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WASHINGTON AND THE BWC PROTOCOL NEGOTIATION

In the aftermath of the February session of the BWC Ad Hoc Group, on which Graham Pearson reports in this issue, it is far from clear that the BWC Protocol will be completed before the commencement of the Fifth BWC Review Conference in November 2001.

What is clear, however, is that decisions taken between now and the April Preparatory Committee for the Review Conference will be critical in determining whether that deadline — agreed by states parties at their Fourth Review Conference, in 1996 — is met.

The first and potentially most important decision is to be made in the United States, where the new administration of President George W Bush has launched what is reported to be a broad review of US policy toward the BWC Protocol.

Readers of the *Bulletin* will recall that, in what was said to be one of the most hotly contested non-proliferation decisions of the new Clinton Administration, the White House announced in September 1993 that the United States would support the negotiation of new measures to deter violation of the Convention and to strengthen compliance with it. Now, with the Protocol negotiation still underway, figures from earlier administrations are re-entering office, bringing with them their well known scepticism towards multilateral arms control agreements such as the BWC.

Participants in the Washington BWC Protocol review, some of whom have served on the US Ad Hoc Group delegation, will weigh the potential costs of the Protocol to US biodefence and antiterrorism programmes and to the US pharmaceutical and biotechnology industries against the potential benefits. It is not clear whether value is seen in the norm-setting function of the BWC itself, a function that may be weakened in regard to potential violators, both state and sub-state, if after all there is no Protocol. Furthermore, members of the US delegation have made no secret in Geneva of their desire for a change in the mandate for the negotiation.

The final decision on US policy is to be made at a more senior political level, where presumably there will be some sensitivity to the long-term security and foreign-policy implications of simply walking away from the negotiations. As a consequence, Washington observers expect a more nuanced approach — but one which may accomplish essentially the same end.

One possibility is that the new Bush administration will try to persuade AHG Chairman Tibor Tóth not to publish his long-awaited composite text in April. If this is indeed his

decision, the deadline for completion will not be met, as there will not be time enough to address the outstanding substantive and procedural issues between then and November.

If, on the other hand, Ambassador Tóth goes forward with the composite text, the Protocol's prospects in 2001 may well depend upon decisions taken by key Non-Aligned Movement (NAM) and other countries.

Nowhere is this more true than on the issue of export controls, which has pitted Iran and some other NAM countries against the USA and others in the West. Iran has heretofore argued that existing multilateral export controls on biological materials are discriminatory and that, if it is to support the Protocol, safeguards against their improper application must be incorporated. Continued adherence to this position would provide the Bush Administration with opportunity to shift the blame for the Protocol's failure away from Washington and on to the NAM.

However, a willingness to compromise — by Iran and the NAM on export controls, by Russia on definitions and thresholds, by China on declared information, by the West on BWC Article X measures, and, within the Western and the other main negotiating groups, on criteria for declarations — could provide Ambassador Tóth with the ability to fashion a final Protocol text that, while not 100 per cent acceptable to any single delegation, could command the support of the AHG as a whole.

Under such circumstances, the decision would again be Washington's to make: whether to take the lead with such a text, as an earlier Bush Administration had done for the CWC, thus strengthening the regime against bioweapons at state and sub-state levels, or to be responsible for the failure of the Protocol negotiations in 2001.

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FURTHER CHEMICAL CONTROL REGIMES: NARCOTIC DRUGS AND PSYCHOTROPIC SUBSTANCES

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In previous articles for the *CBW Conventions Bulletin*, the regimes for the control of transfers of “banned and severely restricted chemicals” — the Rotterdam Convention for Prior Informed Consent — and for the control of High Production Volume (HPV) chemicals have been considered and their potential relevance to the Chemical Weapons Convention regime explored.¹ This article continues this process by considering further control regimes for chemicals — those for narcotic drugs and psychotropic substances. These are also dual purpose chemicals as they have permitted medical uses as well as prohibited uses. They are also subject to international conventions requiring the monitoring of manufacture, production and international trade of such substances and of precursors and essential chemicals used in the illicit manufacture of narcotic drugs and psychotropic substances.

The control regimes for such drugs and psychotropic substances is of particular interest as the use of such materials for purposes other than those not prohibited under the Chemical Weapons Convention (CWC) — purposes not prohibited under the CWC are defined in *Article II Definitions and Criteria* as meaning:

- (a) Industrial, agricultural, research, medical, pharmaceutical or other peaceful purposes;
- (b) Protective purposes, namely those purposes directly related to protection against toxic chemicals and to protection against chemical weapons;
- (c) Military purposes not connected with the use of chemical weapons and not dependent on the use of the toxic properties of chemicals as a method of warfare;
- (d) Law enforcement including domestic riot control purposes.

— would be subject to the general purpose criterion of the CWC and, in the case of materials of natural origin, by the general purpose criterion of the Biological and Toxin Weapons Convention (BWC). Insofar as some narcotic drugs and psychotropic substances are the natural products of living material — or synthetically produced analogues of such natural products — they can be regarded as falling under both the CWC and the BWC.

The control of narcotic drugs has been of global concern ever since the first international conference on the subject was held in Shanghai in 1909. The international control system has been developed under a number of treaties starting in 1912 with the adoption of the International Opium Convention. During the past 40 years a series of treaties adopted under the auspices of the United Nations require that Governments exercise control over the production and distribution of narcotic drugs and psychotropic substances, combat drug abuse and illicit traffic, and maintain the necessary national infrastructure and report to international organs on their actions.

There are four legal instruments which constitute the international regime for narcotic drugs and psychotropic substances: the 1961 Single Convention on Narcotic Drugs; the 1971 Convention on Psychotropic Substances; the 1972 Protocol Amending the Single Convention; and the 1988 United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances.

The Single Convention on Narcotic Drugs 1961

This was adopted by states at a special international conference in 1961. It entered into force in 1964 after the deposit of the 20th instrument of ratification. This Convention replaced the treaties concluded before World War II on opiates, cannabis and cocaine. At present, control is exercised under this Convention of some 118 narcotic drugs, including opium and its derivatives, as well as synthetic narcotics such as methadone and pethidine. As of 2 January 2001, this Convention had 172 states parties.

The general obligations in *Article 4 General Obligations* require the parties to:

take such legislative and administrative measures as may be necessary:

- (a) To give effect to and carry out the provisions of the Convention within their own territories;
- (b) To cooperate with other States in the execution of this Convention; and
- (c) Subject to the provisions of this Convention, to limit exclusively to medical and scientific purposes the production, manufacture, export, import, distribution of, trade in, use and possession of drugs.

The substances under control are divided into four Schedules. To those familiar with the CWC Schedules, the schedules for the Single Convention are more complex. These are detailed in *Article 2 Substances under Control*:

Schedule I - these drugs are subject to all measures of control applicable under the Convention and in particular to those prescribed in certain Articles.

Schedule II - these drugs are subject to the same measures of control as drugs in Schedule I with the exception of measures presented in Article 30, paragraphs 2 and 5 in respect of retail trade.

Schedule III - these drugs are subject to the same measures of control as preparations containing drugs in Schedule II except that specific paragraphs of Article 31 and 34 need not apply and that for the purposes of estimates (Article 19) and statistics (Article 20), the information required shall be restricted to the quantities of the drugs used in the manufacture of such preparations.

Schedule IV — these drugs shall also be included in Schedule I and subject to all measures of control applicable to drugs in the latter Schedule and in addition thereto further measures should the State Party, in its opinion, require such measures.

The Convention also details specific measures, in addition to those applicable to all drugs in Schedule I, for opium, the coca leaf and cannabis.

