat-i-Islami, subsequently seek to rally support by attacking the ratification of the CWC {*Islamabad News* 17 Mar, *Pakistan TV* 4 Apr in BBC-SWB 6 Apr, *Islamabad Nation* 13 Apr}.

**9 February** Mauritania deposits its instrument of ratification of the Chemical Weapons Convention. In 30 days time, it will thereby become the 107th state party to the treaty.

**9 February** Iraq "may have possessed large quantities of a CW agent known as Agent 15 since the 1980s", so UK Defence Secretary George Robertson tells the UK House of Commons. He explains his disclosure as being "in line with our undertaking to Gulf veterans to make available any information that we possess that is of potential relevance to Gulf veterans' health issues". The precise chemical identity of Agent 15 is not known but, according to a Defence Ministry release, it is "one of a large group of chemicals called glycollates" — anticholinergic agents, of which the best known is Agent BZ, that can temporarily dis-

able people through a variety of psychotropic effects. The ministry release continues: "We have known since 1985 that Iraq was investigating CW agents of this type, but the first indication of a specific interest in Agent 15 came in a brief reference contained in an Iraqi document, which we became aware of in August 1995 and which stated that Iraq was carrying out laboratory research on this agent. The first indications that Iraq had possessed large stocks of Agent 15 came late last year". [Note: At its plenary meeting in May 1986, the Australia Group decided to add 31 chemicals to what was then its "warning list" of CW-agent precursors. Five of the new additions were glycollate-agent precursors, ones which could have been used to make such incapacitants as Agent BZ or CS 3245.]

Iraqi television later {11 Feb in BBC-SWB 13 Feb} describes the disclosure as "yet another attempt to mislead world public opinion in order to justify the Anglo-US aggression against Iraq". It quotes General al-Saadi [see 1-6 Feb], described as "adviser at the Presidency and official in charge of closing the chemical file with UNSCOM", as saying that the British Defence Secretary "should have presented evidence, if he has any, to the UNSCOM so that it can check this evidence in a scientific way and within the framework of ongoing consultations".

**9 February** Israeli ratification of the CWC is the subject of a presentation by Gerald Steinberg of the Bar Ilan University Begin-Sadat Centre for Strategic Studies, Israel, speaking in the Security Studies Program Seminar at the Massachusetts Institute of Technology. After reviewing the principal factors that have been promoting and inhibiting a decision to ratify, Professor Steinberg concludes that the internal debates currently seem to favour ratification, but only narrowly and with much depending on the outcome of the current UN-Iraq crisis.

**9 February** The US Department of State imposes both import and procurement sanctions on Berge Balanian [see 4 Dec 96], described as a fugitive from justice last known to reside in Lebanon, for engaging in chemical-weapons proliferation activity. {*Export Practitioner* Mar}

**10 February** Iraq retains "a small but very lethal operational arsenal of [weapons of mass destruction] and platforms capable of delivering them throughout the Middle East and even beyond", according to a report from the US House of Representatives Task Force on Terrorism and Unconventional Warfare released today {DPA from Washington 15 Feb, *Hansard (Lords)* 17 Feb}. The report, by Yossef Bodansky, states: "No bombing campaign against Iraq, and even an occupation of that country for that matter, is capable of destroying the hard core of Saddam Hussein's primary WMD development and production programs. The reason is that under current conditions these programs are run outside of Iraq — mainly in Sudan [see 16 Nov 97] and Libya [see 10 Jan], as well as Algeria." The report presents much detail — undocumented, however — on these collaborations, describing a joint Iraqi-Sudanese chemical-weapons programme that grew from a temporary expedient into an established joint enterprise for production, storage and employment-training, and describing also how tentative Iraqi involvement in preëxisting Libyan WMD programmes grew into concerted collaboration on both chemical and biological as well as nuclear weapons. Iraqi-Algerian collaboration is no more than alluded to in the report, though the presence of Iraqi weapons scientists in Algeria is reported elsewhere {*London Times* 13 Feb}. An Iraqi delivery system described in the report is a small 700-km-range unmanned aerial vehicle, or drone, made mostly of plastic and plywood, "equipped with a very accurate GPS navigation system illegally

purchased in the West”, and capable of carrying 30–40 kilograms of CBW agent

The report says that the first joint Iraqi–Sudanese project was the building of chemical-weapons facilities in Bar-El-Ghazal, southern Sudan, near Wau. The Sudanese embassy in Saudi Arabia later issues a denial of reports of Iraqi–Sudanese cooperation to produce CBW weapons. The denial refers specifically to reports of such weapons being stored in the city of Wau [see 14 Jan], and says that “Sudan opens its doors to anyone who wishes to verify the correctness of its position”. {Riyadh *al-Jazirah* 19 Feb in FBIS-NES 21 Feb}

The UK government, whose Defence Intelligence Staff has written a critique of the report, later tells Parliament that it is unable to corroborate many of the details but knows some of the claims to be untrue. It also says: “Iraq had admitted to concealment mechanisms which UNSCOM is continuing to investigate. We do not rule out the possibility that the gaps in Iraq’s disclosure may indeed be attributable to the transfer out of Iraq of weapons with a mass destruction capability. However, ... while that is a possibility of which Her Majesty’s Government are fully aware, we do not have credible evidence to support that view.” {*Hansard (Lords)* 19 Mar}

**10 February** Iran is receiving assistance from Russia in the development of chemical and biological weapons, according to Israeli Defence Minister Yitzhaq Mordekhay speaking at Bar-Ilan University. {Voice of Israel 10 Feb in BBC-SWB 11 Feb}

**10 February** The Russian government, on the proposal of the Ministry of Defence, issues a decree on the creation of a Centre for the Training of Specialists for Facilities for the Destruction of Stockpiles of Chemical Weapons in the Russian Federation. The Specialist Training Centre is to be established at Chap-ayeysk at the training centre of Military Unit 25260 with a statute that the Defence Ministry is to coordinate in draft with other ministries and interested bodies for submission to the government before the end of March 1998. Funding is to be from a special budget appropriation for chemical disarmament that has yet to be established. {Moscow *Krasnaya Zvezda* 18 Feb in BBC-SWB 19 Feb, Moscow *Rossiyskaya Gazeta* 3 Mar in FBIS-SOV 23 Mar}

**10 February** In Poland, the cabinet agrees to what is reportedly a US request to send anti-CW units to the Persian Gulf if the need arises. The commander of the Polish Chemical Security Troops, Brigadier Wlaysia Karcz, later says in interview that a 140-strong company of antichemical troops is being prepared to deploy to the region at ten days notice. {Warsaw *Rzeczpospolita* 12 Feb in FBIS-EEU 16 Feb} Defence Minister Janusz Onyszkiewicz subsequently tells the Sejm that any Polish troops sent to the Gulf would not be directed against Iraq: their job would be to remove any contamination resulting from a possible Iraqi revenge attack on Kuwait. {PAP 19 Feb in FBIS-EEU 19 Feb}

**10 February** In the United Kingdom, the decision of the Home Office to continue with the policy of the previous government of supporting the issue of CS Spray incapacitant weapons [see 28 Jan] to the country’s police forces, notwithstanding the inquest on the death of Ibrahim Sey [see 16 Oct 97], is reaffirmed to Parliament. Referring to the operational trials of the weapon that had been undertaken during March–August 1996, Home Office Minister Alun Michael responds as follows to a parliamentary question: “It was found during the trials that the risk of injury from the use of CS spray was much lower than that from police batons. Of the 99 injuries believed to have been caused

by CS, six resulted in subjects being taken to hospital, although none was detained there more than briefly.” He goes on to write: “There has been no subsequent centrally co-ordinated assessment of injuries sustained as a result of exposure to CS spray”, but adds: “The use of CS spray and other equipment is kept under review by the Self Defence and Restraint Committee of the Association of Chief Police Officers. The *Sunday Telegraph* later {19 Apr} reports that, in July 1996, in a report commissioned from CBD Porton Down, the Police Scientific Development Branch of the Home Office had been “strongly recommended” for safety reasons to switch to methylene chloride as the CS solvent from the methyl isobutyl ketone which the spray weapon then used, and still does.

**10 February** US Commerce Under-Secretary William Reinsch tells a conference in Los Angeles that the Bureau of Export Administration has imposed a penalty of \$824,000 on Allergan Inc of Irvine following the investigation into the company’s unlicensed exporting of botulinum toxin [see 27 Nov 96] {*Intelligence Newsletter* 19 Feb}. Since 1991, when Allergan acquired the only existing supply of Botox, the company’s annual sales of it have risen from \$12.6 million to \$90.1 million in 1997. The company has now built a new plant to produce it, following FDA permission, in November 1997, to sell newly prepared lots. Botox is approved for use in the United States in the treatment of blepharospasm and strabismus. It also has application in treating hemifacial spasm, facial wrinkles, stuttering, spasticity in paralysed limbs, achalasia, scoliosis, dystonia, muscular contraction following cerebral palsy, anal fissure, and vaginismus. {*New York Times* 10 Mar} Other potential applications under study include the treatment of hyperhidrosis. {*New Scientist* 21 Mar, London *Independent on Sunday* 22 Mar}

**11 February** In Baghdad, Foreign Minister Said al-Sahhaf announces Iraqi support for a Russian proposal on UNSCOM access to sensitive sites [see 12–16 Dec 97]. Part-way between the position of “full and unfettered access” being sought on the basis of past Security Council resolutions by the United States and Britain and the position now adopted by Iraq of denying access to 68 “sensitive sites” [see 19–21 Jan], this Russian compromise would open the 8 “presidential sites” for inspection under the supervision of representatives of the UN Security Council. The compromise is rejected by the British and US governments, both of which are now actively preparing to bomb Iraq, to which end they are gaining strong support from their legislatures, and varying degrees of support from some other governments. UN Secretary-General Kofi Annan is preparing to visit Baghdad on a conciliation mission.

**11 February** In Moscow, Vice-Admiral Tengiz Borisov states during a television interview that evidence has been found indicating that CW agents are leaking from their post-World-War-II ocean-burial sites deep in the Skagerrak strait, near the entrance to the Baltic Sea. The evidence comprises detections of abnormally high levels of arsenic and of mustard-gas-tolerant bacteria at distances of up to one kilometre from the sites. Admiral Borisov, who heads a working group of the Interdepartmental Commission on Chemical Disarmament [see 8 Dec 97], also speaks to camera about mutant fish. Russia is offering the technology, the manpower and the ships necessary to “resolve this problem once and for all”. The task would take about five years to complete and would cost \$1.5–2 billion. {NTV 11 Feb in FBIS-TEN 6 Mar} The Shirshov Institute of Oceanology, in Kaliningrad, has been studying the burial sites since 1995. Its director, Vadim Paka, later says in interview that, although the

leaks are small now, they could become much worse. {UPI from St Petersburg 20 Mar, *St Petersburg Times* 23–29 Mar} He says that the new evidence had been found off the coast of Lysekil, Sweden, during a 45-day expedition in Fall 1996. {RFE/RL from Kaliningrad 15 Apr}

**11 February** Canadian Defence Minister Art Eggleton announces that Canadians who take part in any US-led military strike against Iraq will not be allowed to go to the Gulf without adequate anti-BW protection. In particular, they would be vaccinated against anthrax. {Radio Canada International 12 Feb in FBIS-LAT 12 Feb}

**11 February** The US Army is preparing to merge its Chemical and Biological Defense Command with its Soldier Systems Command, partly because the majority of the work performed by CBDCOM has involved soldier protection. The new command, to be called Soldier and Chemical Biological Command, will be headquartered in the Edgewood area of Aberdeen Proving Ground and will be formally inaugurated on 1 October. {*Jane's Defence Weekly* 11 Feb}

**11 February** The United States is reported to have declared to the OPCW Technical Secretariat last year its non-acceptance of two people — one a Cuban, the other an Iranian — on the list of OPCW inspectors and inspection-assistants that had been communicated to it in accordance with CWC Verification Annex Part II.1 {*Jane's Defence Weekly* 11 Feb, *London Guardian* 12 Feb}. How many other CWC states parties have exercised this right is not public information, though soon afterwards it transpires that Pakistan has excluded all Indian inspectors {*Islamabad Muslim* 3 Mar in FBIS-TAC 4 Mar}.

**11–13 February** US Arms Control and Disarmament Agency Director John Holum is in Europe for consultations on the Biological Weapons Convention, starting in Germany and then going on to the UK and France. He tells a press conference in Bonn that his visit has been occasioned in part because of the recent White House announcement [of a US position for the negotiation on strengthening the Convention action: see 27 Jan]. He continues: “We have been engaged in this negotiation since 1995 so it is not new, but what we have found during the course of those discussions is it is fairly easy to get bogged down in technical details. There are a number of country groups that have differing perspectives, and I think the President’s speech gave us new impetus, both in terms of his personal interest and his direction that we develop new ideas to bridge some of the gaps among different countries. This gives us a good chance to stimulate the negotiations and move forward.” {Transcript 11 Feb via USIA website} At his London press-conference he speaks of trying to break four years of log-jam in the negotiation {*London Daily Telegraph* 13 Feb}.

**12 February** The Russian Foreign Ministry rejects as “crude attacks” reports originating in the *Washington Post* {12 Feb} of Russian government complicity in the sale to Iraq of fermentation equipment ostensibly designed to produce single-cell protein for animal feed but which could also be used to grow BW agents {*ITAR-TASS* 12 Feb in BBC-SWB 13 Feb}. The allegation is further denied by Russian Defence Minister Igor Sergeyev {*Xinhua* from Moscow 12 Feb}. The *Post* had based its report on a July 1995 document found by UNSCOM inspectors in Iraq some months previously which described lengthy negotiations culminating in a deal worth millions of dollars. The deal apparently included not only two 5,000-litre fermenters but also spray driers {*Chicago Tribune* 13 Feb}. UNSCOM de-

clines to comment {AFP from the UN 12 Feb}, but, from Baghdad, General Amer al-Saadi [see 1–6 Feb] says that Iraq had intended to go ahead with the deal but it had fallen through and no agreement was signed {Iraqi TV 12 Feb in BBC-SWB 14 Feb}. Unidentified “American and foreign officials” are later quoted as saying that the plant under discussion would have included several fermentation vessels to a total capacity of about 50,000 litres. UNSCOM Executive Chairman Richard Butler releases the text of a letter he had written to Russian UN Ambassador Sergey Lavrov on 5 January about the document, explaining that he was doing so in response to a request from the ambassador that UNSCOM should repudiate the press reports. {*New York Times* 18 Feb} In its original statement on the *Post* story, the Russian Foreign Ministry had been “seriously concerned” by the fact that information confidential to UNSCOM had apparently been used.

**12 February** France is preparing to construct a facility to destroy old chemical weapons that will enter into service in 2002 at an estimated cost of FFr 300 million, so *Le Monde* reports. The newspaper is quoting the rapporteur of the Senate Foreign Affairs and Defence Commission, Guy Penne, who has explained that, although France has declared to the OPCW that it neither possesses nor manufactures chemical weapons, some 500 tonnes of unearthed World War I chemical munitions have now accumulated in the storage area maintained for such things at Vimy, with more still coming in: World War I munitions continue to be uncovered in France at a rate of 250 tonnes per year, and 10–15 percent of them are chemical. The capacity of the projected chemdemil facility is to be 100 tonnes per year.

**14 February** The Soviet Union dumped some 150,000 tonnes of mustard-gas and other CW weapons in the Barents and the Kara Sea between 1945 and 1982 according to *New Scientist* quoting a study conducted by the US Central Intelligence Agency that had “draw[n] heavily on information supplied by Lev Fedorov”. The study, chaired by Otis Brown of the University of Miami, is described as being “part of a research programme called Medea”. [Note: Established in 1994 to continue the work of the Director of Central Intelligence Environmental Task Force, Project MEDEA is a group of some 60 prominent US scientists with high security clearances whose mission is to determine whether technical assets of the US Intelligence Community can be used productively by the scientific community to study environmental problems.]

**14 February** In Iraq, UNSCOM’s 62nd biological mission, UNSCOM 223, comes to an end. A ten-person team led by Diana Simon of the United States, one of its tasks has been to conduct a surprise inspection of a site under the ongoing monitoring regime. {*INA* from Baghdad 3 Feb in BBC-SWB 5 Feb, *Arms Control Reporter* 704.B.196}

**15 February** Iraq deployed anthrax weapons to Kuwait after its invasion of the country in August 1990, so the *London Sunday Telegraph* reports, quoting the findings of an unpublished United Nations investigation into the mysterious deaths, in 1993, of more than a hundred sheep that had been grazing where Iraqi occupying forces had sited one of their main defensive positions.

**15 February** The Palestinian Authority, concerned about the mounting crisis over Iraq’s proscribed weapons, is asking the World Health Organization for protective clothing, vaccines and medication {*Lancet* 28 Feb}. Palestinian official Nabil Sha’th says on Israel radio that, following a request to the US govern-

ment, the Authority is receiving technical assistance in this field from two American experts {Voice of Israel 15 Feb in BBC-SWB 17 Feb}.

**15 February** On Russian television, Dr Yuriy Baturin [see 17 Sep 97], who until recently had been President Yeltsin's national-security aide and Secretary of the Defence Council, speaks of the circumstances of his departure from the administration and about the transfer of his former responsibilities to other officials. He says: "There is, perhaps, just one area which ... no-one has ever tried to take away from me, unlike, for example, the cadre commissions and the commission for general's titles. ... [It is the area of] chemical weapons. I haven't been able to pass this on to anyone. I asked that this decree — on the Interdepartmental Commission for Chemical Disarmament [see 11 Feb] — should be signed no later than the decree on my dismissal, but so far this has not happened." {NTV 15 Feb in BBC-SWB 17 Feb} Ten days later, when he is interviewed on Ekho Moskvyy radio {24 Feb in BBC-SWB 26 Feb} upon his confirmation as cosmonaut member of an impending *Mir* expedition, a new chairman of this commission has still not been appointed. When his interviewer asks him whether it might be "advantageous for Russia to keep chemical weapons, to obtain money for their destruction and to use this money for the wrong purpose", he firmly rejects the suggestion, but adds: "I think that since we are now simply duty-bound by the convention to destroy chemical weapons, since this has to be done, quite a few commercial structures will come into being as a result, and we could of course find ourselves in dangerous situations. If criminal elements get involved with such a dangerous area of activity, the situation will be simply explosive."

**16 February** In Tokyo District Court, testimony is heard from a Chinese survivor of an alleged Japanese biological warfare attack in the vicinity of Ningbo [see 23 Nov 97] in southeastern China in October 1940. The witness, Hu Xianzhong, is one of 107 Chinese plaintiffs seeking, *inter alia*, formal acknowledgement that biological weapons had been employed by the Japanese Imperial Army [see 11 Aug 97]. The Japanese Government have argued that the case should be dismissed since individuals cannot sue a state under the laws of war. {AP from Tokyo 16 Feb}

**17 February** In Bonn, the Federal German Foreign Office announces that gas masks are to be issued to all German citizens and their families living in countries that might fall victim to Iraqi poison-gas attack. In Tel Aviv this issuance of masks has already started, and supplies are now on their way to the Palestinian territories [see also 15 Feb], Jordan, Kuwait [see also 3 Feb], Saudi Arabia and Bahrain. {Munich *Süddeutsche Zeitung* 18 Feb in FBIS-WEU 18 Feb}

**17 February** The UK declaration to the OPCW under CWC Art III.1(e), which has not yet been publicly disclosed [see 27 May 97], has identified two chemicals as being held for riot control purposes, according to *The Independent* newspaper. The two chemicals are agents CS and CR, the latter being held not by UK police forces [see 10 Feb] but by the military. CR has been rejected for police use, so the Home Office tells Parliament ten days later, "because not enough is known about its chronic health effects and its carcinogenic and genotoxic potential" {*Hansard (Commons)* written answers 26 Feb}. Armed Forces Minister John Reid subsequently states: "The Ministry of Defence currently holds stocks of approximately 260kg [of CR] for use if necessary by those units responsible for maintaining an effective counter terrorist response capability". The stocks

are held at DERA/CBD Porton Down "and at the relevant unit level". He also says that the Defence Ministry holds stocks of CS for antichemical-defence training purposes and "as a contingency in case the armed forces should ever be asked to support the civil power in riot control". The holdings comprise some 54,000 CS-filled cartridges and grenades and 2.5 tonnes of unweaponized CS. {*Hansard (Commons)* written answers 12 Mar}

**17 February** In the United States, as the crisis over Iraq [see 11 Feb Baghdad] continues to intensify, the White House publishes a White Paper on *Iraqi Weapons of Mass destruction*, reportedly produced by the CIA and other intelligence agencies in order to prepare the American public for a military strike on Iraq {*Washington Times* 18 Feb}. The White Paper says: "On the basis of the last seven years' experience, the world's experts conclude that enough production components and data remain hidden and enough expertise has been retained or developed to enable Iraq to resume development and production of WMD. They believe Iraq maintains a small force of Scud-type missiles, a small stockpile of chemical and biological munitions, and the capability to quickly resurrect biological and chemical weapons production."

The picture presented is thus similar to that which the UK government had publicized a fortnight previously [see 4 Feb Iraq], but with rather more detail. For example, the new publication states that Iraq could "quickly resume a small-scale BW program at known facilities that currently produce legitimate items such as vaccines and other pharmaceuticals", and that, without effective UN monitoring, Iraq "could probably begin production within a few days". As for CW weapons, "Iraq could restart limited mustard agent production within a few weeks, full-scale production of sarin within a few months, and pre-Gulf war production levels — including VX — within two or three years".

Included, too, are data on the use of chemical weapons by Iraq during its war with Iran during the 1980s, presented in a table setting out casualty statistics for each of ten major CW campaigns. [Note: in relation to the Halabjah episode [see 18 Mar 88], a footnote to the table repeats the assertion [see 9 Oct 97], yet again without substantiation, that the casualties among the Kurdish townspeople — "reportedly in the hundreds" — could have been due to Iranian use of chemicals].

**18 February** In Moscow, a press conference on the 1979 anthrax outbreak in Sverdlovsk [see 3 Feb] (now once again called Yekaterinburg) is convened by the president of the Union for Chemical Safety, Lev Fyodorov [see 8–10 Jul 97 and 14 Feb], with Sergei Volkov, who had been an official in the administration of Yekaterinburg during 1993–96, as the other main speaker. Fyodorov and Volkov are the authors of a front-page story, "Sex-bomb, Soviet-style", in *Moskovskaya Pravda*, which suggests that the form of anthrax that had been discharged from Military Compound 19 in Sverdlovsk was actually one that had been altered so as to attack adult males preferentially. Volkov, who had grown up inside Compound 19 where his father had been a security guard but had moved away by the time of the epidemic, says that he has been interviewing residents of the affected area and now believes the death toll to have been around a thousand people. He speaks of work on plague and anthrax having been conducted in large underground laboratories at the Compound. {London *Independent* 19 Feb, Baltimore *Sun* 20 Feb, *Washington Post* 26 Feb, Paris *Le Monde* 27 Feb} Publicity continues to be given subsequently to this story that the Sverdlovsk anthrax epidemic had been caused by a "selective-impact biological weapon" developed by military geneticists, and that many more people had died than had been



officially acknowledged: no fewer than 2000 people, according to one account {NTV 25 Feb in FBIS-TAC 4 Mar}. [Note: for the definitive study of the epidemic see Meselson et al, *Science* vol 266 pp 1202–8.]

Meanwhile, Lt-Col Yevgeni Tulykin, who had worked at Compound 19 from 1978 through 1996, has given an interview to *Time* magazine {16 Feb} in which he has said that what is now known as the Center for Military and Technical Problems of Anti-Bacteriological Defense has been discreetly rebuilding and re-equipping its facilities with the aim of resuming offensive production of anthrax.

**18 February** In Washington, addressing the Arms Control Association, the National Security Council Senior Director for Defence Policy and Arms Control, Robert Bell, clarifies the relationship between the recent Presidential Decision Directive on nuclear weapons [see 7 Dec 97] and the US negative security assurances [see 6 Sep 94 and 11 Apr 96, Cairo]. He says: "it is the policy of the United States, as restated in this PDD, not to use nuclear weapons first in a conflict unless the state attacking us or our allies or our military forces is nuclear-capable or not in good standing under the NPT or an equivalent regime, or, third, is attacking us in alliance with a nuclear capability". During the subsequent colloquy, he expressly repudiates the suggestion, which is now being heard again in the news media in relation to Iraq, that the PDD permits nuclear-weapons employment against CBW facilities or nuclear retaliation against CBW attack — unless one or another of those three exceptions also obtains.

Dr Bell also says that the administration will be giving more high-level attention to the negotiation in Geneva of the projected BWC Protocol [see 11–13 Feb]. He observes that, during the debate on US ratification of the Chemical Weapons Convention, "there was an interrelationship ... between our position on the BWC verification issue and continued support from the pharmaceutical industries for the CWC".

**18 February** In Las Vegas, two suspected bio-terrorists are arrested by US federal agents following a tip-off earlier in the day by a "citizen-informant", later identified as a disgruntled business associate of one of the suspects. A team of some 70 FBI, Army and Air Force specialist personnel had been mustered after the tip-off, and, after the arrest, vials of what are thought to be anthrax bacteria are taken to Fort Detrick for analysis. One of the two detainees is Larry Wayne Harris, currently on probation following his illegal acquisition of plague bacteria [see 22 Apr 97]. The other is William Leavitt, Jr, a respected Nevada businessman. Amidst huge nationwide media attention, the two are charged with conspiring to possess and use a biological agent as a weapon, the first people to be so charged under the Antiterrorism and Effective Death Penalty Act of 1996 [see 15 Apr 96]. They say they were testing a device for neutralizing pathogens in the body, and that what had been confiscated from them contained anthrax vaccine, not anthrax pathogen. Such is indeed found to be the case, and the charges are dropped five days later. Wayne Harris, however, remains in custody charged with having violated the terms of his probation. {AP in *Boston Globe* 19 Feb, London *Independent*, *Times* and *Daily Telegraph* 20 and 21 Feb, Las Vegas *Review-Journal* 24 Feb, *Newsweek* and *Time* 2 Mar, *Columbus Dispatch* 4, 15 and 24 Mar}

**19 February** In the Chuvash Republic of the Russian Federation, a joint meeting of the committees on international affairs of the two chambers of the Federal Assembly takes place at Cheboksary, in the premises of the Novocheboksary Khimprom

[see 12 Sep 97], to discuss progress in implementing the Chemical Weapons Convention. Also participating are representatives of the Russian regions that are taking part in the federal programme for destruction of chemical weapons. TASS {19 Feb in FBIS-TAC 20 Feb} is later told by the Chairman of the State Duma committee, Vladimir Lukin, that the meeting agreed that "an interregional consultative conference of heads of the regions which are directly concerned with the problems of chemical disarmament" would be convened regularly to work out a joint stance and monitor the implementation of decisions. In preparation is an appeal to President Yeltsin from the participants containing proposals on these matters.

**19 February** In Berne, following an incident involving two businessmen reportedly associated with Hezbollah, authorities arrest a group of people later described as agents of the Israeli secret service Mossad. The London *Times* later {3 Mar} carries an interview with an unidentified Israeli characterized as a disgruntled officer "serving under Mossad's Brussels-based European directorate" who was seeking to influence impending Mossad-leadership changes. This person describes the incident as the attempted assassination of people suspected of helping Hezbollah to acquire CBW weapons from eastern Europe and to ship them to the Middle East via the Balkans. The assassination weapon is said to have been of the same kind as that used in the attempted murder of Khalid Mish'al in Amman five months previously [see 25 Sep 97], here described as a device for squirting a delayed-action poison into the victim's ear.

**19 February** UNSCOM Executive Chairman Richard Butler transmits to the UN Security Council and to the Government of Iraq the conclusions and parts of the substance of the reports on the joint Iraq/UNSCOM technical evaluation meetings on Proscribed Missile Warheads and VX Chemical Weapons that had been conducted in Baghdad earlier in the month [see 1-6 Feb]. {S/1998/176}

Signed by all 15 members of the UNSCOM international expert team, the report on the VX TEM concludes as follows: "It is clear that the capability to produce VX was regarded as being of the utmost importance to Iraq in 1987 and beyond. Iraq's unilateral destruction of VX essential components and materials, coupled with its denial until 1995 of attempts to produce VX at an industrial scale can only reinforce that view. Therefore, the retention of a VX capability by Iraq cannot be excluded by the UNSCOM international expert team." The team had also found that: "Iraq was capable of producing significant quantities of VX before January 1991. This may have been as much as 50 to 100 tonnes of VX, albeit of an uncertain quality. Currently the team assesses that Iraq has the know how and process equipment, and may possess precursors to manufacture as much as 200 tonnes of VX." Iraq had portrayed a VX acquisition programme in which the research into production methods had been successful but in which the scale-up to fullscale production had failed; Iraq had made no more than 3.9 tonnes of VX and VX hydrochloride in seven batches. The report indicates that Iraq studied at least two different production routes to VX, one of them being the (less favoured) di-ester route; but, beyond identifying phosphorus pentasulphide, diisopropylamine, "choline" [see 16–20 Sep 95] and chloroethanol as precursors, the report is not specific. The programme had included a binary VX weaponization activity. The idea of storing VX as a salt ("Dibis") had entered Iraqi consideration as a means for countering storage instability by early 1988.

The report on the Warheads TEM, also agreed unanimously by the international team, concludes that the "level of verifica-

tion achieved so far” had not been found to be satisfactory, and that further work is required.