A further requirement addresses substances that may be used in the illicit manufacture of drugs:

The Parties shall use their best endeavours to apply to substances which do not fall under this Convention, but which may be used in the illicit manufacture of drugs, such measures of supervision as may be necessary.

Consequently, Schedule IV contains the most highly controlled drugs, then Schedule I, then Schedule II and finally Schedule III. Schedule IV contains 17 drugs including several substituted fentanyls, cannabis and heroin, Schedule I contains 106 drugs (which include all the Schedule IV drugs) including coca leaf, cocaine, fentanyl, morphine, methadone, opium, pethidine and Schedule II contains 10 drugs including codeine. Schedule III contains preparations primarily of drugs in Schedule II containing not more than 100 milligrams of the drug per dosage unit and with a concentration of not more than 2.5 per cent in undivided preparations.

The arrangements for changes to the Schedules are addressed in *Article 3 Changes in the Scope of Control* which places the obligation on a state party or the World Health Organization (WHO) to notify the Secretary-General of the United Nations and to furnish him with the information in support of the notification, should it have information which in its opinion may require an amendment to any of the Schedules. The Secretary-General is then required to transmit such notification, and any information he considers relevant, to the states parties, to the Commission on Narcotic Drugs of the UN Economic and Social Council, and, where the notification has been made by a state party, to the World Health Organization. Article 3 contains the following:

3. Where the notification relates to a substance not already in Schedule I or II,

- (i) The Parties shall examine in the light of the available information the possibility of the provisional application to the substance of an [sic] measures of control applicable to drugs in Schedule I;
- (ii) Pending its decision as provided in subparagraph (iii) of this paragraph, the Commission may decide that the Parties shall apply provisionally to that substance all measures of control applicable to drugs in Schedule I. The Parties shall apply such measures provisionally to the substance in question.
- (iii) If the World Health Organization finds that the substance is liable to similar abuse and productive of similar ill effects as the drugs in Schedule I or Schedule II or is convertible into a drug, it shall communicate that finding to the Commission which may, in accordance with the recommendation of the World Health Organization, decide that the substance shall be added to Schedule I or Schedule II.

Article 3 goes on to make provision regarding assignment of drugs to Schedule IV by stating that:

5. If the World Health Organization finds that a drug in Schedule I is particularly liable to abuse and to produce ill effects (paragraph 3) and that such liability is not offset by substantial therapeutic advantages not possessed by substances other than drugs in Schedule IV, the Commission

may, in accordance with the recommendation of the World Health Organization, place that drug in Schedule IV.

The International Control Organs for the Convention are specified in Article 5 as being the Commission on Narcotic Drugs of the Economic and Social Council and the International Narcotics Control Board (INCB). The Commission is authorized to consider:

all matters pertaining to the aims of the Convention, and in particular:

- (a) To amend the Schedules in accordance with Article 3; ...

The INCB shall consist of 13 members to be elected by the Economic and Social Council of which three members having:

medical, pharmacological or pharmaceutical experience from a list of at least five persons nominated by the WHO

and ten members from:

a list of persons nominated by the Members of the United Nations and by Parties which are not Members of the United Nations.

Members of the INCB shall serve for a period of five years and may be re-elected.

Article 18 details the information to be provided by states parties to the Secretary-General as being:

such information as the Commission may request as being necessary for the performance of its functions, and in particular:

- (a) An annual report on the working of the Convention within each of their territories;
- (b) The text of all laws and regulations from time to time promulgated in order to give effect to this Convention; ...
- (d) The names and addresses of the government authorities empowered to issue export and import authorizations and certificates.

The Convention requires parties to submit annually estimates of drug requirements including the following:

- (a) Quantities of drugs to be consumed for medical and scientific purposes;
- (b) Quantities of drugs to be utilized for the manufacture of other drugs, of preparations in Schedule III, and of substances not covered by this Convention;
- (c) Stocks of drugs to be held as at 31 December of the year to which the estimates relate; ...
- (g) The number of industrial establishments which will manufacture synthetic drugs; and
- (h) The quantities of synthetic drugs to be manufactured by each of the establishments referred to in the preceding subparagraph.

The Convention also requires the submission of annual statistical returns including information on the following:

- (a) Production or manufacture of drugs;
- (b) Utilization of drugs for the manufacture of other drugs, of preparations in Schedule III and of substances not covered by this Convention, and utilization of poppy straw for the manufacture of drugs;
- (c) Consumption of drugs;
- (d) Imports and exports of drugs and poppy straw;
- (e) Seizures of drugs and disposal thereof;

- (f) Stocks of drugs as at 31 December of the year to which the returns relate;

Article 22 addresses the penal provisions required as follows:

1. (a) Subject to its constitutional limitations, each Party shall treat as a punishable offence, when committed intentionally, any action contrary to a law or regulation adopted in pursuance of its obligations under this Convention, and shall ensure that serious offences shall be liable to adequate punishment, particularly by imprisonment or other penalty of deprivation of liberty.

(b) Notwithstanding the preceding sub-paragraph, when abusers of psychotropic substances have committed such offences, the Parties may provide, either as an alternative to conviction or punishment or in addition to punishment, that such abusers undergo measures of treatment, education, after-care, rehabilitation and social reintegration in conformity with paragraph 1 of article 20.

whilst Article 23 enables a party to adopt more strict or severe measures of control than those provided by this Convention if, in its opinion, such measures are desirable or necessary for the protection of public health and welfare.

The Convention on Psychotropic Substances

This was adopted in 1971 and entered into force in 1976. It was intended to control drugs not covered by previous treaties such as hallucinogens, amphetamines, barbiturates, non-barbiturate sedatives and tranquilizers. Some 111 psychotropic substances are covered, most of them contained in pharmaceutical products acting on the central nervous system. The Convention also calls for substances that have been judged to be particularly dangerous, such as lysergic acid diethylamide (LSD) to be placed under even stricter control than narcotic drugs. It also calls for substances with very wide legitimate medical use to be controlled in a less stringent way not to hamper their availability for medical purposes but on the other hand to avoid their diversion and abuse. As of 2 January 2001, it had 166 states parties.

This Convention does not have an article containing general obligations but the aim of the Convention is apparent from the Preamble in which the parties:

Determined to prevent and combat abuse of such substances and the illicit traffic to which it gives rise,
Considering that rigorous measures are necessary to restrict the use of such substances to legitimate purposes,
Recognizing that the use of psychotropic substances for medical and scientific purposes is indispensable and that their availability for such purposes should not be unduly restricted,

The psychotropic substances are again assigned to four Schedules I, II, III and IV. In this case, Schedule I substances are subject to the most severe control measures and Schedule IV to the least severe control measures.

Schedule I These are required to be subject to the special control measures elaborated in Article 7 which require parties to:

- (a) Prohibit all use except for scientific and very limited medical purposes by duly authorized persons, in

medical or scientific establishments which are directly under the control of their Governments or specifically approved by them;

- (b) Require that manufacture, trade, distribution and possession be under a special licence or prior authorization;
- (c) Provide for close supervision of the activities and acts mentioned in paragraphs (a) and (b);
- (d) Restrict the amount supplied to a duly authorized person to the quantity required for his authorized purpose;
- (e) Require that persons performing medical or scientific functions keep records concerning the acquisition of the substances and the details of their use, such records to be preserved for at least two years after the last use recorded therein; and
- (f) Prohibit export and import except when both the exporter and importer are the competent authorities or agencies of the exporting and importing country or region, respectively, or other persons or enterprises which are specifically authorized by the competent authorities of their country or region for the purpose. The requirements of paragraph 1 of Article 12 for export and import authorizations for substances in Schedule II shall also apply to substances in Schedule I.