**20 February** In Taiwan, the Ministry of Economic Affairs is preparing to send a delegation of trade officials and chemical experts to the United States in order to “seek feasible measures” to cope with possible impacts of the Chemical Weapons Convention on the country’s large chemical industry [see 28 May 97]. Officials say that the Ministry has established a 16-person task force to study the problem and develop applicable strategy. {CNA 20 Feb in FBIS-CHI 20 Feb}

**20 February** In Tehran, former Iranian President Akbar Hashemi-Rafsanjani, now head of the Expediency Council, speaks to Friday prayer worshippers of Iraqi use of chemical weapons during the first Gulf War: “The weapon was extensively used against us on Majnun Island. In Faw, 3000 chemical bombs were dropped on our forces. Halabjah [see 17 Feb US] saw the climax of barbarism. They used a chemical substance comprising two or three agents. This chemical substance was so dangerous that we did not show the people many of the video footage taken from the scene. We did not want to undermine the people’s morale, so we showed them only one part of the video films.” He then goes on to explain Iraq’s CW bombardment of the Halabjah region as a desperate resort to prevent Iranian forces there from taking control of the Darbandikhan dam. {Voice of the Islamic Republic of Iran 20 Feb in BBC-SWB 23 Feb}

**20–23 February** In Iraq, a team led by UN Secretary-General Kofi Annan reaches an agreement with President Saddam Hussein and his government which seems to promise a resolution of the current crisis, averting US-led military action [see 17 Feb]. At the start of the talks, according to one member of the team, “we really didn’t know whether the Iraqis wanted to be bombed as a way of getting rid of UNSCOM, or whether the Americans knew they were going to bomb anyway and we were just a token gesture”. {London *Observer* 1 Mar} Under the agreed terms {S/1998/166}, Iraq commits itself to granting UNSCOM and the IAEA immediate, unconditional and unrestricted access in conformity with Security Council resolutions 687 (1991), 715 (1991) and all others that are relevant, while UNSCOM undertakes to respect Iraq’s legitimate concerns relating to national security, sovereignty and dignity. The Memorandum of Understanding specifies how “entries for the performance of tasks mandated” at eight presidential sites identified in an Annex are to be conducted, both the initial and subsequent entries (for which no time limit is specified). A Special Group established by the Secretary-General in consultation with the heads of UNSCOM and the IAEA is to take charge of these visits, and is to operate under established UNSCOM/IAEA procedures in specific ways yet to be developed. The agreement is later endorsed by the UN Security Council. {SC/6483 2 Mar} The Secretary-General appoints the Under-Secretary-General for Disarmament Affairs, Jayantha Dhanapala, to UNSCOM to serve, under Executive Chairman Richard Butler, as the special commissioner who, in accordance with the Memorandum of Understanding, is to head the Special Group.

**22 February** In Bangalore, Indian defence science adviser A P J Abdul Kalam, known as the father of the Indian missile programme, says that the intermediate-range Agni missile currently under development can carry a nuclear, biological or chemical payload. He is speaking at a function honouring award to him of the Bharat Ratna. {All India Radio 22 Feb in BBC-SWB 23 Feb}

**23 February** On UK television, there is a documentary about the health condition of people living in Halabjah, the town in Iraqi Kurdistan which suffered massive CW attacks shortly before the end of the Iran-Iraq war from which maybe five thousand or more people had died, many of them women and children [see 18 Mar 88 and 20 Feb]. {Channel 4 *Dispatches* 23 Feb} An abbreviated version is screened on CBS *60 Minutes* in America a week later. The reporter is the British journalist Gwynne Roberts, who had first filmed CW attack-sites inside Iraq shortly after that assault on Halabjah [see 23 Nov 88 and 11 Jan 89], and who is later the subject of allegations of espionage in the Iranian newspaper *Jomhuri-ye Eslami* {26 Apr in London *Independent* 27 Apr} that are demonstrably unfounded {London *Al-Sharq al-Awsat* 30 Apr in BBC-SWB 2 May}. On the visit for this documentary, he is accompanied by Dr Christine Gosden, Professor of Medical Genetics at the University of Liverpool. They find a population suffering from strikingly high rates of leukaemia, respiratory disease, birth abnormalities, neurological disorders and other illnesses. Abnormal incidence of cancers, respiratory disease and kidney disorders is being reported from southern Iraq too {London *Independent* 9 Mar}. In a statement to camera which she subsequently develops in print {*Washington Post* 11 Mar, *Sydney Morning Herald* 14 Mar}, Professor Gosden associates such afflictions with the damage, including genetic damage, which chemical weapons are known to be capable of causing. Also speaking to camera is Ambassador Rolf Ekéus, who says that he had assumed what is now manifestly not the case, that international medical aid had long since been brought to those people in Halabjah and other parts of Kurdistan whose suffering had spurred him and his fellow negotiators in Geneva into agreement on the Chemical Weapons Convention.

Replying to a Parliamentary question next day about the work of the World Health Organization in Iraq, UK Health Secretary Frank Dobson says: “It is worth noting that, since 1991, the United Kingdom has contributed more than £94 million in humanitarian and medical aid through bilateral and multilateral sources to Iraq, especially northern Iraq, where Saddam Hussein deployed chemical weapons against his own people” {*Hansard (Commons)* oral answers 24 Feb}.

**24 February** In Tokyo, two members of Aum Shinrikyo, Zenji Yagisawa and Satoshi Matsushita, are sentenced to four-year jail terms for having placed a cyanide bomb in a Tokyo subway station [see 5 May 95]. {London *Times* 24 Feb}

**24 February** In Vilnius, the Seimas passes legislation enabling Lithuanian ratification of the Chemical Weapons Convention. Under this law, the Economics Ministry is to be responsible for implementation. {ELTA 24 Feb}

**24 February** In the US Senate, the Judiciary Subcommittee on Terrorism conducts a hearing on foreign terrorists in America, taking testimony from the FBI, the Secret Service, and Immigration & Naturalization Service officials, from which it later concludes that the threat of international terrorism to the country is increasing. {*Defense News* 2–8 Mar}

**24 February** In Washington, the US Defense Department Special Assistant for Gulf War Illnesses, Dr Bernard Rostker, leads briefings for visiting members of the UK House of Commons Defence Committee on how US Defense and Veterans Affairs authorities are seeking to help the inexplicably sick veterans of the Gulf War. {GulfLink 6 Apr}

**24 February** President Clinton issues an Executive Order establishing the Special Oversight Board for Department of Defense Investigations of Gulf War Chemical and Biological Incidents. The Board is to be a 7-member panel, headed by former senator Warren Rudman, a lawyer who is currently chairman of the President's Foreign Intelligence Advisory Board, to review Defense Department work on Gulf War illnesses [see 8 Nov 97 and 8 Jan]. {White House release 24 Feb} Former Veterans' Affairs Secretary Jesse Brown is named as Vice-Chair on 27 April, as are the five other members of the Board.

**25 February** In Pakistan, Foreign Minister Gohar Ayub Khan addresses the National Assembly on the Chemical Weapons Convention [see 7 Feb]. He states that the treaty does not jeopardize the national security because Pakistan neither produces nor possesses chemical weapons, nor has it ever done so. "Our sensitive facilities, which are obviously not related to chemical weapons, are beyond the scope of the Convention." Therefore, the question of having to open them to inspection under the CWC [see 4 Jan] is a "non-issue". {Radio Pakistan 25 Feb in BBC-SWB 27 Feb}

**25 February** The UK Government, responding in Parliament to a question about Iraqi students at British universities, states its policy on intangible-technology export-control [see 19 Jul 94] as follows: "Her Majesty's Government seek to prevent the transfer of technology related to weapons of mass destruction in the higher education sector through the operation of the Voluntary Vetting Scheme which is administered by the Foreign and Commonwealth Office. This scheme applies to post-graduate students and post-doctoral researchers from certain countries, including Iraq, and covers those scientific disciplines relevant to weapons of mass destruction technologies or the missiles to deliver them. Under the scheme, universities and higher education colleges are asked to refer potential students from specified countries who are seeking to undertake research in particular disciplines to the Government. The Government provide advice on individual applicants and the universities and colleges then make the final admission decisions. This is a voluntary arrangement and there is currently no law in place to oblige higher education institutions to contact Government over admission matters." {*Hansard (Commons)* written answers 25 Feb}

**25 February** In the United States, the past activities of the former First Deputy Chief of Main Directorate Biopreparat in the USSR, Dr Kanatjan Alibekov [see 23 Dec 97], who had emigrated to America in 1992 and is now living in Arlington, Virginia, as Ken Alibek, begin to receive widespread public notice. This starts with a feature on ABC News *Prime Time Live* television and an associated article on the front page of the *New York Times*. Subsequent elements, besides secondary press coverage, include a *New Yorker* {9 Mar} article by Richard Preston (journalist author of *The Hot Zone*), and such overseas happenings as a feature-length interview in the London *Sunday Telegraph* {8 Mar}. Later, he is quoted at some length on smallpox in an article in *The Sciences* {May/June}.

New information from all of this is extensive, both about the biological-weapons work of the USSR and about that of the United States. In particular, Dr Alibek states that the USSR never believed that the US biological-weapons programme had in fact been ended by President Nixon's renunciation of it in November 1969. Until the late 1980s, he says, "we strongly believed the United States had an offensive program" and that the USSR had to match it. Quoting a British intelligence officer, the

*New Yorker* article notes: "The Soviets continued to believe ... that the United States had not ended its biological weapons program but simply hidden it away, turning it into a 'black' weapons program. 'The notion that the Americans had given up their biological weapons was thought of as the great American lie.'" The USSR appears to have had good reason for this belief, for the article goes on to report how doubts in the mind of the last Chief of Product Development for the old US Army biological-weapons facility at Fort Detrick, Dr William Patrick III (who had originally debriefed Alibekov for the CIA), as to whether BW weapons would actually work were finally resolved: "Those doubts were removed decisively during the summer of 1968, when one of the biggest of a long series of open-air biological tests was conducted over the Pacific Ocean downwind of Johnston Atoll, a thousand miles southwest of Hawaii. There, in reaches of open sea, American strategic tests of bioweapons had been conducted secretly for four years ... 'We tested certain real agents and some of them were lethal', Patrick said. The American strategic tests of bioweapons were as extensive and elaborate as the tests of the first hydrogen bombs at Eniwetok Atoll. They involved enough ships to have made the world's fifth-largest independent navy. The ships were positioned around Johnston Atoll, upwind from a number of barges loaded with hundreds of rhesus monkeys. ... 'When we saw those test results [said Patrick], we knew beyond a doubt that biological weapons are strategic weapons. We were surprised. Even we didn't think they would work that well.'" The *New Yorker* says that Patrick holds five secret patents on "special processes for making biobuds that will disperse rapidly in the air".

Dr Patrick has told the *New York Times* that the Soviet biological-weapons programme has "paralleled ours very closely" in terms of military technology, though "it took them many, many years to get past us with respect to biological agents, delivery systems and munitions". The Soviet programme, Alibek says, ultimately included development of a strategic ballistic missile with multiple independently targettable warheads each of which held more than a hundred bomblets the size of a small cantaloup. The warheads included cooling systems to protect the payload from the heat of re-entry. Some 52 different BW agents had been studied, of which the favoured ones were smallpox virus [see 2 Feb WHO] and the bacteria of anthrax and plague; Alibek says that never less than 20 tons of dry-agent smallpox were held in the stockpile and that "hundreds of tons" of anthrax bacteria were prepared. Development of smallpox weapons had begun at the USSR Ministry of Defence facility at what is now Sergiyev Posad. With the breakup of the Soviet Union, some experts now fear, but are unable to prove, that Soviet biologists have made the virus available to several countries (China, India, Iran, Iraq, Israel, Libya, North Korea and Syria have all be named in this connection {*The Sciences* May/June}) notwithstanding the world smallpox-eradication campaign. His own specialty at Stepnogorsk [see 23 Dec 97] had been an improved preparation of anthrax spores: the *New Yorker* describes it as "an amber-grey powder, finer than bath talc, with smooth, creamy particles that tend to fly apart and vanish in the air, becoming invisible and drifting for miles". He says that, at the end of the Soviet programme, a dry-agent fill of Marburg virus was nearing operational readiness.

On *Prime Time Live*, Dr Alibekov states that, in the Russian Federation under the guise of defensive purposes, research continues on the development of new biological agents. In Moscow this allegation is described as "sheer nonsense" by Oleg Ignatyev of the President's Committee on CBW Convention Problems, who also says: "Russia has carried out no research and development of biological weapons since all work in the field was cancelled in 1990" {AP 25 Feb}. The Russian De-

fence Ministry also issues a denial, saying that the allegation “appears to be financially motivated and show the drive of some circles in the West to cultivate mistrust in Russia” it states that Russia “scrupulously observes” the Biological Weapons Convention {ITAR-TASS 27 Feb in BBC-SWB 2 Mar}. The Chief of the Russian General Staff during 1992-96, General Mikhail Kolesnikov, is reported as saying that, during Soviet times, “biological warfare was never discussed at the collegium of the Defense Ministry. It was not an intricate part of the Soviet defense doctrine, and we did not put biological weapons into our military plans.” {*Moscow Times* 19 Mar} In the *New York Times* later {27 Mar}, Dr Alibekov repeats the suggestion that Russia may be continuing to violate the BWC, arguing that the treaty therefore needs strengthening in order bring the current Russian BW facilities — at Yekaterinburg, Kirov, Sergiyev Possad and Strizhi (a new facility) — under inspection. Russian Foreign Ministry spokesman Gennady Tarasov then tells a news briefing that the offensive military biological programme of the USSR is totally liquidated {RIA Novosti 31 Mar}.

**25–26 February** The US National Defense Industrial Association holds its third annual conference on *Non-Lethal Defense*. It is for people from industry, government and the military, and takes place at the Johns Hopkins University Applied Physics Laboratory in Laurel, Maryland. The opening speaker is Lt-Gen Martin Steele, Deputy Chief of Staff for Plans, Policy and Operations, US Marine Corps. Details of the current Joint Non-Lethal Weapons Program are presented. Included is a session on chemical non-lethal weapons. Over the next 5–7 years, 29.7 percent of the research and development budget for non-lethals is expected to go on kinetic technologies and 24.4 percent on acoustic weapons. General Steele speaks of being “on the front edge of a whole new concept of warfare”. He also says that a commitment must be made now to “never use non-lethal force without the threat of lethal force to back it up”. {*National Defense Apr*}

**25–27 February** In the UK, a Russian delegation led by the chief of the Defence Ministry RKhB Troops, Col Gen Stanislav Petrov, begins its three-day visit with talks at the Ministry of Defence with Armed Forces Minister John Reid. Later there is a visit to Porton Down. On the agenda is coöperation between Britain and Russia on the destruction of chemical weapons. {ITAR-TASS 25 Feb, London *Guardian* 26 Feb}

**26 February** UK Defence Secretary George Robertson announces to all UK service personnel and Defence Ministry civilians in the Persian Gulf region his decision that they are to be given the opportunity to be immunized against anthrax. He says that the Canadian and US governments are making similar announcements. The vaccination programme is to commence early next month. Each individual will receive three injections over a 6-week period, with a fourth injection six months later, and no other vaccine will be co-administered. The anthrax vaccine, manufactured and licensed in the UK, is one that has been in use since 1963 for veterinary surgeons and abattoir workers. Secretary Robertson says that he will himself be vaccinated, in public, as will the Minister for the Armed Forces and the Chief of the Defence Staff. {*Hansard (Commons)* written answers 3 Mar}

**27 February** OPCW Director-General José Bustani writes to UN Secretary-General Kofi Annan to note that chemical weapons are “the only category of weapons of mass destruction not covered by the treaty obligations assumed by Iraq”. After referring to the work of UNSCOM, he adds: “Convincing Iraq to ac-

cede to the Chemical Weapons Convention would not only add an important element to that country’s binding international treaty obligations, but would also better guarantee the indefinite future monitoring of Iraq’s activities in the chemical field”. {OPCW doc S/45/98} He develops this concept in a subsequent press interview: “The role I see for the OPCW has to do with the long-term monitoring of chemical activities once UNSCOM has finished its work. ... The OPCW is the logical agency for the future.” {*Reuter* 11 Mar}