In addition, parties are required to:

- (i) Require licences for manufacture, trade and distribution as provided in Article 8 for substances in Schedule II;
- (ii) Require medical prescriptions for supply or dispensing as provided in Article 9 for substances in Schedule II;
- (iii) Comply with the obligations relating to export and import provided in Article 12, except in respect to another Party having given such notice for the substance in question;
- (iv) Comply with the obligations provided in Article 13 for substances in Schedule II in regard to prohibition of and restrictions on export and import;
- (v) Furnish statistical reports to the Board in accordance with paragraph 4 (a) of Article 16; and
- (vi) Adopt measures in accordance with Article 22 for the repression of acts contrary to laws or regulations adopted pursuant to the foregoing obligations.

Schedule II The requirements on parties are essentially the same as the Schedule I requirements — but without the special control measures in Article 7 — to:

- (i) Require licences for manufacture, trade and distribution in accordance with Article 8;
- (ii) Require medical prescriptions for supply or dispensing in accordance with Article 9;
- (iii) Comply with the obligations relating to export and import provided in Article 12, except in respect to another Party having given such notice for the substance in question;
- (iv) Comply with the obligations of Article 13 in regard to prohibition of and restrictions on export and import;
- (v) Furnish statistical reports to the Board in accordance with paragraphs 4 (a), (c) and (d) of Article 16; and
- (vi) Adopt measures in accordance with Article 22 for the repression of acts contrary to laws or regulations adopted pursuant to the foregoing obligations.

Schedule III The requirements on Parties are essentially the same as the Schedule II requirements — but without the requirements relating to import provided in Article 12 and to provide statistical reports — to:

- (i) Require licences for manufacture, trade and distribution in accordance with Article 8;
- (ii) Require medical prescriptions for supply or dispensing in accordance with Article 9;
- (iii) Comply with the obligations relating to export provided in Article 12, except in respect to another Party having given such notice for the substance in question;
- (iv) Comply with the obligations of Article 13 in regard to prohibition of and restrictions on export and import; and
- (v) Adopt measures in accordance with Article 22 for the repression of acts contrary to laws or regulations adopted pursuant to the foregoing obligations.

Schedule IV The requirements on parties are essentially the same as the Schedule III requirements — but without the requirements to require medical prescriptions or to comply with the obligations relating to export in Article 12 — to:

- (i) Require licences for manufacture, trade and distribution in accordance with Article 8;
- (ii) Comply with the obligations of Article 13 in regard to prohibition of and restrictions on export and import; and
- (iii) Adopt measures in accordance with Article 22 for the repression of acts contrary to laws or regulations adopted pursuant to the foregoing obligations.

Schedule I with the most highly controlled substances contains some 27 psychotropic substances including LSD, Schedule II contains 15 substances including amphetamine and phenylcyclidine, Schedule III contains 9 substances including several barbiturates and Schedule IV contains some 60 substances including other barbiturates and diazepam.

The arrangements for changes to the Schedules are in *Article 2 Scope of Control of Substances* which requires a party or the World Health Organization having:

information relating to a substance not yet under international control which in its opinion may require the addition of that substance to any of the Schedules of this Convention

to notify the Secretary-General of the United Nations and furnish him with the information in support of that notification. The same procedure also applies when a party or the WHO has information justifying the transfer of a substance from one Schedule to another among those Schedules, or the deletion of a substance from the Schedules. The Secretary-General shall transmit such notification, and any information which he considers relevant, to the parties, to the Commission on Narcotic Drugs of the Economic and Social Council and, when the notification is made by a party, to the WHO. If the information transmitted with such a notification indicates that the substance is suitable for inclusion in Schedule I or Schedule II pursuant to paragraph 4, the parties shall examine, in the light of all information available to them, the possibility of the provisional application to the substance of all measures of control applicable to substances in Schedule I or Schedule II, as appropriate. Paragraph 4 sets out the procedure for the WHO:

- 4. If the World Health Organization finds:
 - (a) That the substance has the capacity to produce
 - (i) (1) A state of dependence, and

(2) Central nervous system stimulation or depression, resulting in hallucinations or disturbances in motor function or thinking or behaviour or perception or mood,

or

(ii) Similar abuse and similar ill effects as a substance in Schedule I, II, III or IV, and

(b) That there is sufficient evidence that the substance is being or is likely to be abused so as to constitute a public health and social problem warranting the placing of the substance under international control,

the World Health Organization shall communicate to the Commission an assessment of the substance, including the extent or likelihood of abuse, the degree of seriousness of the public health and social problem and the degree of usefulness of the substance in medical therapy, together with recommendations on control measures, if any, that would be appropriate in the light of its assessment.

The Commission on Narcotic Drugs, taking into account the communication from the World Health Organization, may add the substance to Schedule I, II, III or IV. The Commission may seek further information from the World Health Organization or from other appropriate sources.

The Convention also includes provision in Article 23 for states parties to introduce stricter control measures if they consider this desirable or necessary:

A Party may adopt more strict or severe measures of control than those provided by this Convention if, in its opinion, such measures are desirable or necessary for the protection of the public health and welfare.

Article 8 Licences requires parties to ensure that:

the manufacture of, trade (including export and import trade) in, and distribution of substances listed in Schedules II, III and IV be under licence or other similar control measure.

In addition, the parties shall:

- (a) Control all duly authorized persons and enterprises carrying on or engaged in the manufacture of, trade (including export and import trade) in, or distribution of substances referred to in paragraph 1;
- (b) Control under licence or other similar control measure the establishments and premises in which such manufacture, trade or distribution may take place; and
- (c) Provide that security measures be taken with regard to such establishments and premises in order to prevent theft or other diversion of stocks.

Furthermore, the parties shall require that:

all persons who obtain licences in accordance with this Convention or who are otherwise authorized ... shall be adequately qualified for the effective and faithful execution of the provisions of such laws and regulations as are enacted in pursuance of this Convention.

Article 12 Provisions relating to International Trade and Article 13 Prohibition of and Restrictions on Export and Import set out the requirements in respect of import and export of psychotropic substances. Article 12 requires that for substances in Schedule I or II:

- (a) Every Party permitting the export or import of substances in Schedule I or II shall require a separate import or export authorization, on a form to be established by the Commission, to be obtained for each

such export or import whether it consists of one or more substances.

- (b) Such authorization shall state the international non-proprietary name, or, lacking such a name, the designation of the substance in the Schedule, the quantity to be exported or imported, the pharmaceutical form, the name and address of the exporter and importer, and the period within which the export or import must be effected. If the substance is exported or imported in the form of a preparation, the name of the preparation, if any, shall additionally be furnished. The export authorization shall also state the number and date of the import authorization and the authority by whom it has been issued.
- (c) Before issuing an export authorization the Parties shall require an import authorization, issued by the competent authority of the importing country or region and certifying that the importation of the substance or substances referred to therein is approved, and such an authorization shall be produced by the person or establishment applying for the export authorization.
- (d) A copy of the export authorization shall accompany each consignment, and the Government issuing the export authorization shall send a copy to the Government of the importing country or region.
- (e) The Government of the importing country or region, when the importation has been effected, shall return the export authorization with an endorsement certifying the amount actually imported, to the Government of the exporting country or region.