**28 February** In the United States the only producer of anthrax vaccine [see 15 Dec 97], Michigan Biological Products Institute, has for some while been under threat of closure. *Lancet* now reports that, at Defense Department request, it will continue producing the vaccine until the end of the present fiscal year (30 September), or until it is sold. The effectiveness of the Michigan vaccine, which is similar to the one that is shortly to be given to British military personnel in the Gulf [see 26 Feb], has recently been called into question because experimentation had shown that it gave complete protection to guinea-pigs (which are, however, not primates) against only one of the five main natural strains of anthrax bacteria {*New Scientist* 28 Feb, *New York Times* 26 Mar}. US Army Surgeon General Ronald Blanck later issues a commentary on this and other criticisms of the vaccine, including unpublished data from licensing submissions to the Food and Drug Administration. The commentary concludes that the vaccine is both safe for humans and capable of protecting them against high aerosol dosages of anthrax spores. {*ProMED-mail* 26 Mar}

**2 March** In Australia, Foreign Minister Alexander Downer announces in the Federal Parliament that, “as part of Australia’s response to the recent crisis caused by Iraq, ... the Government will pursue a series of diplomatic initiatives to strengthen the Biological Weapons Convention.” His statement recalls the central role of Australia during the endgame in the negotiation of the Chemical Weapons Convention. The initiatives are aimed at promoting the work of the BWC Ad Hoc Group, and are to include “calling for the convening of a high-level meeting to inject into the negotiations the necessary commitment for urgent action”. {*AFP from Canberra* 2 Mar, *Disarmament Diplomacy Mar*}

**2 March** The UN Security Council unanimously adopts resolution 1154 (1998) endorsing the Memorandum of Understanding between Iraq and the United Nations [see 20–23 Feb]. The resolution states that any violation of the agreement “would have severest consequence for Iraq” — wording which became generally acceptable only after resolution-sponsors stated that it did not imply advance approval of the use of force against Iraq in the event of noncompliance. {*London Daily Telegraph* 3 Mar} UN Secretary-General Kofi Annan shortly afterwards nominates Prakash Shah of India as his special representative in Iraq. Ambassador Shah later describes his job as being “to watch all developments in relations between Iraq and the United Nations to avert any escalation that might develop”. {*AFP from Baghdad* 22 Mar}

**2 March** The US Defense Department, in its Cooperative Threat Reduction (Nunn–Lugar) programme [see 2 Feb], has now notified Congress of plans to spend a total of \$138.7 million on projects for “chemical weapons destruction” in Russia, of which \$134.355 million has actually been obligated for chemdemil work. It has also obligated \$1.8 million for “biological weapons production facility dismantlement” in Kazakhstan [see 22 Mar 96]. {*CTR Program website* 2 Mar}

**2 March** In the United States, the National Gulf War Resource Center issues a report estimating that 400,000 US and Coalition troops could have been exposed to the smoke, or its residues, from burning depleted uranium [see 31 Oct 97] during the Kuwait War. The report, by Dan Fahey of Swords to Ploughshares Veterans Rights Organization, alleges that the US Defense Department deliberately failed to alert veterans to the potentially adverse health effects or to monitor the possible occurrence of such effects. {London *Times* 3 Mar}

**3 March** In Moscow, *Novye Izvestia* carries an interview with Valentin Ivanovich Yevstigneyev, Lieutenant General of the Medical Service, deputy director, for BW defence, of the Russian Ministry of Defence RKhB Protection Troops, and, until its closure in 1992, head of the Ministry's 15th Directorate. He comments on numerous recent allegations concerning his command. In dismissing reports that the 1979 Sverdlovsk anthrax outbreak [see 18 Feb] had been caused by explosion of biological munitions, he remarks that no-one writes about the anthracose cattle carcasses that were cremated then in the furnace of a ceramics factory. [Note: He does not invoke the now-discredited explanation of the outbreak as the result of consumption of tainted meat.] He also says: "I was not yet at Sverdlovsk-19 in 1979. But in 1985 I was appointed the deputy director of the institute for scientific work. Of course I tried to analyse the situation. I did a computer analysis using image recognition theory and mathematical modelling, and I tried three versions: the institute was responsible, a natural epidemic, and a diversion with the aim of compromising the institute. Strangely enough, the latter version got the highest score."

In another newspaper interview, General Yevstigneyev speaks of work conducted on Vozneseniya island in the Aral Sea testing BW-agent delivery systems during the 1970s and 1980s. This, he says, "was in direct violation of the anti-biological treaty". {*Moscow Times* 19 Mar}

**3 March** UK Defence Secretary George Robertson announces establishment of an independent Advisory Group on Medical Countermeasures chaired by Professor Peter Blain of Newcastle University {*Hansard (Commons)* written answers 3 Mar}. This new body had been convened during the previous month to advise on the projected immunization of UK service personnel against anthrax [see 26 Feb] {London *Times* 4 Mar}.

**3 March** US Defense Secretary William S Cohen announces his decision to vaccinate against anthrax all 36,000 US military personnel deployed to the Persian Gulf area {DoD news release and briefing 3 Mar}. Similar announcements are made by the defence ministers of the United Kingdom [see also 26 Feb], which has 3500 personnel in the region, and of Canada, which will be using the UK vaccine {London *Guardian* 4 Mar, *Hansard (Commons)* oral answers 9 Mar}. The vaccinations are to begin almost immediately, the US Defense Department bringing forward commencement of the forces-wide programme it had announced three months before [see 15 Dec 97]. The US vaccinations will be mandatory, the UK ones voluntary.

**3 March** US Department of Energy nonproliferation and national-security programmes are described in testimony to the Senate Appropriations Committee by the responsible official, Dr Rose Gottemoeller. The programmes include research and development of supersensitive CBW-agent detectors, and also the Initiatives for Proliferation Prevention (IPP) programme [see 20–21 Feb 97], which is aimed at drawing former Soviet nuclear and CBW weapon scientists, engineers and technicians into

peaceful commercial ventures and also, in the interests of transparency, increasing the access of US scientists to former Soviet weapons facilities. The \$15 million FY 1999 budget request for the IPP programme is half what it had been the previous year. Dr Gottemoeller says that this is because of unexpended prior-year funding. The corresponding State Department programme — support for the International Science and Technology Center (ISTC) in Russia and the Science and Technology Center in Ukraine [see 22 Nov 96 and 8 Jan 97] has experienced two successive years of cuts, but its FY 1999 budget has been increased from its 1998 level of \$15 million to \$23 million. {*Atlanta Journal* 15 Mar}

**4 March** In Brussels, the Council of the European Union adopts Common Position 98/197/CFSP aiming "to promote the early and successful conclusion of the negotiations, in the BTWC ad hoc Group, on a legally binding Protocol establishing a verification and compliance regime which will effectively strengthen the [Biological Weapons] Convention". Article 2.1 of the Common Position requires that member states "shall actively promote decisive progress in the work of the ad hoc Group, with a view to concluding the substantive negotiations by the end of 1998, so that the Protocol can be adopted by a Special Conference of States Parties early in 1999". Article 2.3 sets out the measures which the Council has agreed "are both central and essential to an effective Protocol", namely: "declarations of a range of facilities and activities of potential relevance under the Convention, inter alia so as to enhance transparency; provision for visits to facilities in order to promote accurate and complete declarations and thus further enhance transparency and confidence; provision for rapid and effective investigations into concerns over non-compliance, including both facility and field investigations; a cost-effective and independent organization, including a small permanent staff, capable of implementing the Protocol effectively". {OJL 75 12 Mar} The EU-associated countries of Central and Eastern Europe, as well as Cyprus and the EFTA countries members of the EEA, formally declare that their national policies, too, will conform to the Common Position {EU Council press release 6 Mar}.

**4 March** In the US Senate, the Select Committee on Intelligence and the Judiciary Subcommittee on Technology, Terrorism and Government Information conducts the first of what is planned as a series of three joint hearings to investigate the threat that CBW weapons present to Americans. Testimony on bioterrorism, biological weapons, and the expanding regulatory framework for shipments of biological agents is taken, respectively, from Dr Seth Carus, a visiting fellow at the National Defense University Center for Counter Proliferation Research, from Colonel David Franz, Deputy Commander of the US Army Medical Research and Development Command, and from Dr Steven Ostroff of the Centers for Disease Control and Prevention. These witnesses then participate as a panel in what becomes a strikingly informative colloquy with the senators. {Federal News Service transcript 4 Mar}

**5 March** In Germany, a state property agency is preparing for sale the site of the ruined four-storey underground factory built during the second world war at Falkenhagen, near the Polish border, to manufacture sarin nerve-gas, and also chlorine trifluoride. Occupying Soviet forces had later converted the factory into a command centre protected against radioactive fallout and CBW agents. {London *Times* 5 Mar}

**5–10 March** In Iraq, UNSCOM conducts unannounced inspections of nine "sensitive" sites, including premises of the

Ministry of Defence, the Special Republican Guard and the Special Security Organization. Prior to the UN-Iraq agreement [see 2 Mar], UNSCOM had been refused access to a number of these sites. The inspections are conducted by a 50-person team, UNSCOM 227 (previously cancelled [see 12 Jan]), led by Scott Ritter [see 13 Jan] of the United States. The team includes nationals of 11 countries, among them Argentina, Australia, Egypt, Germany, Jordan, the Netherlands, Poland, Syria, the United Kingdom and the United States. {S/1998/332}

**8–11 March** In Atlanta, Georgia, there is an international conference on emerging infectious diseases, partly sponsored by the Centers for Disease Control and Prevention. There is much attention to potential bioterrorism and other forms of BW attack, speakers advocating precautions even though the probability of occurrence might actually be small. US Health Secretary Donna Shalala states that her department has begun coordinating with other federal and military agencies to ensure proper training to address this “growing threat”. Colonel David Franz of Fort Detrick observes that “a prepared society acts as a deterrent to use of biological weapons”. The former chief of the CDC Surveillance Section, deputy White House science adviser, and Dean Emeritus of the Johns Hopkins University School of Public Health, Dr Donald A Henderson, says in his plenary address: “We need to be as prepared to detect and diagnose, to characterize epidemiologically and to respond appropriately to biological weapons use as we need to be prepared to respond to the threat of new and emerging infections”. He speaks of there being some consensus that the most likely agents of BW attack are anthrax, plague and smallpox. He continues: “Knowing what little has been done to date, I can only say that a mammoth task lies before us. ... If we can and are willing to spend tens of billions to deal with the threat of nuclear weapons, as is now the case, we should be more than prepared to devote hundreds of millions to cope with the greater threat of new and emergent infections, whether naturally occurring or induced by man.” {Reuter 10 Mar, *New York Times* 11 Mar, *Charles W Henderson Health Letter on the CDC* 23 Mar}

**9–13 March** In Geneva, the Ad Hoc Group of states parties to the Biological Weapons Convention reconvenes [see 5–23 Jan] for its tenth session. Participating are 49 states parties, 4 of which present a total of 6 new working papers. Also participating are three other signatory states. Work is done on Measures to Promote Compliance, the Investigations Annex, and Measures Related to Article X (on economic and technological development). The outcomes of these discussions, presented in the form of possible amendments to the existing Rolling Text, are annexed to the procedural report on the meeting which the Group adopts at the end of the session {BWC/AD HOC GROUP/40}. The outcome of the Article X discussion includes a proposal made by the United States, an effect of which could be to weaken implementation of Article X rather than, as the Group’s mandate requires, to strengthen it. The *Statement by the Non-Aligned Movement and other countries* issued at the close of the session expresses concern at this development, continuing: “Substantive progress in strengthening the application and full operationalisation of Article X is crucial to the conclusion of a universally acceptable and legally binding instrument designed to strengthen the Convention. ... [T]here is no substitute to negotiations and the promotion of agreements and consensus on specific issues within the Ad-Hoc Group. Therefore, negotiations should be conducted within the Ad Hoc Group and on the basis of the existing rolling text”. [For further details, see *Progress in Geneva*, above.]

**10 March** Russian Defence Minister Igor Sergeev, at a meeting with President Yeltsin, proposes that his ministry be relieved of functions connected with the elimination of chemical weapons, missile fuels and nuclear submarines, recommending that a separate civilian institution should be established for the purpose. He later reports that the President has “fully approved” the proposal. {Interfax 10 Mar in BBC-SWB 12 Mar, AP 11 Mar}

**10 March** In the United States, the recent disclosures about past USSR biological-weapons programmes by Dr Kanatjan Alibekov [see 25 Feb] have been encouraging into print people who had once been privy to US intelligence on the subject. In the *Wall Street Journal*, Joseph D Douglass Jr writes of occasions during the 1970s and 1980s when such intelligence had, he says, been suppressed in the interests of arms control. He also recounts earlier episodes: “Other defectors [besides Alibekov] have stated that experimental biological and chemical agents were tested on U.S. and South Vietnamese military bases during the Vietnam War. The experiments were so successful that the Soviets ended them prematurely, fearing that the Americans would learn what was happening. Other tests were run against U.S. military bases in Okinawa and in Europe, according to a Soviet defector.” Douglass says that “most of the Soviet, and now Russian, development efforts” on chemical and biological weapons concerned applications other than battlefield use: “Special institutes concentrated on the development of chemical and biological agents for assassinations. One objective was to mimic the effects of natural diseases; another was to render a person ineffective without killing him ... A variety of such agents were intended for very focused military use — special nonlethal agents for use against pilots, tank drivers, command posts and field commanders. The Soviets had a major effort to determine which U.S. airplane crashes in Vietnam were the result of their chemical agents.”

**11 March** In Washington, US Vice President Gore and Russian Prime Minister Chernomyrdin conclude the tenth semi-annual meeting of their Joint Commission on Economic and Technological Cooperation, at a time when the US Congress is close to approving legislation that would require economic sanctions on Russia because of exports of materials and expertise into the Iranian missile programme [see 2 Oct 97 and 12 Nov 97]. At a joint press conference, Gore says that joint teams are to be deployed to ensure enforcement of the recent Russian government decree placing export controls on any “goods and services [that] could be used in the creation of nuclear, chemical and biological weapons or missile delivery systems” [see 22 Jan]. {*Washington Post* 12 Mar}

**12 March** In Tehran, health official Farzad Panahi tells an expert gathering that the number of CW-injured Iranian veterans of the war with Iraq now stands at 60,000. Of these, 50-60 percent have pulmonary diseases, some 30 percent have eye problems, and the rest have skin diseases. All are being treated in medical centres of the Oppressed and the War Disabled Foundation, of which Panahi is the deputy head. {IRNA 12 Mar in BBC-SWB 14 Mar}

**12–25 March** In Iraq there is a further UNSCOM biological mission, BW 64 (UNSCOM 225). {*Arms Control Reporter* 704.B.196}

**13 March** South African Defence Minister Joe Modise opens a new CW defence research facility, in Centurion, south of Pretoria, for Protechnik Laboratories [see 8 Dec 94], which is now a subsidiary of the Armaments Corporation of South Africa

(Armscor). Speaking of chemical defence, the minister says: "The issue is all the more pressing in that the threat from chemical weapons is changing from a purely military form to one where chemical weapons are unleashed by terrorists or fanatics". He makes mention of a recent OPCW inspection at the new site. {SAPA 13 Mar in BBC-SWB 16 Mar} The Hennops River (Magaliesberg) facility of Protechnik is now closed {Johannesburg *Saturday Star* 7 Mar}. Later, Protechnik Technical Director Philip Coleman also speaks, in interview, of chemical terrorism: "In Britain, it's not a question of if this will happen — it's when it will happen. We must be guided by what they say. We are not sure if our neighbours have such weapons. There is concern that many countries in Africa have not signed the Chemical Weapons Convention because they are not interested in having external inspectors inspect their activities. Angola, Botswana, Mozambique, Libya and Egypt have not signed the agreements. In the south west [Namibia] border conflict, there were rumours about chemical weapons capability, and nothing was proved or disproved." {Johannesburg *Saturday Star* 14 Mar} Armscor Executive Chairman Ron Haywood says that, even though nations were uniting to remove the threat, there remained those who were prepared to threaten world peace and security by developing a chemical weapons capability {Johannesburg *Business Day* 16 Mar}.