For substances in Schedule III the requirements are that:

- (a) The Parties shall require that for each export of substances in Schedule III exporters shall draw up a declaration in triplicate, on a form to be established by the Commission, containing the following information:
 - (i) The name and address of the exporter and importer;
 - (ii) The international non-proprietary name, or, failing such a name, the designation of the substance in the Schedule;
 - (iii) The quantity and pharmaceutical form in which the substance is exported, and, if in the form of a preparation, the name of the preparation, if any; and
 - (iv) The date of despatch.
- (b) Exporters shall furnish the competent authorities of their country or region with two copies of the declaration. They shall attach the third copy to their consignment.
- (c) A Party from whose territory a substance in Schedule III has been exported shall, as soon as possible but not later than ninety days after the date of despatch, send to the competent authorities of the importing country or region, by registered mail with return of receipt requested, one copy of the declaration received from the exporter.
- (d) The Parties may require that, on receipt of, the consignment, the importer shall transmit the copy accompanying the consignment, duly endorsed stating the quantities received and the date of receipt, to the competent authorities of his country or region.

Insofar as the prohibition of and restrictions on export and import are concerned, the provisions of Article 13 are that:

1. A Party may notify all the other Parties through the Secretary-General that it prohibits the import into its country or into one of its regions of one or more substances in Schedule II, III or IV, specified in its

notification. Any such notification shall specify the name of the substance as designated in Schedule II, III or IV.

2. If a Party has been notified of a prohibition pursuant to paragraph 1, it shall take measures to ensure that none of the substances specified in the notification is exported to the country or one of the regions of the notifying Party.
3. Notwithstanding the provisions of the preceding paragraphs, a Party which has given notification pursuant to paragraph 1 may authorize by special import licence in each case the import of specified quantities of the substance in question or preparations containing such substances.

The information to be provided by states parties is detailed in Article 16 and includes the following:

1. The Parties shall furnish to the Secretary-General such information as the Commission may request as being necessary for the performance of its functions and in particular an annual report regarding the working of the Convention in their territories including information on:
 - (a) Important changes in their laws and regulations concerning psychotropic substances; and
 - (b) Significant developments in the abuse of and the illicit traffic in psychotropic substances within their territories.
2. The Parties shall also notify the Secretary-General of the names and addresses of the governmental authorities referred to in sub-paragraph (f) of Article 7, in Article 12 and in paragraph 3 of Article 13. Such information shall be made available to all Parties by the Secretary-General. ...
4. The Parties shall furnish to the Board annual statistical reports in accordance with forms prepared by the Board:
 - (a) In regard to each substance in Schedules I and II, on quantities manufactured, exported to and imported from each country or region as well as on stocks held by manufacturers;
 - (b) In regard to each substance in Schedules III and IV, on quantities manufactured, as well as on total quantities exported and imported;
 - (c) In regard to each substance in Schedules 11 and III, on quantities used in the manufacture of exempt preparations; and
 - (d) In regard to each substance other than a substance in Schedule I, on quantities used for industrial purposes in accordance with sub-paragraph (b) of Article 4. The quantities manufactured which are referred to in sub-paragraphs (a) and (b) of this paragraph do not include the quantities of preparations manufactured.

The requirements for penal provisions are detailed in Article 22 and require that:

1. (a) Subject to its constitutional limitations, each Party shall treat as a punishable offence, when committed intentionally, any action contrary to a law or regulation adopted in pursuance of its obligations under this Convention, and shall ensure that serious offences shall be liable to adequate punishment, particularly by imprisonment or other penalty of deprivation of liberty.
- (b) Notwithstanding the preceding sub-paragraph, when abusers of psychotropic substances have committed such offences, the Parties may provide, either as an alternative to conviction or punishment

or in addition to punishment, that such abusers undergo measures of treatment, education, after-care, rehabilitation and social reintegration in conformity with paragraph 1 of Article 20.

2. Subject to the constitutional limitations of a Party, its legal system and domestic law,
 - (a) (i) If a series of related actions constituting offences under paragraph 1 has been committed in different countries, each of them shall be treated as a distinct offence;
 - (ii) Intentional participation in, conspiracy to commit and attempts to commit, any of such offences, and preparatory acts and financial operations in connexion with the offences referred to in this article, shall be punishable offences as provided in paragraph 1;
 - (iii) Foreign convictions for such offences shall be taken into account for the purpose of establishing recidivism; and
 - (iv) Serious offences heretofore referred to committed either by nationals or by foreigners shall be prosecuted by the Party in whose territory the offence was committed, or by the Party in whose territory the offender is found if extradition is not acceptable in conformity with the law of the Party to which application is made, and if such offender has not already been prosecuted and judgement given.
- (b) It is desirable that the offences referred to in paragraph 1 and paragraph 2 (a) (ii) be included as extradition crimes in any extradition treaty which has been or may hereafter be concluded between any of the Parties, and, as between any of the Parties which do not make extradition conditional on the existence of a treaty or on reciprocity, be recognized as extradition crimes; provided that extradition shall be granted in conformity with the law of the Party to which application is made, and that the Party shall have the right to refuse to effect the arrest or grant the extradition in cases where the competent authorities consider that the offence is not sufficiently serious.

The 1972 Protocol Amending the Single

Convention This has been in force since 1975 and highlights the need for treatment and rehabilitation of drug addicts. As of 2 January 2001, it had 161 states parties.

The United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances

This was adopted in 1988 and entered into force in 1990 is designed to prevent the laundering of money obtained from illicit trafficking and to provide concrete instruments for international law enforcement. As of 2 January 2001, it had 158 states parties.

The Convention includes provisions for the tracing, freezing and confiscation of proceeds and property derived from drug trafficking. Courts are empowered to make available or seize bank, financial or commercial records and bank secrecy cannot be invoked. The Convention also aims to bar all havens to drug traffickers and provides for the extradition of drug traffickers and for mutual legal assistance between states on drug-related investigations. In addition, under this Convention states parties commit themselves to eliminate or reduce illicit demand for drugs, monitor

precursors and essential chemicals used in the illicit manufacture of narcotic drugs and psychotropic substances.

Article 2 Scope of the Convention sets out the purpose of the Convention as being:

to promote co-operation among the Parties so that they may address more effectively the various aspects of illicit traffic in narcotic drugs and psychotropic substances having an international dimension. In carrying out their obligations under the Convention, the Parties shall take necessary measures, including legislative and administrative measures, in conformity with the fundamental provisions of their respective domestic legislative systems.

It then in Article 3 sets out offences under the Convention including:

1. Each Party shall adopt such measures as may be necessary to establish as criminal offences under its domestic law, when committed intentionally:
 - (a) (i) The production, manufacture, extraction, preparation, offering, offering for sale, distribution, sale, delivery on any terms whatsoever, brokerage, dispatch, dispatch in transit, transport, importation or exportation of any narcotic drug or any psychotropic substance contrary to the provisions of the 1961 Convention, the 1961 Convention as amended or the 1971 Convention;
 - (ii) The cultivation of opium poppy, coca bush or cannabis plant for the purpose of the production of narcotic drugs contrary to the provisions of the 1961 Convention and the 1961 Convention as amended;
 - (iii) The possession or purchase of any narcotic drug or psychotropic substance for the purpose of any of the activities enumerated in (i) above;
 - (iv) The manufacture, transport or distribution of equipment, materials or of substances listed in Table I and Table II, knowing that they are to be used in or for the illicit cultivation, production or manufacture of narcotic drugs or psychotropic substances;
 - (v) The organization, management or financing of any of the offences enumerated in (i), (ii), (iii) or (iv) above;

Article 12 Substances Frequently Used in the Illicit Manufacture of Narcotic Drugs or Psychotropic Substances sets out the following obligations:

1. The Parties shall take the measures they deem appropriate to prevent diversion of substances in Table I and Table II used for the purpose of illicit manufacture of narcotic drugs or psychotropic substances, and shall co-operate with one another to this end.