**13 March** President Saddam Hussein will not give up his weapons of mass destruction, so his exiled former head of military intelligence General Wafiq al-Samarra'i [see 21 Jun 96] believes, not least because of the key role that the weapons played in the defeat of Iran. Interviewed for the London *Independent* {13 Mar}, the general recounts this role. It culminated in an unimplemented plan in 1988 to attack Tehran with CW missiles coordinated with conventional aircraft bombardment. He estimates that Iraq currently possesses about 40 missiles and has "about 100 cases of biological weapons which could be put in warheads".

**13 March** The US Senate unanimously adopts a concurrent resolution urging President Clinton to call on the United Nations to form an international tribunal for the purpose of "indicting, prosecuting, and imprisoning Saddam Hussein and other Iraqi officials who are responsible for crimes against humanity, genocide, and other violations of international law" {*Washington Post* 14 Mar}. The Iraqi Parliament thereupon issues calls for President Bush, President Clinton and former UK Prime Minister Thatcher to be tried for causing "hundreds of thousands" of Iraqi civilian deaths through sanctions {London *Times* 16 Mar, *International Herald Tribune* 24 Mar}. The US State Department regards the call for an international tribunal as premature, but spokesman James Rubin says: "We do support an effort to document Iraqi war crimes, including those of Saddam Hussein and to establish an internationally recognised record of such war crimes. We made clear last year that we support the 'indict campaign' which seeks to assemble such a record; and we would be supportive of a war crimes tribunal that built on this assembled record." {Transcript of State Dept daily press briefing}

**14–20 March** In Iraq there is a further UNSCOM chemical mission, of 10 inspectors, CW 45 (UNSCOM 229). {INA 14 Mar in BBC-SWB 16 Mar, *Arms Control Reporter* 704.E-2.174}

**16 March** Halabjah day is observed in several countries {*Tehran Times* 16 Mar, *Frankfurter Rundschau* and Paris *Libération* 16 Mar}. In Kurdistan it is occasion for the Council of Ministers to urge an end to the internecine fighting in the region {PUK

Radio 11 Mar in BBC-SWB 13 Mar}. President Clinton, in a report to the US Congress, writes that the day marks "the tenth anniversary of the Iraqi military's devastating chemical attack on the Iraqi Kurdish town of Halabja" [see 23 Feb], continuing: "As many as 5,000 civilians were killed. More than 10,000 were injured [but see 17 Feb US] ... Ten years after the massacre, the people of Halabja still suffer from the effects of the attack, including much higher rates of serious diseases (such as cancer), birth defects, and miscarriages." {White House release 6 Apr} A two-day conference in Berlin attended by representatives of international human-rights organizations issues a declaration calling upon the United Nations to create a medical-science facility in Halabjah to provide help, support and therapy to victims of the chemical weapons {DPA 29 Mar}.

**16 March** The UK Defence Ministry informs Parliament that its investigation of a possible new nerve-gas pretreatment using a combination of physostigmine and hyoscyne (*note*: rather than the present pyridostigmine [see 14 Jul 97]) is due to be completed in June 1999 {*Hansard (Commons)* written answers 16 Mar}.

**16 March** At UN headquarters in New York, the Preparatory Committee on Establishment of an International Criminal Court reconvenes, under the continuing chairmanship of Adriaan Bos of the Netherlands, for its sixth and final session prior to the Rome conference of plenipotentiaries [see 1-12 Dec 97]. The committee has before it the report of an intersessional meeting held in Zutphen, the Netherlands, containing consolidated text for the draft statute of the ICC as negotiated thus far. The session is due to end on 3 April. {*New York Times* 18 Mar}

**16 March** In the United States, the Defence Reform Initiative plan to eliminate the main Defense Department bureau concerned with CBW and to establish a new multifunctional Defense Threat Reduction Agency [see 20 Nov 97] is under criticism from former CBW defence officials and others on the grounds that it will inevitably diminish high-level attention to CBW. There is also industry criticism: the Nuclear Chemical Biological Industry Group, representing about 80 companies, has just written in protest to Defense Secretary Cohen and other senior Defense figures. {*Defense Week* 16 Mar}

**17 March** OPCW Director-General José Bustani addresses the European Parliament Subcommittee on Security and Disarmament in Brussels {*OPCW Synthesis* Mar/Apr}. While speaking to reporters about one of the themes of his address, CWC universality, he says "Israel has taken a number of steps that indicate that the ratification [of the CWC] may be coming sooner than later" {Jiji 18 Mar}.

**17 March** US Defense Secretary William Cohen announces that National Guard and Reserve forces are to be trained for aid to the civil power in the event of chemical or biological attacks upon or within the United States. Under the Nunn–Lugar–Domenici programme of civil defence against weapons of mass destruction [see 4 Nov 97], the Defense Department is already providing instruction to first responders (police, firefighters, paramedics and others) in 120 US cities [see 9 May 97]. The Department is now going to establish special Rapid Assessment and Initial Detection teams from the National Guard that will be dedicated solely to assisting local authorities. There are to be 10 such RAID quick-response teams, each of 22 people, managed from a new Consequence Management Program Integration Office in the Defense Department. Also, Reserve units that are already trained to respond to CBW attacks abroad are to be



given opportunity and more training to assist at home. Included in the FY 1999 budget is a funding request of \$49.2 million for these new initiatives. {Defense Department news briefing 17 Mar, *Jane's Defence Weekly* 25 Mar, *Federal Computer World* 6 Apr}

**17 March** In the US Senate, the Veterans Affairs Committee continues its inquiry into Gulf War illnesses and conducts a hearing on the adequacy of procedures for protecting US forces from CBW and other weapons of mass destruction. There is testimony from the General Accounting Office, from the Defense Department, from the Food and Drug Administration and also from Dr Melissa McDiarmid of the University of Maryland, who is directing a surveillance programme for Gulf War veterans exposed to depleted uranium [see 2 Mar]. {Federal News Service transcript} Immediately prior to the hearing, the acting Assistant Defense Secretary for Health Affairs, Dr Gary Christopherson, had written, in response to questions from the committee staff, that the nerve-gas pretreatment drug pyridostigmine [see 16 Mar UK] would not be used in the future except on orders from Central Command. During the Gulf War, unit commanders had ordered troops to take the pills. {Gannett News Service 17 Mar} Reportedly, overdosing had been common, both among British and US personnel {London *Independent on Sunday* 22 Mar}.

**18 March** In Russia, *Moskovskiy Komsomolets* (in FBIS-SOV 20 Apr) publishes an account by a journalist, Alexandr Kamenskiy-Maltsev, of how he had made a film in Sverdlovsk during 1989–91 about the 1979 anthrax epidemic [see 3 Mar], using interviews with relatives of those who had died. He also writes that he had spoken with one of the scientists who had worked at the Sverdlovsk military laboratory. The film had not been publicly shown, and his attempts to publish what he had learned had, he said, been obstructed, on one occasion violently. From this experience, he suggests that the Soviet Union, or one or more of its successor states, might have been the source of Iraq's biological weapons.

**18–19 March** In Tokyo, there is the fourth [see 7–9 Jun 95] Asian regional Seminar on National Implementation of the Chemical Weapons Convention, the second to be held in Japan [see 16–17 Oct 96]. It is hosted by the Japanese Ministry of International Trade and Industry and the Japanese Chemical Industry Association in coöperation with the OPCW Technical Secretariat. There are 88 Japanese participants, plus 18 from Burma, China, India, Indonesia, Jordan, Marshall Islands, Mongolia, Saudi Arabia, South Korea, Thailand and the United Arab Emirates. There is particular attention to industry verification, to the Japanese experience of implementation, and to the political and practical advantages of being a CWC state party. {OPCW doc S/44/98}

**19 March** In the US Defense Department, the Office of the Special Assistant for Gulf War Illnesses releases the tenth in a series of detailed case narratives [see 23 Sep] on specific events during the Gulf War possibly associated with chemical weapons. This one has been prepared jointly with the Gulf Veterans' Illnesses Unit of the UK Defence Ministry. It concludes that CW agent was "definitely not" present in a storage tank abutting the wall of Sabahiyah High School for Girls in Kuwait City, as had been reported in August 1991 [see 10–11 Dec 96]; rather, the storage tank had "definitely" contained the misile-fuel oxidant IRFNA (inhibited red fuming nitric acid). {[www.mod.uk/gulfwar/gvi.htm](http://www.mod.uk/gulfwar/gvi.htm).} The report appears to resolve a confusion originating in the fact that nitric acid can false-alarm

Chemical Agent Monitors for mustard gas. {DoD news briefing 19 Mar}

**20 March** The OPCW Technical Secretariat has now received initial declarations from 78 of the 107 states parties to the Chemical Weapons Convention as required (within 30 days of entry into force) under Articles III and VI. Nine have disclosed chemical-weapons-related activities. {*OPCW Synthesis Mar/Apr*} Deputy Director-General John Gee, speaking in Bonn on 7 May, observes that some of these initial declarations are clearly incomplete, particularly those for commercial industry facilities. In the case of two "major" states parties, this was because their continuing failure to enact domestic CWC-implementing legislation meant that they had no powers to require their industries to furnish data needed for the declarations; he observes that, as of 20 March, only 44 member states had been able to notify the OPCW of their implementing legislation. On the numbers and types of facilities thus far disclosed in initial declarations, Dr Gee provides the following breakdown (the numbers in parentheses are the corresponding initial planning assumptions adopted by the OPCW in May 1997): 58 CWPFS (51); 29 CWSFs (23); 5 CWDFs (6); 24 Schedule 1 (75); 350 Schedule 2, of which 97 would be inspectable (950/450); 392 Schedule 3, of which 317 would be inspectable (1500/1200); and 3859 DOCs (15,000).

**20–27 March** In Vienna, at the UN office, Iraq's biological-weapons programme is the subject of a further "technical evaluation meeting" bringing together Iraqi experts and an UNSCOM international expert team [see 19 Feb]. The Iraqi team of 10 people is led by General al-Saadi [see 1–6 Feb]. The international team of 18 people comprises nominees of the governments of Australia, Brazil, Canada, China, France, Norway, Romania, Russia, Sweden, Switzerland, Ukraine, the UK and the USA, plus three UNSCOM staff experts (from Austria, Germany and the United States), and had spent the previous six days in New York preparing for the meeting with access to all UNSCOM information on the matter in hand — receiving briefings and preparing a Commentary Note for transmission to the Iraqi delegation prior to the meeting. The Iraqi delegation likewise furnishes a dossier ahead to the TEM. The meeting is chaired by Ake Sellström of Sweden. {S/1998/308}

**21 March** The Russian government approves a plan for defining the procedures that are needed to implement the laws on ratification of the Chemical Weapons Convention [see 31 Oct 97] and on destruction of chemical weapons [see 25 Apr 97] {Interfax 27 Mar in FBIS-UMA 27 Mar}.

**22–25 March** In Munster, Germany, there is an international symposium on *Destruction of Chemical Weapons: Technologies and Practical Aspects* organized by the Munster EXPO 2000 Committee in coöperation with the Federal Ministry of Defence and the Foreign Office. The proceedings include some 26 podium presentations, a roundtable discussion, poster presentations, industrial exhibits, and a tour of the Munster chemdemil facility. {*ASA Newsletter* 12 Feb}

**22–26 March** In Baghdad, UNSCOM Executive Chairman Richard Butler conducts high level talks with Iraqi officials. For the most part the talks are devoted to technical issues, particularly the results of the first two Technical Evaluation Meetings [see 19 Feb]. There is agreement that further TEMs should be conducted, and that Ambassador Butler should visit Baghdad again in early June. Satisfaction is expressed by both sides with the way the inspections of "sensitive" sites had proceeded

earlier in the month [see 5–10 Mar]. {S/1998/278} Ambassador Butler tells reporters that he is no longer looking to “close” weapons files before reporting to the UN Security Council that Iraq has fulfilled its disarmament responsibilities, but rather to declare them ready for “transition”. He wants to be able to report that “sufficient of Iraq’s weapons capability in a given field ... has been accounted for ... and what elements remain will be taken care of in ongoing monitoring and verification”. {AFP from Baghdad 25 Mar}

**23 March** In the UK, the fact that the government has received information about the possible smuggling of anthrax into the country is confirmed by the Prime Minister’s office {*Hansard (Commons)* written answers 30 Mar} The Home Secretary had been told of the possibility two days previously, his department having received the information on 5 March {*Hansard (Commons)* written answers 6 Apr}. Leaked to *The Sun*, and now confirmed as genuine, had been a purported intelligence bulletin issued to police and Customs authorities on 18 March warning of the existence of a foreign plot to smuggle large quantities of anthrax bacteria into “hostile countries” inside bottles containing spirits, cosmetics, cigarette lighters and scent sprays. The bulletin said: “Iraq may launch chemical and biological attack using materials disguised as harmless fluids. Could officers therefore be alert for any items which might contain harmful substances.” {PA 23 Mar, London *Sunday Times* 29 Mar} Home Office Minister Mike O’Brien says on television: “There is no specific threat so far as we can gather to Britain. I don’t think this is a greater threat than many of the others that have been made. We step up intelligence when they occur. I don’t want to get people particularly scared on this occasion. There are steps we have taken. We are very good at dealing with these things.” {London *Guardian* 24 Mar} An Iraqi government spokesman is quoted by INA as saying the alert is “silly and baseless”. {Reuter from Baghdad 24 Mar}

**24 March** In Iraq, the scientist Nassir al-Hindawi, described as “the father of Baghdad’s germ weapons program”, has been arrested while preparing to leave the country, according to unidentified Western officials quoted in the *New York Times*. Dr Hindawi had written a secret report in 1983 suggesting how the country’s small and ailing BW programme might be turned into a major military asset, so UNSCOM officials have said, and, according to Iraqi officials sometime previously, he had been managing director during 1989-91 of the now-destroyed facility at al-Hakam [see 20 Jun 96]. The *Times* also reports that it had been told by Ambassador Nizar Hamdoon, Iraq’s UN representative, that his government had, on 9 March, informed UNSCOM of the arrest, turning over to it papers on the BW programme that had been found in Dr Hindawi’s possession. UNSCOM spokesman Ewen Buchanan later confirms that this was so, but adds that Dr Hindawi “was not involved in the production phase” of the programme {*Washington Post* 25 Mar}. General al-Saadi [see 20-27 Mar] tells the *Vienna Standard* {1 Apr in FBIS-NES 1 Apr} that Iraqi authorities had been suspicious of Dr Hindawi for some time because, when questioned by UNSCOM, as he often had been, he could “remember” details that nobody else knew any more. To the *Zurich Tages-Anzeiger* {28 Mar in BBC-SWB 1 Apr}, he says that Dr Hindawi “wanted to retire as a rich man, outside Iraq” and was now “in prison for an illegal deal”, also saying: “He resigned from the weapons programme in 1989, but remained head of the civilian programme, which deals with the production of pesticides, fertilizers and proteins. The CIA is after the Iraqi scientists so that it can keep the biological weapons file open.” Unidentified people, some of them said to represent the Iraqi opposition in exile,

are quoted as attributing the arrest of Dr Hindawi to a CIA exfiltration operation that had gone wrong {London *Guardian* 26 Mar, *Intelligence Newsletter* 2 Apr}.