The Article sets out the measures to be taken in regard to the substances in Tables I and II. Whilst these generally apply equally to chemicals in both Table I and II, the substances in Table I are subject to the monitoring of exports.

Article 12 sets out measures to be taken to monitor the manufacture and distribution of substances in Table I and Table II:

- (a) Without prejudice to the generality of the provisions contained in paragraph 1 of this article and the provisions of the 1961 Convention, the 1961 Convention as amended and the 1971 Convention, the Parties shall take the measures they deem appropriate to monitor the

- manufacture and distribution of substances in Table I and Table II which are carried out within their territory.
- (b) To this end, the Parties may:
- (i) Control all persons and enterprises engaged in the manufacture and distribution of such substances;
 - (ii) Control under licence the establishment and premises in which such manufacture or distribution may take place;
 - (iii) Require that licensees obtain a permit for conducting the aforesaid operations
 - (iv) Prevent the accumulation of such substances in the possession of manufacturers and distributors, in excess of the quantities required for the normal conduct of business and the prevailing market conditions.

In addition, a system to monitor international trade is required:

Each Party shall, with respect to substances in Table I and Table II, take the following measures:

- (a) Establish and maintain a system to monitor international trade in substances in Table I and Table II in order to facilitate the identification of suspicious transactions. Such monitoring systems shall be applied in close co-operation with manufacturers, importers, exporters, wholesalers and retailers, who shall inform the competent authorities of suspicious orders and transactions.
- (b) Provide for the seizure of any substance in Table I or Table II if there is sufficient evidence that it is for use in the illicit manufacture of a narcotic drug or psychotropic substance.
- (c) Notify, as soon as possible, the competent authorities and services of the Parties concerned if there is reason to believe that the import, export or transit of a substance in Table I or Table II is destined for the illicit manufacture of narcotic drugs or psychotropic substances, including in particular information about the means of payment and any other essential elements which led to that belief.
- (d) Require that imports and exports be properly labelled and documented. Commercial documents such as invoices, cargo manifests, customs, transport and other shipping documents shall include the names, as stated in Table I or Table II, of the substances being imported or exported, the quantity being imported or exported, and the name and address of the exporter, the importer and, when available, the consignee.
- (e) Ensure that the documents referred to in subparagraph (d) of this paragraph are maintained for a period of not less than two years and may be made available for inspection by the competent authorities.

The additional measures relating to the export of substances in Table I are the following:

- (a) In addition to the provisions of paragraph 9, and upon request to the Secretary-General by the interested Party, each Party from whose territory a substance in Table I is to be exported shall ensure that, prior to such export, the following information is supplied by its competent authorities to the competent authorities of the importing country:
 - (i) address of the exporter and importer and, when available, the consignee;
 - (ii) Name of the substance in Table I;
 - (iii) Quantity of the substance to be exported;

- (iv) Expected point of entry and expected date of dispatch;
 - (v) Any other information which is mutually agreed upon by the Parties.
- (b) A Party may adopt more strict or severe measures of control than those provided by this paragraph if, in its opinion, such measures are desirable or necessary.

The substances in Table 1 and Table II, including the amendments made by the Commission on Narcotic Drugs in force on 23 November 1992 are as follows:

Table I	Table II
N-acetylantranilic acid	Acetic anhydride
Ephedrine	Acetone
Ergometrine	Anthranilic acid
Ergotamine	Ethyl ether
Isosafrole	Hydrochloric acid
Lysergic acid	Methyl ethyl ketone
3,4-methylene-dioxyphenyl-2-propanone	Phenylacetic acid
1-phenyl-2-propanone	Piperidine
Piperonal	Potassium permanganate
Pseudoephedrine	Sulphuric acid
Safrole	Toluene
The salts of the substances listed in this Table whenever the existence of such salts is possible	The salts of the substances listed in this Table whenever the existence of such salts is possible (the salts of hydrochloric acid are specifically excluded)

Provisions are also included in this Article for the amendment of the Tables:

2. If a Party or the [International Narcotics Control] Board has information which in its opinion may require the inclusion of a substance in Table I or Table II, it shall notify the Secretary-General and furnish him with the information in support of that notification. The procedure described in paragraphs 2 to 7 of this article shall also apply when a Party or the Board has information justifying the deletion of a substance from Table I or Table II, or the transfer of a substance from one Table to the other.
3. The Secretary-General shall transmit such notification, and any information which he considers relevant, to the Parties, to the Commission [on Narcotic Drugs], and, where notification is made by a Party, to the Board. The Parties shall communicate their comments concerning the notification to the Secretary-General, together with all supplementary information which may assist the Board in establishing an assessment and the Commission in reaching a decision.
4. If the Board, taking into account the extent, importance and diversity of the licit use of the substance, and the possibility and ease of using alternate substances both for licit purposes and for the illicit manufacture of narcotic drugs or psychotropic substances, finds:
 - (a) That the substance is frequently used in the illicit manufacture of a narcotic drug or psychotropic substance;
 - (b) That the volume and extent of the illicit manufacture of a narcotic drug or psychotropic substance creates serious public health or social problems, so as to warrant international action, it shall communicate

to the Commission an assessment of the substance, including the likely effect of adding the substance to either Table I or Table II on both licit use and illicit manufacture, together with recommendations of monitoring measures, if any, that would be appropriate in the light of its assessment.

5. The Commission, taking into account the comments submitted by the Parties and the comments and recommendations of the Board, whose assessment shall be determinative as to scientific matters, and also taking into due consideration any other relevant factors, may decide by a two-thirds majority of its members to place a substance in Table I or Table II.

Finally, Article 12 includes an exclusion of its provisions from pharmaceutical preparations:

14. The provisions of this article shall not apply to pharmaceutical preparations, nor to other preparations containing substances in Table I or Table II that are compounded in such a way that such substances cannot be easily used or recovered by readily applicable means.

Article 14 entitled *Measures to Eradicate Illicit Cultivation of Narcotic Plants and to Eliminate Illicit Demand for Narcotic Drugs and Psychotropic Substances* includes the following provisions:

1. Any measures taken pursuant to this Convention by Parties shall not be less stringent than the provisions applicable to the eradication of illicit cultivation of plants containing narcotic and psychotropic substances and to the elimination of illicit demand for narcotic drugs and psychotropic substances under the provisions of the 1961 Convention, the 1961 Convention as amended and the 1971 Convention.
2. Each Party shall take appropriate measures to prevent illicit cultivation of and to eradicate plants containing narcotic or psychotropic substances, such as opium poppy, coca bush and cannabis plants, cultivated illicitly in its territory. The measures adopted shall respect fundamental human rights and shall take due account of traditional licit uses, where there is historic evidence of such use, as well as the protection of the environment.
3. (a) The Parties may co-operate to increase the effectiveness of eradication efforts. The Parties may agree on any other appropriate measures of co-operation. ...

Article 20 Information to be Furnished by the Parties requires that:

1. The Parties shall furnish, through the Secretary-General, information to the Commission on the working of this Convention in their territories and, in particular:
 - (a) The text of laws and regulations promulgated in order to give effect to the Convention; ...

Appreciation

The central aim of these conventions is to limit the supply of and demand for narcotic drugs and psychotropic substances to medical and scientific needs. The measures of control prescribed by the three conventions vary in strictness from one group of drugs to another. For this purpose, drugs and chemicals are listed in various schedules annexed to the conventions according to the differences in their dependence-producing properties, therapeutic value and risk

of abuse, or in the case of chemicals, in relation to the impact the control measures would have on permitted commercial trade and on their availability for illicit use.

The Commission on Narcotic Drugs This is a subsidiary body of the Economic and Social Council of the United Nations. The Commission has the power to determine whether a new drug or chemical should be listed or whether a listed drug should be transferred to another schedule or deleted. In doing so, it must take into account the findings and recommendations of the World Health Organization with respect to drugs and the International Narcotics Control Board with respect to chemicals. The Commission prepares comprehensive reports on its sessions that are available on the internet as part of the Official Records of the Economic and Social Council. These reports include a chapter on the implementation of the international drug control treaties.

The International Narcotics Control Board This is the independent and quasi-judicial control organ for the implementation of the United Nations drug conventions, established in 1968 by the 1961 Single Convention and replacing preceding international treaty bodies in the drug control field. The responsibility of the INCB is to promote government compliance with the provisions of the drug control treaties and to assist them in this effort. It carries out tasks in two broad areas:

- a. With regard to permitted manufacture and trade in drugs, the INCB seeks to ensure that adequate supplies are available for medical and scientific uses and that leakage to illicit traffic does not occur. This is achieved by the estimates system for narcotic drugs and a voluntary assessment system for psychotropic substances with the cultivation, production and trade in drugs being monitored through a statistical returns system. In addition, the INCB also monitors government control over chemicals used in the illicit manufacture of drugs and assists governments in preventing diversion of these chemicals into illicit traffic.
- b. The INCB identifies weaknesses in national and international drug control systems and helps remedy those situations. The INCB is also responsible for assessing new chemicals found to be used in the illicit manufacture of drugs for possible international control. In cases where the INCB finds that Governments are not meeting their treaty obligations, it urges them to adopt remedial measures, and it may bring treaty violations to the attention of the States Parties, the Commission on Narcotic Drugs and the Economic and Social Council.

In accordance with the requirements in the conventions, the INCB prepares an annual report on its work containing an analysis of the information at its disposal. Interestingly all three conventions include language requiring the unrestricted distribution of the reports of the INCB. For example the 1988 Convention states in Article 23 that:

The reports of the Board shall be communicated to the Parties and subsequently published by the Secretary-General. The Parties shall permit their unrestricted distribution.

The INCB annual report and its supplements, available via <http://www.incb.org/>, provides a comprehensive survey of

the drug control situation in various parts of the world. As an impartial body, the INCB seeks to identify and predict dangerous trends and suggests necessary measures to be taken. Its annual report includes a section entitled "Operation of the international drug control system" which reviews the status of adherence to the treaties and cooperation with governments during the previous year to implement the drug control system. The annual report is supplemented by technical reports on narcotic drugs and psychotropic substances giving a detailed account of estimates of annual legitimate requirements in each country as well as data on the permitted production, manufacture, trade and consumption of these drugs worldwide.

The annual report is supplemented by the report to the Commission on Narcotic Drugs which contains an analysis of measures governments have taken against the diversion of precursors and essential chemicals and trends in illicit trafficking in such substances.

The UN Drug Control Programme (UNDCP) was founded in 1991 and has the following main objectives:

- a. To provide effective leadership for all UN drug control initiatives
- b. To anticipate and help to prevent developments that could aggravate illicit drug production, trafficking and abuse
- c. To be a world wide centre of expertise and repository of information in all fields of drug control
- d. To assist the CND and INCB in implementing their treaty functions
- e. To provide technical assistance to help Governments to establish adequate drug control structure and strategies, as well as technical cooperation in the different fields of drug control.

The UNDCP budget document for 1998–99, available via www.undcp.org, includes information on a total of 295 ongoing projects divided into four main areas: Policy support, legislation and advocacy; Prevention and reduction of drug abuse; Elimination of illicit crops; and Suppression of illicit drug trafficking. The budget for 1998–99 was some \$218 million; most of this (about three-quarters) is earmarked by the donor governments for specific projects.

Conclusions

The three drug conventions together control a significant number of narcotic drugs (118), psychotropic substances (111) along with precursors and essential chemicals (22) used in the illicit manufacture of narcotic drugs and psychotropic substances. The number of parties to all three conventions is close to 160 and it is evident that states continue to accede to them as a result of the efforts of the INCB to further the aims of the treaties and achieve universality.

The narcotic drugs, psychotropic substances, precursors and essential chemicals are assigned to Schedules or Tables which are associated with various control measures. The materials controlled are all dual purpose with the conventions and the INCB seeking to limit the cultivation, production, manufacture and use of drugs to an adequate amount required for medical and scientific purposes whilst preventing illicit cultivation, production and manufacture of, and illicit traffic in and use of drugs. The essential chemicals

controlled under the 1988 Convention include materials such as acetic anhydride and potassium permanganate, key chemicals in the manufacture of heroin and cocaine respectively, although the quantities diverted for illicit drug production is very much less than 1 per cent of the permitted use of these chemicals.

The control measures include both national monitoring and controls as well as export and import measures. One of the provisions under Article 13 of the 1971 Convention on Psychotropic Substances enables states parties to notify the prohibition of the importation of specific substances in Schedules II, III or IV of the Convention. 24 of the states parties have used this notification procedure for the prohibition of the importation of several substances; for example, India has prohibited 31 substances and Pakistan 34. Export and import authorizations are required by national legislation for all substances in Schedule III of the 1971 Convention by 150 countries and for all substances in Schedule IV of that Convention by some 140 countries.

The annual report of the INCB together with its supplements is a much sharper and more pointed document than is usual in annual reports of international organizations. This doubtless reflects the independent nature of the INCB which, for example, in its annual report names the states which have not acceded to the individual conventions or, in the case of the Single Convention of 1961 have yet to accede to the Convention as amended by the 1972 Protocol. It also does not hesitate to name states parties which have shortcomings in regard to their implementation of particular aspects of the Conventions.

In the context of the chemical and biological weapons conventions, many of the substances controlled under the three drug conventions are chemicals of biological origin and would also be covered by the general purpose criteria in either or both the CWC and the BWC in respect of uses prohibited under these conventions. It is evident that the substances controlled under the drug conventions are dual-purpose materials and that the associated export-import control regimes are intended increasingly to enable the exporting country to seek validation of the import request by the authorities of the importing countries before authorising the export. It is thus very clear that this is yet another area in which the global trend is towards greater control of exports and imports.

A number of different dual-use material regimes now exist — such as those for chemical warfare agents and precursors; banned and severely restricted chemicals; pathogens and genetically modified organisms; and narcotic drugs and psychotropic substances. It is evident that all show that the monitoring and control of exports and imports in dual-use materials is becoming the standard as more and more countries around the world want to safeguard the public health and the environment and thereby promote safety, security and prosperity. The trend is increasingly towards more controls over potentially harmful materials to ensure that these are not misused to cause harm to people or to states.

Taking the wider scene into consideration, it is evident that the trend is increasingly — whether chemicals, biological organisms or drugs and psychochemicals are concerned — towards a world in which governments want

to be consulted prior to potentially dangerous dual use materials and equipment being introduced into their country and the exporting governments equally want to be assured that the export is for legitimate purposes and is not going to be misused. It is probable that some 20 to 25 years hence it would be regarded as irresponsible to transfer any potentially dangerous dual use materials and equipment without first receiving confirmation from the importing country that the transfer is for legitimate purposes. Such a situation would certainly meet the obligations placed on states parties under the relevant Articles of the CWC and BWC not to transfer chemicals or biological agents and toxins for prohibited purposes.

Reference

1. Graham S Pearson, 'The CWC General Purpose Criterion: How to Implement?', *CBW Conventions Bulletin*, no 49, September 2000, pp 1–7 and Graham S Pearson, 'Toxic Chemicals: A Multilateral Export–Import System', *Chemical Weapons Convention Bulletin*, no 34, December 1996, pp 1, 3–8.