**24 March** In England, the EU presidency holds an expert seminar on biological and chemical terrorism {*Hansard (Commons)* 24 Mar}.

**25 March** In Manila, a three-day conference on organised crime attended by some 200 governmental officials and others from 50 countries comes to its close. At the subsequent news briefing, Mohamed Abdul Aziz of the UN International Crime Prevention Centre warns that organized crime may soon gain access to biological and nuclear weapons. {AFP from Manila 25 Mar}

**25 March** In Brussels, at a meeting of the Russia-NATO Permanent Joint Council [see 17 Dec 96], experts discuss options for blocking the spread of biological weapons. This follows discussion on chemical-weapons proliferation at a Council meeting earlier in the year. A NATO official subsequently tells reporters that the Russian representative, Sergey Kislyuk, had said that Russia will need assistance if it is to destroy its chemical weapons within the 10–15 years available under the CWC. {RIA Novosti from Brussels 27 Mar}

**25 March** UK Armed Forces Minister John Reid provides a public explanation of why, in written answers to two parliamentary questions on 12 March, he had told one questioner that “CS irritant is the only riot control agent held by my Department”, having just informed the other questioner that “the Ministry of Defence currently holds stocks” of “CR gas ... a riot control agent designed to cause temporary irritation” [see 17 Feb]. His explanation is that because the physiological effects of CR are among those which the Chemical Weapons Convention uses to define a “riot control agent” — because CR, in the words of Article II.7 of the CWC, “can produce rapidly in humans sensory irritation or disabling physical effects which disappear within a short time following termination of exposure” — CR can properly be described as a “riot control agent”, even though it is in fact held by the UK Defence Ministry for a purpose other than riot control, namely “maintaining an effective terrorism response capability”.

**25–26 March** In Beijing there are further bilateral US-Chinese talks on weapons-nonproliferation issues [see 19–21 Mar 97] within the framework of the expanded security dialogue agreed between President Jiang Zemin and President Clinton in October 1996 {AFP from Beijing 25 Mar}. The Chinese team is led by Vice Foreign Minister Zhang Deguang. Acting Under-Secretary of State John Holum, heading the US delegation, says at a press conference: “We discussed ... ways of expanding our mutual efforts to prevent the spread of missiles and chemical weapons. ... We agreed on the importance of strengthening the Biological Weapons Convention to help address the threat posed by the proliferation of biological weapons.” {Xinhua 26 Mar in BBC-SWB 28 Mar}

**26 March** In the US Senate, the Armed Services Strategic Forces Subcommittee conducts a hearing on the status of the Defense Department’s domestic emergency response programme and the role of the Department, and of the Department of Energy, in responding to terrorist use of weapons of mass destruction within the United States [see also 17 Mar]. Both departments testify, as does the Army. {Federal News Service transcript}

**26 March–2 April** In Iraq, the eight presidential sites identified in the UN Memorandum of Understanding [see 2 Mar] receive initial visits from the Special Group in accordance with procedures drawn up by the UN Secretary-General and put before the Security Council on 9 March {S/1998/208}. Headed by UN Under-Secretary-General Jayantha Dhanapala, the Special Group consists of 20 senior diplomats from as many countries and a team of 77 experts from UNSCOM and the IAEA headed by UNSCOM Deputy Executive Chairman Charles Duelfer. The mission, UNSCOM 243, visits all 1058 structures contained within the 8 sites, most of which are later said to have been empty, and proceeds without major incident, and without discovery of anything untoward. Half-way into the mission, Duelfer says to reporters: "We want to get a quick understanding of the nature of each building and, because there are so many, we can average [only] 15 minutes for each. ... We have no intention or expectation of finding prohibited materials. Our target is to conduct a baseline mission which sustains our right to the principle of access to all sites." The UN Secretary-General's envoy in Baghdad, Ambassador Prakash Shah [see 2 Mar], says that "some blips did occur" during the visits, but they were sorted out in the presence of the diplomats. Deputy Prime Minister Tariq Aziz is quoted as follows by INA: "What has been achieved is a triumph for the truth over falsehood. The visit has verified Iraq's credibility." A formal report on the mission will be submitted to the Security Council in mid-April. {*New York Times* 4 Apr}

**30 March** Romanian Defence Minister Constantin Ionescu and US Defense Secretary William Cohen sign an agreement whereby the United States will assist Romanian border control authorities in interdicting transfers of weapons of mass destruction, or components thereof. Minister Ionescu later tells reporters that, despite certain past reports, he has no evidence of individuals trying to sell or move nuclear components or CBW weapons through Romania or out of any other former Warsaw-Pact country. But he stresses his country's interest in strengthening barriers against any such attempts. {DPA and Reuter from Washington 31 Mar}

**30–31 March** In New York, UNSCOM conducts one of its twice-yearly plenary meetings, with 20 of the 22 commissioners attending {AFP from the UN 30 and 31 Mar}. They review the recommendations they had made at their emergency session four months previously [see 21 Nov 97] and discuss draft elements for inclusion in the next six-monthly report of UNSCOM to the Security Council. They also hear a presentation from the Permanent Representative of Iraq to the United Nations, and accept the proposal by the Deputy Prime Minister of Iraq that a technical delegation from Iraq be invited to speak at their next plenary session. {S/1998/332}

**31 March** In the US House of Representatives, a hearing on the fall of Srebrenica during the Bosnian war is held by the Foreign Affairs Subcommittee on Human Rights. Among those testifying is the international non-governmental organization Human Rights Watch. HRW had conducted a field investigation into reports that Bosnian Serbs had used chemical weapons disseminating BZ incapacitant or something similar [compare 9 Feb Iraq] to attack people fleeing from Srebrenica [see 23 Jan 96]. The HRW witness, Diane Paul, tells the subcommittee that, on the basis of this investigation, a US intelligence assessment, the fact that the Defense Department had conducted two investigations, and other indications as well, HRW had concluded that Bosnian Serbs may have used chemical weapons. This testimony is subsequently challenged

strongly by a Defense Department spokesman, Col Steve Campbell, speaking to *Newsday* {1 Apr}.

**31 March** The US Defense Department is delaying the transmittal to Congress of a report due in today about Cuban capability to attack the United States with chemical or biological weapons. The report is required under Section 1228 of the FY 1998 National Defense Authorization Act. Some newspapers are saying that the report, which has been drafted by the Defense Intelligence Agency, finds that the Cuban military poses no significant threat, and that this has so outraged certain sectors of US opinion that the administration is now reviewing the report to make sure that it is "speaking with one voice" on Cuba. Reportedly, stronger language on Cuba's ability to produce biological weapons is being considered. While it is not alleged that Cuba possesses such weapons, an unidentified defence official says that, in view of Cuba's increasing use of civil biotechnologies, "you can't say there's no capability". President Castro says in interview: "It has never, never occurred to us to produce biological weapons". {*International Herald Tribune* 1 Apr, Inter Press Service 10 Apr}

**31 March–2 April** At Carlisle Barracks, the US Army War College conducts its 9th annual strategy conference. Its theme is *Challenging the United States Symmetrically and Asymmetrically: Can America be Defeated?* [see 10 Sep 97].

**1–2 April** The US Defense Department provides an advance planning briefing for industry on its chemical/biological mission area. The briefing, which includes descriptions of current CBW-defence and chemdemil programmes, takes place at the Kossiakoff Center of the Johns Hopkins Applied Physics Laboratory, and is organized by the National Defense Industrial Association.

**2 April** Britain may have been the original source of the seed-stock from which Iraq cultured fill for its anthrax weapons, so it is suggested in the House of Commons by Liberal Democrat defence spokesman Menzies Campbell. During a debate on the international arms trade, he says: "Between 1985 and 1989, Iraq obtained at least 21 strains of anthrax from [the US company] ATCC [see 9 Feb 94] and about 15 other class III pathogens, the bacteria that pose an extreme risk to human health. It has not been reported that many of the anthrax strains were British. Extensive American investigative journalism has revealed that they had been sold to ATCC, notwithstanding the fact that the company was well known to be re-exporting pathogens without restraint, not least to Iraq." Foreign Office Minister of State Tony Lloyd says that he will look into the matter. {*Hansard (Commons)* 2 Apr} The "investigative journalism" referred to is a report in the *Washington Post* {London *Independent* 3 Apr}.

**3 April** In Viet Nam, Prime Minister Phan Van Khai decides that a new nationwide survey should be conducted to reassess the condition of people affected by the toxic chemical substances sprayed by US forces during the Vietnam War. The investigation is to be co-ordinated by the Ministry of Labour, War Invalids and Social Affairs. Subjects of the survey are to be those people who had worked, fought or lived in sprayed areas, and "those who are crippled and those who have been suffering from ailments due to the consequence of the chemical substances". {Voice of Vietnam 5 Apr in BBC-SWB 8 Apr} A government survey in 1994 estimated that two million people had been affected, and that 50,000 deformed children had been

born to parents exposed to the chemicals. {AFP from Hanoi 6 Apr}

**3 April** At UN headquarters in New York, the Preparatory Committee on Establishment of an International Criminal Court concludes its work [see 16 Mar]. It adopts the outcome of its substantive work, which is the draft statute for the ICC, as contained in A/AC.249/1998/CRP.6 through CRP.19, consisting of Preamble, Parts 1–11 and Final Act. The draft is 175 pages long and contains more than 1700 square brackets. The Preparatory Committee also adopts a list of 237 non-governmental organizations that have expressed an interest in attending the Rome Conference in June. {UN press releases 3 April}

**3–4 April** In London, heads of state or government from 10 Asian and 15 European nations, plus the president of the European Commission, convene for the second Asia-Europe Meeting [see 1–2 Mar 96], which is chaired by UK Prime Minister Tony Blair. The chairman's statement released at the close of the meeting notes that the assembled leaders are determined to "deepen ASEM cooperation" in strengthening non-proliferation of weapons of mass destruction, and that they "reaffirmed their support for ... the negotiations on measures to strengthen the Biological and Toxin Weapons Convention". {Kyodo 4 Apr in BBC-SWB 6 Apr}

**8 April** In Ukraine, President Kuchma transmits to the legislature draft law on ratification of the Chemical Weapons Convention. Cabinet resolution no 487, issued on 16 April, establishes a temporary secretariat to implement the Convention. {*Eastern Economist* 13 and 20 Apr}

**8 April** The OPCW Technical Secretariat is now staffed by 382 people in fixed-term posts, including 127 inspectors and inspection assistants, from 60 member states {*OPCW Synthesis* Mar/Apr}. Another 35–40 people are on temporary assignment, short-term contract, loan, or other such arrangements. The total number of posts authorized for 1998 is 491, so recruitment is still continuing.

**8 April** UNSCOM Executive Chairman Richard Butler transmits to the UN Security Council and to the Government of Iraq a report on the joint Iraq/UNSCOM technical evaluation meeting in Vienna on Iraq's proscribed BW programme [see 20-27 Mar]. The report is the principal text, but not the detailed annexes, of the version that had been agreed by all 18 members of the UNSCOM international team and adopted on 1 April. In a degree of detail bewildering to readers denied the annexes, the report sets out the team's assessment of the deficiencies in the current version of Iraq's "full, final and complete disclosure" of its BW programme [see 6 Oct 97]. Judging the FFCD to be "incomplete and inadequate", the report concludes: "The information presented by Iraq does not provide the basis for the formulation of a material balance or a determination of the structure and organisation of the BW programme. This is required for effective monitoring of Iraq's dual capable facilities. The construction of a material balance based primarily on recollection provides no confidence that resources such as weapons, bulk agents, bulk media and seed stocks have been eliminated. The organisational aspects of the BW programme are not clear and there is little confidence that the full scope of the BW programme is revealed. Additional aspects, such as the existence of dormant or additional BW programmes, remain unresolved."

The conclusion continues: "The TEM identified to the Iraqi delegation the depth and extent of the experts' concern about

Iraq's biological FFCD. The responses by Iraq revealed that their delegation was not prepared to tackle the issues in the technical detail demanded by the process. They did not grasp the opportunity offered. The attitude of Iraq as evinced by the TEM toward the discussions was disappointing and shows no change since 1995. Iraq, however, recognized the need to improve its FFCD and promised to do so." {S/1998/308}

**8 April** US Defense Department spokesmen say that punitive measures have been taken against armed forces personnel stationed in the Persian Gulf region who have refused to be immunized against anthrax [see 3 Mar] {AP from Washington 9 Apr, *Hartford Courant* 11 Apr, *Baltimore Sun* 19 Apr}.

**9 April** UNSCOM Commissioner Jayantha Dhanapala, head of the Special Group established for entries into Iraqi presidential sites [see 26 Mar–2 Apr], submits to the UN Secretary-General, through the Executive Chairman of UNSCOM, the report of the Special Group. The Secretary-General transmits the report to the Security Council on 15 April. {S/1998/326} Positive in tone, the report does, however, observe in its penultimate paragraph: "The stated objective of UNSCOM was that the round of initial visits was a 'baseline survey'. The Iraqi authorities did not accept this characterization of the visits. The Memorandum of Understanding provides for 'initial and subsequent entries for the performance of the tasks mandated at the eight presidential sites'". This disagreement is highlighted in the appended summary report by Head of Team Charles Duelfer, which notes that "the fundamental issue of continuing access is by no means solved and has only been postponed to the future". The Duelfer report stresses the need for follow-on visits by noting that many of the inspected buildings had clearly been stripped of documents and computers, even furnishings, ahead of the initial visits — "in anticipation of a military strike", according to the Iraqi explanation. The Duelfer report also notes that the ratio of Iraqi officials to inspectors was often five to one or greater.

**9–15 April** In Iraq there is a further UNSCOM chemical mission, CW 46 (UNSCOM 238). {*Arms Control Reporter* 704.E-2.174}

**10 April** President Clinton leads a roundtable discussion at the White House on ways to respond to the threat of biological weapons. Participating are members of the Cabinet and seven outside experts, including Joshua Lederberg of Rockefeller University and Barbara Rosenberg of the Federation of American Scientists. White House spokesman Mike McCurry later briefs reporters that, "although this was not designed to be any decision-making meeting or implement any specific plan, it clearly reflects the President's desire to keep this issue front and center as we assess threats to our national security in the post Cold War environment". {White House release 10 Apr}

**13 April** In the United States, Frost & Sullivan predicts that worldwide spending on CBW-agent detection equipment will increase steadily through 2005. The firm's latest report, *World Markets for Chemical and Biological Warfare Agent Detection* (price \$2950), estimates a 12 percent growth in demand for CW-agent detectors over 1998-2005. BW-agent detectors represent a minor share of the market and are described by Frost & Sullivan defense-industry analyst Eric Croddy as "still a developing technology". {PR Newswire 13 Apr}

**15 April** In Pakistan, Prime Minister Nawaz Sharif is quoted on Radio Pakistan {in FBIS-TAC 15 Apr} as having "given a cat-

egorical assurance that inspection of Kahuta would not be allowed in the guise of the provisions of the Chemical Weapons Convention" [see also 25 Feb].

**15 April** Lithuania deposits its instrument of ratification of the Chemical Weapons Convention. In 30 days time, it will thereby become the 108th state party to the treaty.