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Progress in The Hague

Quarterly Review no 33

Developments in the Organization for the Prohibition of Chemical Weapons

The period under review, from late December 2000 until early March 2001 was dominated by discussion of the budget of the Organization for the Prohibition of Chemical Weapons (OPCW) and the programme of work of its Secretariat for 2001. The two main difficulties encountered were a cash flow problem and the identification of several structural problems in the budget, especially in relation to reimbursements under Article IV and VI.

A large shortfall in the 2000 budget and forecasted underfunding for the 2001 programme of work, resulting from a convergence of numerous factors, both internal and external, was revealed in the first weeks of the year and intensive efforts were undertaken to address deficiencies in the process by which the OPCW budget is constructed and approved. The Secretariat's response to the financial situation included the imposition of austerity measures designed to bring the programme of work in line with the funds available; consequently, reductions in verification and international cooperation activities, as well as in other areas, were implemented during the period under review.

The Organization gained two further members following the ratifications by Zambia and Dominica of the Chemical Weapons Convention (CWC). Both the Southern African Development Community (SADC) and the Organization of Eastern Caribbean States (OECS), regional organizations to which Zambia and Dominica belong, were the focus of Secretariat outreach and international cooperation programmes in 2000. By mid-March, after entry into force of the Convention for these two countries, the Convention would have 143 states parties and 31 signatories. The 1972 Biological and Toxin Weapons Convention (BWC) also has 143 states parties, 115 of which it shared with the CWC.

In addition, the OPCW hosted the "International Symposium on Cooperation and Legal Assistance for the Effective Implementation of International Agreements" during 7–9 February. This represented one of the first opportunities for individuals from government agencies, international organizations, national police forces, and the academic community, concerned with the prevention and

prosecution of international crime, to come together to discuss the penal enforcement of international treaties like the CWC. The proceedings included a presentation of the Harvard Sussex Program *Draft Convention to Prohibit Biological and Chemical Armament Under International Criminal Law* by HSP Director Mathew Meselson.

Executive Council

The twenty-third session of the Executive Council met during 20–23 February.

The Council also met in informal sessions during the period under review. The first such meeting took place on 26 January — following a briefing given to Council members by the Director-General on 17 January — and addressed the financial situation of the Organization including matters relating to the 2000, 2001, and 2002 budgets. Informal consultations on the 2001 budget led by coordinator Mark Albon (South Africa), critical because of the austerity measures applied by the Secretariat, continued on 12 February. An additional informal meeting was convened on 19 February to discuss progress on chemical weapons destruction and the destruction and conversion of chemical weapon production facilities (CWPFs). The next informal meeting on the same topic was scheduled to take place on 2 April, and similar meetings were planned for three additional occasions during 2001.

In his opening statement to the Council, the Director-General warned against the degradation of the Organization's programme of work — especially as regards the verification regime and international cooperation — resulting from the current impasse over the Organization's budget and finances. He highlighted four challenges facing the Organization in the immediate future:

- universal membership to the treaty, especially in Northeast Asia and the Middle East where adherence to the CWC could play an important role mitigating the ongoing violence and tension in those regions;

- maintaining the credibility of the verification regime, which had been under challenge by states parties wishing to limit the access accorded to inspection teams with regard to plant sites and documentation;
- the destruction of chemical weapons in Russia; and
- the financial situation of the Organization.

The Director-General noted that additional funding to carry out the full programme of work for 2001 and in the future could only be provided by the member states. A decision on the budget would be imperative at the Council's twenty-fourth session in April.

The Council was briefed by the relevant coordinators on the status of the clusters of issues subject to ongoing consultations. Mark Albon (South Africa) reported on the status of consultations on chemical weapons issues, including guidelines for old and abandoned chemical weapons, a topic on which the Council remained deadlocked. Armin Andereya (Chile) spoke about those topics included under chemical industry and other Article VI issues, such as the frequency of inspections of Schedule 2 plants sites, the transfer of Schedule 3 chemicals to non states parties, low concentrations, rounding rules for Schedule 1 chemicals, production limits, and the declaration of Schedule 2 and 3 chemicals. Dorian Mihai (Romania) briefed the Council on administrative and financial issues, and Amir A. Shadani (Pakistan) reported on legal, organizational and other issues, including the status of draft proposals for the implementation of Article XI. All of the issues within each cluster will continue to be discussed during the next intersessional period.

Status of Implementation of the Convention A meeting on transfers of Schedule 2 and 3 chemicals, convened in order to address discrepancies in the declarations of importing and exporting countries, took place on 17 January. As emphasised by the Director-General in his opening statement to the Council at its twenty-first session, the amounts of chemicals declared by the respective parties do not correspond in 70–80 per cent of declarations. Reasons for these discrepancies identified by the Secretariat include offshore transactions, clerical errors, different calculation methods, and customs-related difficulties (such as free-trade areas).

Destruction of Chemical Weapons The Russian delegation informed the Council of the designation of the Munitions Agency as the country's National Authority and communicated to the Council that a comprehensive plan for the destruction of its chemical weapons stockpiles was currently under review; it would be submitted to the Council during the second quarter of 2001. This plan would not include the use of mobile destruction units, as previously proposed, and would provide for the construction of three chemical weapons destruction facilities (CWDFs — at Gorny, Shchuch'ye, and Kambarka) as opposed to seven. Priority would be given to completion of the CWDF in Gorny, for which the government allocation in 2001 is RR1.1 billion. The importance of continuing work on the construction of a CWDF in Shchuch'ye, with primary assistance from the United States, was also highlighted, and the Russian dedication of RR732 million toward the project

noted. The Shchuch'ye facility would be used to destroy munitions that were being stored at Shchuch'ye and at various other locations throughout the country. Russia was confident that the shipment of these materials could be undertaken in a safe manner. Although the country has significantly increased its budgetary allocation for chemical disarmament — the amount now totals RR3 billion — Russia stressed the need for international financial assistance in order to achieve full implementation. Russia reminded the states parties of the decision of the fifth session of the Conference on this matter.

The Council considered the detailed plan for the verification of phase 1 of the destruction of Category 2 chemical weapons at the Shchuch'ye CWDF, and requested that phase 2 plans be submitted as soon as possible. This issue had been under consideration by the Council since its twenty-first session in June 2000, and was again deferred to the Council's next session in April. The Russian delegation proposed that construction of the facility could be completed by 2004 and the stocks of Category 2 chemical weapons would be destroyed by 2007.

Destruction/Conversion of CWPFs The Council considered the combined plans for phase 1 destruction and verification of a CWPF in Volgograd, Russia. The plans provided for destruction to be completed early in 2002. The facility was previously (before 1987) used for the filling of toxic chemicals into munitions and the Secretariat has carried out a total of five inspections of the facility. The plans will be further considered by the Council at its twenty-fourth session in April.

A state party of withheld identity submitted to the Council's twenty-third session combined plans for the destruction and verification of a CWPF on its territory. On-site inspections of this facility were held in both April and November 2000. The Council considered and approved these plans.

The Council also approved detailed plans for the conversion of a CWPF, Orgsteklo, at Dzerzhinsk in Russia and recommended that the Conference of the States Parties authorise the project at its sixth session in May. The Secretariat initially inspected this facility in March 1998, at which time Russia provided documents confirming that all specialised equipment had been destroyed in 1991. Since 1991, the facility has been used for non-prohibited purposes. Also under consideration, was the Russian request for the conversion of a facility at Novocheboksarsk that produced aminomercaptan. This request had been originally submitted to the Council at its twenty-second session and was subsequently referred to the Council at its twenty-third session. The Council decided to return to this request at its twenty-fourth session in April.