**15 April** OPCW Director-General José Bustani requests CWC states parties to consider submitting additional candidates for selection as members of the OPCW Scientific Advisory Board. He asks for names by 31 May so as to allow him to establish the Board "shortly thereafter". Having noted that 87 candidates had thus far been nominated by 42 states parties, he says that "the overall number of genuinely eminent persons, such as full members of National Academies of Science, across the entire spectrum of nominations submitted thus far is still insufficient to allow a balanced and well justified selection". {OPCW doc S/41/98}

**16 April** The UN Security Council receives its fifth six-monthly consolidated report [see 6 Oct 97] on the work of UNSCOM in Iraq during the previous six months {S/1998/332}. The report follows its predecessor in having separate status reports on disarmament and on ongoing issues. For the former, the reporting takes each category of proscribed weapon and sets out in turn the actions required of Iraq in accordance with the directing UN Security Council resolutions, the stage those actions have reached, and the UNSCOM view of what now needs to be done.

On chemical weapons, the report notes the conclusions of the recent VX TEM [see 19 Feb], observing that "the retention of a VX capability by Iraq could not be excluded". It goes on to state that a "full and verified accounting of all Iraq's proscribed CW-related activities and for their elimination" will remain impossible until Iraq furnishes additional data.

On biological weapons, the report states that Iraq now claims its BW programme was "obliterated" in 1991, continuing: "Notwithstanding this claim, which is itself unverifiable, it is established that Iraq retained the facilities, growth media, equipment and groupings of core technical personnel of its BW programme." On Iraq's BW FFCD [see 8 Apr] the report says that it "does not provide a clear understanding of the current status of the BW programme nor whether, nor when, it was terminated", continuing: "In this overall context, it is important to mention that, in March 1998, the Commission discovered in Iraq a document, dated 1994, which indicated the existence, at a site monitored by the Commission's missile monitoring team, of a programme for the manufacture of nozzles for spray driers to be delivered to Al Hakam [see 24 Mar], Iraq's principal biological weapons production facility, subsequently demolished by UNSCOM. Also, in September 1997, the Commission discovered in Iraq another relevant set of documents relating to discussions held in 1995 by Iraq and a potential supplier for the possible importation of a single-cell protein facility [see 12 Feb Russia], the potential dual-use character of which is beyond question. Following contact with the potential supplier, the Commission was assured that no contract was concluded and that no request to supply such materials and equipment had been submitted to the national export control agency of the potential supplier, either in 1995 or in subsequent years." The report reiterates the findings of the BW TEM report [see 8 Apr], and again observes that, unless Iraq submits additional data, UNSCOM will remain unable to report credibly to the Security Council on Iraq's BW capabilities.

On procedural matters, the report notes disutilities in the new process of Technical Evaluation Meetings, notably the slowing-down, even postponement, of essential UNSCOM field work. Such comment the report says it would not have made "had Iraq done what it indicated it would do, namely, brought to each of the technical evaluation meetings new materials that would help explain and verify its claims with respect to its prohibited weapons programmes".

The on-going issues addressed in the report include the presidential site visits, ongoing monitoring and verification, the export/import regime, and the concealment investigation. The report then goes on to use terse and pithy language to state its overall conclusions, for example: "Fourthly, as is evident in the disarmament section of this report, a major consequence of the four-month crisis authored by Iraq has been that, in contrast to the prior reporting period, virtually no progress in verifying disarmament has been able to be reported. If this is what Iraq intended by the crisis, then, in large measure, it could be said to have been successful."

**17 April** The Australian government sanctioned the use of some 2000 Australian servicemen in mustard-gas tests by British scientists during World War II, according to *Keen as Mustard*, a new book by Bridget Goodwin {AP in London *Guardian* 18 Apr}.

**19 April–2 May** In Iraq there is a further UNSCOM biological mission, BW 63 (UNSCOM 224). {*Arms Control Reporter* at 704.B.196}

**20–21 April** In London the EU presidency hosts a conference on how to implement the expanded oil-for food programme in Iraq [see 2 Feb]. EU Humanitarian Affairs Commissioner Emma Bonino says: "We must remember that sanctions have humanitarian side-effects which affect innocent populations and which, if unchecked, can help to strengthen dictators". {*International Herald Tribune* 21 Apr, London *Financial Times* 22 Apr}

**20–22 April** In Bucharest, there is a NATO Advanced Research Workshop on *Antidotes, Protectors and Decorporators — A New Approach in the Area of Disarmament: From Military Towards Environmental Purposes*, hosted by Gen Prof Victor Voicu and Col Prof Constantin Mirciou in partnership with the Federal German Defence Ministry in the person of Col Dr Torsten Sohns. {*ASA Newsletter* 30 Apr}

**21–24 April** In The Hague, the OPCW Executive Council [see 27–30 Jan] convenes for its ninth session [for details, see *Progress in The Hague*, above].

**22 April** Iraqi Deputy Prime Minister Tariq Aziz transmits to the UN Security Council a lengthy reply {S/1998/342} to the latest UNSCOM six-monthly report [see 16 Apr], which he characterizes as a "full of blatant falsehoods and lies and has been designed from the outset as a political document aimed at justifying the behaviour of the Special Commission in deliberately prolonging its mandate under resolution 687 (1991), tendentiously blaming Iraq and justifying continuation of the unjust embargo". Six days previously when the report was transmitted to the Security Council, the Revolutionary Command Council of Iraq had included the following in a statement issued after a session chaired by President Saddam Hussein: "The time has come that the discussion of the embargo issue at the end of April must lead to ... lifting the embargo completely and comprehensively". This was necessary, the statement continued, "if relations between Iraq and the Security Council are to become

more balanced and continue on the right basis". {*New York Times* 17 Apr, London *Financial Times* 18–19 Apr}

**22–23 April** In the US Senate, the Select Committee on Intelligence and the Judiciary Subcommittee on Technology, Terrorism and Government Information conducts the second of its joint hearings to investigate the threat that CBW weapons present to Americans [see 4 Mar]. After a classified briefing the day previously, the senators take testimony from Attorney General Janet Reno and FBI Director Louis Freeh, who describe how the US government is currently organizing and planning, under Presidential Decision Directive PDD-39 of 21 June 1995, for the federal response to any CBW incidents there may be within the US homeland. Concerning counter-terrorism, Judge Freeh speaks in passing of the FBI having "worked, over the last year, about 114 cases in the weapons of mass destruction area", continuing: "Approximately 80 percent of them have been hoaxes, and the rest of them either resolved or found to be at least attempts in that regard". Vulnerabilities exist but are being addressed.

Next day the senators hear about the Defense Science Board summer study, *DoD Responses to Transnational Threats* [see 9 Dec 97], from one of its key authors, Donald Latham, currently a vice president of Lockheed Martin Corporation. The final witnesses are Richard Preston, author of recent works on BW and related matters [25 Feb] now testifying on the former Soviet biological-weapons programme, and Professor Christine Gosden [see 23 Feb], testifying on her observations of the sequelae of CW attack in the town of Halabjah. {Federal News Service transcripts}

**26 April–2 May** In Iraq there is a further UNSCOM chemical mission, CW 47 (UNSCOM 239). {*Arms Control Reporter* 704.E-2.174}

**27 April** The United Kingdom has now transmitted to the OPCW its first annual declaration on national programmes related to protective purposes, as required under Article X.4 of the Chemical Weapons Convention. The declaration is made public by the Ministry of Defence. It is a four-page document summarizing the research, procurement and training components of the UK CW-defence posture, and identifying the principal establishments concerned. {MoD news release 27 Apr}

**27 April** Iraq, in its BW programme, may retain undetermined amounts not only of anthrax and plague bacteria, botulinum toxin and ricin but also of Ebola virus, according to a US Congressional Research Service *Issue Brief* citing a UK government release [note: which, however, makes no mention of Ebola].

**27 April** The UN Security Council reviews the question of whether to lift the sanctions imposed on Iraq [see 22 Apr], its first such review for six months [see 23 Oct 97]. US Permanent Representative Bill Richardson has let it be known ahead of the meeting that he will veto any move to lift the embargo. {London *Financial Times* 28 Apr} Among those briefing the Council is UNSCOM Executive Chairman Richard Butler, who is questioned at length and, at one point, reportedly accused by the deputy representative of China, Shen Guofang, of running an "insolent and arrogant" operation in Iraq {*New York Times* 29 Apr}. The Council decides against lifting the embargo, but will review the question again in 60 days. Speaking to reporters afterwards, Ambassador Butler says that Iraq could not expect to have sanctions lifted by declaring itself free of weapons and then withholding evidence that would substantiate its declarations. {*International Herald Tribune* 30 Apr} Addressing a differ-

ent news conference, Iraqi Foreign Minister Mohammed Said Sahhaf calls the Council decision "very disappointing" but, despite the recent statement from the Revolutionary Command Council [see 22 Apr], does not suggest that Iraq will withdraw coöperation. He does suggest, however, that the UNSCOM leadership had falsified the conclusions of the recent BW Technical Evaluation Meeting in Vienna [see 8 Apr]. {AFP from the UN 28 Apr}

**27 April** In Washington, the Brookings Institution and the American Society for Microbiology hold a joint conference on *Biological Weapons and US Security*. It is open to the public and the media.

**29 April** The OPCW Technical Secretariat has now conducted 204 inspections at 168 sites on the territory of 25 member states; 156 of these inspections were at chemical-weapons-related sites, and 48 at industry sites including Schedule 1 Single Small-Scale Facilities. {DDG Gee speaking in Bonn, 7 May}

**29 April** President Clinton makes another of the certifications required by the US Senate resolution of advice and consent to ratification of the CWC. In a letter to the leaders of the two chambers of the US Congress he writes: "I hereby certify in connection with Condition (7)(C)(i), Effectiveness of Australia Group, that: Australia Group members continue to maintain an equally effective or more comprehensive control over the export of toxic chemicals and their precursors, dual-use processing equipment, human, animal and plant pathogens and toxins with potential biological weapons application, and dual-use biological equipment, as that afforded by the Australia Group as of April 25, 1997; and the Australia Group remains a viable mechanism for limiting the spread of chemical and biological weapons-related materials and technology, and that the effectiveness of the Australia Group has not been undermined by changes in membership, lack of compliance with common export controls and nonproliferation measures, or the weakening of common controls and nonproliferation measures, in force as of April 25, 1997." {*Congressional Record* 30 Apr at H2693}

**30 April** President Yeltsin has signed a decree abolishing two government ministries, six state committees and one federal commission, but at the same time creating two new ministries and giving executive federal status to three presidential bodies, among them the President's Committee on CBW Convention Problems. The government is required to draw up a list of the functions and powers of these bodies within the next month. {ITAR-TASS 30 Apr in BBC-SWB 2 May}

**1 May** In Tokyo, the Inter-Ministry Coordination Conference on Chemical Weapon Disposal convenes for its first meeting. It is the high-level government task force set up last year [see 26 Aug 97] to resolve the problem of the chemical weapons abandoned in China by the Imperial Japanese Army. It agrees that its experts should now study the private-sector proposals on chemdemil technology thus far submitted and produce an interim report in September, aiming for decision by Spring 1999. {Kyodo 24 Apr, Jiji 1 May} Seven consortia of Japanese and foreign firms have made proposals {Kyodo 19 Apr in BBC-SWB 20 Apr}.

**1 May** Alleged Bosnian Serb use of chemical weapons in July 1995 at Srebrenica had been the subject of a field investigation by Human Rights Watch in 1996 [see 31 Mar] which is now reported in detail in *Medicine, Conflict and Survival*. Dr Alastair Hay, Reader in Chemical Pathology at the University of Leeds,

England, and the principal investigator, reports on what was one of several hundred alleged occurrences of chemical warfare during the Bosnian War. During July/August 1996, he and HRW staff had conducted interviews in Bosnia with 35 survivors, including 3 doctors, from which interviews he relates an account of what happened to a column of some 15,000 people who had assembled in the village of Jaglici, 15 km from Srebrenica, and from there, at midnight on 11/12 July 1995, had begun to march into the mountains, seeking to break through Serb encirclement, but in fact, over the coming days, encountering ambush and recurrent artillery bombardment, from which it is now estimated that no more than one-third escaped capture or death. That the bombardment included artillery shell disseminating a disabling chemical such as agent BZ had been suggested by the hallucinations experienced by many survivors, by the unusual appearance of some of the shell-bursts, and by the gas-masks which, according to one witness, a group of encountered Bosnian Serb forces were wearing. Dr Hay then compares and contrasts this evidence, considering especially the physical condition and psychological state of the marchers, with what is known about agent BZ and about stress as a cause of hallucination. He concludes: "Thorough investigation of the scientific and medical literature published to date contains a good deal of information to support a suggestion that causes other than the use of a chemical warfare agent, such as BZ, led to most of the aberrant behaviour, and the occurrence of visions, seen among those on the journey". He also writes: "A chemical agent cannot be ruled out as one of the causes of hallucinations which individuals suffered, but it is also highly likely that many of the psychotic episodes could be attributed to the stress affecting the marchers". And he says: "Other avenues of investigation may help. BZ might be found in soil samples, or in clothing or footwear from those who perished in the area. The existence of transcripts of messages relayed between Serbian forces and available to intelligence agencies might be investigated. At present, however, more evidence will be required before it can be shown that chemical agents were part of the arsenal used against those who endured such appalling conditions."

**6 May** In Tel Aviv, District Court judges approve publication of testimony given by Nahum Manbar, who is awaiting the verdict after a trial in which he has been accused of selling chemical-weapons-related materials to Iran [see 5 May 97]. The released transcript indicates that the defendant admitted that he had undertaken "to supply the Iranians know-how and equipment for the establishment of chemical plants in Iran" but that he claimed not to know "the nature of the material and the equipment to be sold to the Iranians ... and that they could be used for military purposes". Moreover, although he had signed the undertaking, he "claimed that it had been a fiction and that he had had no intention of implementing these commitments ... [H]is actions and ties with the Iranians were carried out with the knowledge of the authorities in Israel and with their permission, and that he did not hide anything from anyone." {Tel Aviv *Ma'ariv* 7 May in FBIS-TAC 7 May}

**6 May** US Defense Secretary William Cohen transmits to the Congress the report it had called for reviewing and assessing the Cuban threat to US national security [see 31 Mar]. The report has been prepared by the Defense Intelligence Agency in coördination with the Central Intelligence Agency, the State Department Bureau of Intelligence and Research, the National Security Agency and the US Southern Command Joint Intelligence Center. On CBW capabilities, its unclassified version says only: "Cuba's current scientific facilities and expertise could

support an offensive BW program in at least the research and development stage. Cuba's biotechnology industry is one of the most advanced in emerging countries and would be capable of producing BW agents." The report concludes: "At present, Cuba does not pose a significant threat to the US or to other countries in the region. Cuba has little motivation to engage in military activity beyond defense of its territory and political system. Nonetheless, Cuba has a limited capability to engage in some military and intelligence activities which would be detrimental to US interests and which could pose a danger to US citizens under some circumstances." {DoD news release 6 May}

**7 May** In Bonn, OPCW Deputy Director-General John Gee speaks at the Friedrich-Ebert-Stiftung about the experience of the first year's implementation of the Chemical Weapons Convention. The distributed text of his remarks provides an account of OPCW work which adds greatly to the information publicly available [see 20 Mar and 29 Apr]. [Note: And not only that; the presentation is an analytical one and succeeds in conveying insight into the nature of problems still facing the OPCW without actually naming names.]

**8-9 May** In London, the foreign ministers of the G-8 countries meet in pre-Summit session. In their final communiqué, they say "we are committed to action in the following areas: — the intensification and successful conclusion of the negotiations on measures, including for effective deterrence and verification, to strengthen the Biological and Toxin Weapons Convention with the aim of the earliest possible adoption of a legally-binding Protocol".

**9 May** In Stockholm, the Swedish Pugwash Group hosts an international expert meeting on *The Implementation of Articles X and XI of the Chemical Weapons Convention and Articles VII and X of the Biological and Toxin Weapons Convention*. Organized in collaboration with the Pugwash Study Group in Implementation of the CBW Conventions, it brings together 27 experts from Belgium, Brazil, Burkina Faso, Cuba, the Czech Republic, Denmark, Germany, Hungary, the Netherlands, Slovakia, Sweden, Russia, Ukraine, the United Kingdom, the United States and Zimbabwe.

**10-15 May** In Stockholm there is the *6th International Symposium on Protection against Chemical and Biological Warfare Agents*, arranged jointly by the Swedish National Defence Research Establishment, other Swedish military and civil defence agencies, and the OPCW. The basic purpose is stated to be "to create an interdisciplinary forum for the mutual exchange of information regarding protection against chemical and biological warfare agents". There are at least 600 participants from 46 countries, as well as over 70 corporate exhibitors of CBW protective equipments or services. On 11 May, the King of Sweden opens the formal proceedings, his Foreign Minister, Mrs Lena Hjelm-Wallén, then giving the keynote address. There are 99 podium presentations and also poster and video presentations. For the most part, these are purely technical in content. As with the two previous symposia in the series, presentations of a more political character are given during a "pre-meeting" on the first day. This time they comprise presentations on the work of the BWC Ad Hoc Group, of the SIPRI CBW project, of the OPCW, and of UNSCOM.

**11 May** India resumes nuclear testing at a site in the Rajasthan desert.



**13 May** In Brussels, a seminar on the Biological Weapons Convention is hosted by the EU presidency for European industry, with observers from Japan and Switzerland. [For details see *Progress in Geneva*, above.]

*ca* **13 May** The UK Defence Ministry releases further documents on the field experiments during the 1960s and 1970s in which aerosols of non-pathogenic organisms simulating BW agents were disseminated over southern England from a generator mounted on a naval auxiliary vessel, *ETV Icewhale*, as it steamed off the Hampshire and Dorset coast [see 23-25 Sep 97]. Some 60 sampling stations had been used to track the aerosol clouds as they moved downwind, traversing a million or more people. Joint US-UK experiments over the Portland peninsula during 1966-71 used "inactivated" *Serratia marcescens* as the simulant, as well as *E coli* and *Bacillus globigii*. {London *Sunday Telegraph* 17 May}

**14 May** Benin deposits its instrument of ratification of the Chemical Weapons Convention. In 30 days time, it will thereby become the 109th state party to the treaty.

**15 May** On Russian television, film is screened that had been shot at the Yekaterinburg BW defence centre [see 18 Mar] on what is said to have been the first occasion an outside camera crew had ever been admitted. The report says that the centre, dating back to 1949, is currently working on more effective vaccines against such diseases as plague and anthrax. {Centre TV 15 May in BBC-SWB 18 May}

**15 May** In Birmingham, England, there is a Russia-EU summit meeting between President Yeltsin, the President of the European Commission, Jacques Santer, and, for the current EU Presidency, UK Prime Minister Tony Blair. Their final communiqué reaffirms that they are set to agree on measures to strengthen the Biological Weapons Convention in the very near future. {ITAR-TASS 15 May in BBC-SWB 18 May}

**15-17 May** In Noordwijk, the Netherlands, the Pugwash Study Group on Implementation of the CBW Conventions holds its ninth workshop [see 20-21 Sep 97], on *CWC Implementation: Balancing Transparency and Confidentiality*. Participating are 45 people from 20 countries

**18 May** In The Hague, representatives of some 20 CWC states parties including Russia, EU member states, and the United States participate in an informational working meeting on the provision of chemdemil assistance to Russia. Colonel General Stanislav Petrov, Chief of the Russian Defence Ministry RKhB Protection Troops, presents a detailed report entitled *The Status of the Implementation of the Russian Program of Chemical Weapons Stockpile Destruction and Avenues of Possible International Cooperation*. This notes that "the use of free aid/grants and technical assistance from foreign governments" will be "critical" if Russia is to meet the stockpile-destruction deadlines of the Chemical Weapons Convention [see also 25 Mar Brussels]. The report itemizes, with US-dollar cost estimates, the different components of each of the construction programmes at each of the seven stockpile-chemdemil locations. This itemization of an estimated \$3.64 billion total includes work on the design of chemdemil plant and also infrastructure components, to both of which, but especially the latter, the report invites the particular attention of potential aid-givers.

The report expresses gratitude to the United States, Germany, the Netherlands, Sweden and Finland for the chemdemil

assistance they have already provided, or said they intend to provide. It notes that German companies, which have thus far supplied equipment totalling DM 16 million, have already agreed to further cooperation for 1998, envisaging the delivery of another DM 9.5 million of equipment. The report also states: "The first steps have been made in the organization of cooperation in this area with Italy and Great Britain. This cooperation has good prospects." Italian assistance had been on the agenda for the visit of President Yeltsin to Italy back in February {Interfax from Moscow 7 Feb in BBC-SWB 9 Feb}, and General Petrov had headed a delegation to the UK that same month [see 25-27 Feb]. Meanwhile, at the EU level, TACIS contract information has been released on two Russian chemdemil/CW-conversion projects, totalling ECU 5 million {EU website}, indicating the impending launch by the European Commission of invitations to tender.

OPCW Director-General José Bustani, addressing the meeting, says: "It is heartening to see that the hand of cooperation is being extended to a country which has shown its willingness to comply with its obligations under the Convention but needs assistance to do so" {AFP from The Hague 18 May}

**18 May** In Birmingham, England, there is a US-EU summit meeting between President Clinton, the President of the European Commission, Jacques Santer, and, for the current EU Presidency, UK Prime Minister Tony Blair. Among the joint statements that are subsequently issued is one on counter-terrorism, which includes the comment that, "During the UK Presidency, the EU and US have shared their thinking and compared best practice in the areas of CB terrorism, terrorist arms trafficking, and bomb scene management". {USIS Washington File 18 May} Another such statement, on *Common Orientation of Non-Proliferation Policy*, says: "They are also working toward agreement on an effective Protocol on verification for the Biological and Toxin Weapons Convention" {EU website}.

**19 May** In India, the Cabinet approves the submission to Parliament of a bill on domestic implementation of the Chemical Weapons Convention {All-India Doordarshan TV 19 May in BBC-SWB 21 May}.

**19 May** Gambia deposits its instrument of ratification of the Chemical Weapons Convention. In 30 days time, it will thereby become the 110th state party to the treaty.

**19 May** The US Defense Department announces that Dr Jay Davis, a nuclear physicist at Lawrence Livermore National Laboratory, is to head the new Defense Threat Reduction Agency [see 16 Mar], which is formally to be established on 1 October {DoD news release 19 May}.

**19-20 May** In Colombia, at Cartagena des Indias, there is a ministerial meeting of the coordinating bureau of the Non-Aligned Movement [see 9-13 Mar]. Its final communiqué includes the following: "The Ministers noted the progress achieved so far negotiating a Protocol to strengthen the Biological and Toxin Weapons Convention and reaffirmed the decision of the Fourth Review Conference urging the conclusion of the negotiations by the Ad Hoc Group as soon as possible before the commencement of the Fifth Review Conference and for it to submit its report ... to be considered at a Special Conference".

**20 May** In The Hague, Queen Beatrix of The Netherlands officially inaugurates the new OPCW headquarters building.

**22 May** President Clinton, speaking in Annapolis at the US Naval Academy commencement, announces three initiatives directed against terrorism {White House transcript}. One, embodied in new Presidential Decision Directive PDD-62, establishes a counterterrorism authority within the National Security Council: the Office of the National Coordinator for Security, Infrastructure Protection and Counter-Terrorism, to which post Richard Clarke is appointed. The second, also embodied in a new directive, PDD-63, launches a comprehensive plan to defend the country's critical infrastructures. The third is directed against biological weapons. President Clinton says: "we will undertake a concerted effort to prevent the spread and use of biological weapons, and to protect our people in the event these terrible weapons are ever unleashed by a rogue state, a terrorist group or an international criminal organization. Conventional military force will continue to be crucial to curbing weapons of mass destruction. ... But we must pursue the fight against biological weapons on many fronts. We must strengthen the international Biological Weapons Convention with a strong system of inspections to detect and prevent cheating. This is a major priority. It was part of my State of the Union address earlier this year, and we are working with other nations and our industries to make it happen. Because our troops serve on the front line of freedom, we must take special care to protect them. So we have been working on vaccinating them against biological threats, and now we will inoculate all our Armed Forces, active duty and reserves, against deadly anthrax bacteria. Finally, we must do more to protect our civilian population from biological weapons. ... We will train and equip local authorities throughout the nation to deal with an emergency involving weapons of mass destruction, creating stockpiles of medicines and vaccines to protect our civilian population against the kind of biological agents our adversaries are most likely to obtain or develop. And we will pursue research and development to create the next generation of vaccines, medicines and diagnostic tools. The Human Genome Project will be very, very important in this regard." The White House has been advised by a specially commissioned group of outside specialists that the five biological agents that present the most immediate menace are anthrax, smallpox, plague, tularemia and botulinum toxin {*Washington Post* 21 May}.

**22 May** US Defense Secretary William Cohen directs the military to proceed with implementation of the plan to immunize all active-duty personnel and selected reserves against anthrax [see 15 Dec 97]. The total-force vaccination of about 2.4 million people will begin this summer. {DoD news release 22 May}

**22 May** The US Senate passes the Iran Missile Proliferation Sanctions Act of 1997, HR 2709, already passed by the House of Representatives. Attached to the bill is the Chemical Weapons Convention Implementation Act [see 12 Nov 97], now passing despite criticism that certain of its provisions undercut the Convention itself, notably Section 237 which would grant the President discretionary authority to deny an inspection on national-security grounds. US arms control specialists have been observing that provisions such as this one undo stipulations originally negotiated into the Convention by the US delegation in order to strengthen verification. {*New York Times* 23 May} Particular dismay has been expressed, publicly, by the leadership of the OPCW Technical Secretariat that the new legislation does not seek to repeal Condition 18 of the Senate's resolution of ratification, whereby no chemical sample taken by the OPCW inspectorate may be removed from the country for analysis. Here, the OPCW leadership fears that a precedent is being set

which countries that wish to subvert the verification system will be quick to exploit. {*Chicago Tribune* 14 May} The legislation now passes to President Clinton, for signature or veto.

**24 May** The Iranian Defence Industry Organization last month took delivery from a Chinese corporation, the Tianjin branch of SinoChem, of 500 tons of phosphorus pentasulphide at a price of £1100 per ton, according to the London *Sunday Telegraph* [see also 4 Feb China]. The chemical is a dual-use precursor on the Australia Group control list which can be used for the production of a variety of different pesticides. It has also been used, in Iraq, to make VX nerve gas [see 19 Feb]. The Iranian Foreign Ministry categorically denies the report, spokesman Mahmoud Mohammadi describing it as Zionist propaganda. The Iranian Defence Ministry says the newspaper article is based on false information provided by the Mojahedi-e Khalq Organization. It terms the production and deployment of chemical weapons "a treason to the human community". {IRNA from Tehran 27 May in BBC-SWB 28 and 29 May}

**25 May** In Tokyo District Court, Ikuo Hayashi is sentenced to life imprisonment for his part in the spreading of sarin nerve-gas within the Tokyo subway system in March 1995 [see also 24 Feb, Tokyo]. He is the first to be sentenced of the 15 central Aum Shinrikyo defendants, and had been one of those who had actually released the nerve gas. The court has accepted that cult founder Shoko Asahara, who is the subject of 17 separate prosecutions, had ordered the subway attack. {Reuter and UPI from Tokyo 26 May}

**26 May** In Belgium, the new chemdemil facility at Poelkapelle [see 23 Jan 89] in Flanders commences operations. The army starts to destroy the first of its accumulated stockpile of 21,000 old chemical weapons unearthed from World War I battlefields. It expects to proceed at a rate of 20 weapons per day. {AP 26 May}

**28 May** Pakistan announces that it has exploded three nuclear devices.

**28–29 May** In Vienna, the European Federation of Biotechnology Working Party on Safety in Biotechnology convenes a conference on *A Strengthened Biological and Toxin Weapons Convention: Potential Implications for Biotechnology* at the Agricultural Sciences University Institute for Applied Microbiology, with support from the Federal Ministries of Foreign and Economic Affairs. About 100 people from 22 countries participate, not all of them European. [For further details see *Progress in Geneva*, above.]

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CBW Events data-base is compiled from news reports and other open-source documentation furnished to the Sussex Harvard Information Bank by ad hoc correspondents and systematic scanners, including: Joachim Badelt (in Germany), Gordon Burck (in the US), Rob Evans (in the UK), Daniel Feakes (in the Netherlands), Richard Guthrie (in the UK), Mitslal Kifleyesus (in Belgium), Milton Leitenberg (in the US), Caitriona McLeish (in the UK), Tony Randle (in the UK), Sandy Ropper (in the US), Jenny Smith (in the US), Jonathan Tucker (in the US), Emmanuelle Tuerlings (in Switzerland), Simon Whitby (in the UK), Jean Pascal Zanders (in Sweden), and Elisabetta Zontini (in the UK).

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## Forthcoming events

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The remaining sessions of the OPCW Executive Council for 1998 will be 16–19 June, 1–4 September, 6–9 October, and 8–11 December. All sessions will be held in The Hague.

The BWC Ad Hoc Group will reconvene for its eleventh session on 22 June–10 July and for its twelfth session on 21 September–16 October in Geneva.

UNIDIR is hosting a conference on *Biological Warfare and Disarmament: Problems, Perspectives, Possible Solutions* in Geneva during 5–8 July.

A Wilton Park conference *Co-operative Security: Conflict Prevention and Building Mutual Reassurance* will take place at Wiston House, England during 3–6 August. Enquiries about participation to Heather Ingrey, fax \*\*44-1903 815931, e-mail: wilton@pavilion.co.uk

The 1998 Annual Meeting of the Association for Politics and the Life Sciences (Boston, USA, 3–6 September) is to include panels on “Averting Biowarfare through Moral Repugnance: Fact or Fiction?”, “Russia and the Former Soviet Union’s Biological Warfare Programme”, “Instances and Allegations of the Use of Biological Weapons”, “Strengthening the BWC”, “Assessing Motivations for Chemical and Biological Terrorism”, and “Responding to the Threat of Biological Terrorism”.

A Wilton Park conference *Chemical and Biological Weapons: Achieving and Ensuring Compliance* will take place at Wiston House, England during 25–27 September. Enquiries about participation to Heather Ingrey, fax \*\*44-1903 815931, e-mail: wilton@pavilion.co.uk

A NATO Advanced Research Workshop on *Scientific and Technological Methods of Distinguishing between Biological Weapons Attacks and Natural Disease Outbreaks* will be held in Prague during 17–21 October. Enquiries about participation to Dr Graham Pearson, e-mail: 100703.162@compuserve.com, fax: \*\*44 1672 539582.

A NATO Advanced Research Workshop on *The Role of Biotechnology in Countering BTW-Agents* will be held in Prague during 21–23 October. Enquiries about participation to Dr Alexander Kelle, Peace Research Institute Frankfurt, e-mail: kelle@mem.uni-frankfurt.de, fax \*\*49 69 558481.

The Third Session of the Conference of the States Parties to the CWC is to be held in The Hague during 16–20 November.

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