An additional state party of withheld identity also notified the OPCW of changes in chemical process equipment at a converted facility; no member of the Council objected to the actions taken.

New Validated Data for Inclusion in the Central OPCW Analytical Database The Council adopted the list of new validated data for inclusion in the Central OPCW Analytical Database, formulated by the Validation Group at

its eighth meeting. Further, the Council requested the Secretariat to include the Chemical Abstracts Service (CAS) registry numbers for the listed chemicals.

The Validation Group for its eighth meeting during 28–29 November 2000. The report of the meeting cited the requirement that, as of 1 January 2001, laboratories contributing to the database must submit both hard-copy and electronic versions of spectra for evaluation. The formats for analytical data submitted in electronic form remain the same. The first electronic version of the database, containing 521 mass spectra, was to be distributed in early 2001.

The evaluators recommended the modification of identification codes to distinguish the vapour and condensed phases of data. The recommendation was being considered further.

The Validation Group's ninth meeting is scheduled to take place during 13–14 March.

Financial and Administrative Issues On 17 January, the Director-General informed member states that the OPCW faced a serious financial crisis, resulting from a cash flow problem and underfunding of the 2001 budget. He made clear that under these circumstances the Secretariat would be unable to fully implement the programme of work as approved by the Conference of the States Parties for the year 2001. The cash flow problem resulted from a variety of factors, including a shortfall of nearly NLG 7 million in the 2000 budget. The projected budgetary deficit for 2001 was between EUR 6 and 7 million. The Director-General had, on a number of previous occasions, warned the Council of the consequences of budgetary underfunding. Also, some states parties had failed to pay their assessed contributions. A more fundamental structural problem relates to the way in which the OPCW budget allows for the reimbursement of verification costs under Article IV and V. These problems had previously not been apparent. But as spending in other areas increasingly resembled the actual budget appropriation, the structural deficiencies finally caught up with the Organization.

On 26 January, at the informal meeting of the Council, the Director-General outlined the cutbacks or "austerity measures" being imposed on the Secretariat's programme of work in order to bring the Secretariat's activities in-line with projected funds available in 2001 (unless supplementary funding could be found). The measures announced by the Director-General included the cancellation of the first national authority training course for 2001, originally scheduled to begin in March. Most worrying to the member states were announced cutbacks in verification and inspection activities, especially plans to reduce personnel levels at CWDFs and a drastic reduction in planned industry inspections for 2001 (25 as opposed to the 139 such inspections conducted in 2000).

At the 12 February informal consultations on budgetary issues and at the twenty-third session of the Council itself, the Secretariat further explained the deficiencies in the structure of the present budget related to reimbursements under Articles IV and V. For example, payments in relation to such verification activities inevitably arrived too late. Furthermore, the adopted budget contained overestimates of the anticipated costs of these verification activities and thus

the income expected from reimbursements was higher than that actually invoiced and/or received. The result was that these activities drained the Organization's finances because they included certain statutory costs that the Organization was obligated to pay even if the monies in question were never collected from the responsible states parties. In order to remedy the situation for 2001, and to avoid similar situations in the future, the Secretariat proposed a plan of action.

Under the Secretariat's proposal, some states parties would be issued revised letters of assessment for the 2001 budget, based on the full and not net calculations. Fifty states parties had originally been sent a net assessment, comprised of their full assessment minus the refund of their share of the 1998 surplus. If all member states were to pay their gross (i.e., the full) assessments, then the Secretariat could recover nearly the entire budgetary deficit for 2001, leaving only a EUR 1.51 million shortfall in the regular budget fund. The Secretariat suggested that the remaining monies could be contributed by member states either as part of a supplemental budget or in response to a special appeal from the Director-General.

The Secretariat also proposed a number of amendments to the OPCW financial regulations. One of these would allow for any surpluses from previous years to be held by the Secretariat, and not refunded to the states parties, pending the receipt of contributions. Every year until 2000 had seen a budgetary surplus, but as the budgets remained static and implementation of the approved programme of work increased, it was inevitable that a budget surplus would not continue to be the norm. Past surpluses, which in 2000 were refunded to states parties, had previously provided the Secretariat with a "cushion" from which to draw funds when states parties were tardy in paying their assessments.

To address the longer-term systemic problems within the OPCW budget structure, the Secretariat suggested the consideration of additional measures. These included, *inter alia*, changes to the budgetary cycle, removing the financing of Article IV and V inspections entirely from the regular budget, and an increase in the Working Capital Fund.

During Council debate, delegations urged the Secretariat to minimise cuts in operational programmes while the budgetary problems were being resolved. The Council was not able to make a recommendation, however, during the period under review. A recommendation must be made to the sixth session of the Conference of the States Parties by the Council at its twenty-fourth session in order to fully reconcile the Organization's finances in 2001, and to reconfigure the Organization's budget process and structure so that the current situation can be avoided in the future.

As of 28 February, six states parties owed a total of EUR 3.5 million in reimbursement of verification costs incurred through the end of 2000 under Articles IV and V of the Convention.

As of 13 March, only 50 member states had paid in full the amounts initially assessed to them under the 2001 budget. A number of member states had made partial payments, including the United States, which as the largest contributor had paid about EUR 7 million or half of its net assessment. Only 19 states parties that currently sit on the Executive Council had fully paid the amounts assessed to

them for 2001. Twenty-two states parties had paid neither their 1998 nor 1999 assessments, and an additional 14 did not pay in 1999 and 2000, all 36 would lose their vote in the Organization in 2001 if payments were not promptly made.

The Council also considered the report of the ninth session of the ABAF, details of which can be found below. It was, however, not able to conclude its twenty-third session and no definitive decisions or recommendations were made with regard to either the cash flow or budgetary problems. The Council will no doubt return to these issues at its twenty-fourth session in April, together with consideration of the *Draft Programme and Budget for 2002* and the *Draft Medium-Term Plan for 2003-2005*, which have already been presented to the Council, prior to its twenty-third session. Informal consultations on the programme and budget for 2002 and all budgetary matters would continue during the intersessional period.

Recommendations of the Advisory Body on Administrative and Financial Matters (ABAF) The ABAF held its ninth session during 8–12 January. It considered numerous budgetary issues, including the programme and budget for 2000, the draft programme and budget for 2002 and the draft medium-term plan 2003-2005.

It cited an anticipated deficit of NLG 7.5 million in the 2000 budget, resulting from a reliance on reimbursements under Articles IV and V and the 1999 surplus. The ABAF made a series of important recommendations designed to mitigate the effects of the recent budgetary shortfall and preempt any similar situation in the future — i.e., changing the budget cycle to begin the financial year later in the calendar year, thus granting more time for the assessments from states parties to accrue. ABAF also noted that implementing the second job classification study would result in a significant reduction in expenditures.

The ABAF recommended a EUR 5 million cut in the proposed 2002 budget — currently about EUR 75 million — and decided to further consider the budget at its tenth session.

The ninth session also considered the *Draft Medium-term Plan For 2003–2005*. The plan calls for increases in the number of inspections and inspector posts — Article VI inspections would increase to 250 per year by 2003. Further expansion and regionalisation of the OPCW Associate Programme and legal assistance projects were also emphasised; furthermore, design and maintenance of the Web site and a regular liaison with the United Nations in New York were given priority.

The tenth session of the ABAF is scheduled for 26–29 March.

Recommendations of the Scientific Advisory Board The Council considered the report by the facilitators on the recommendations of the Scientific Advisory Board (SAB) regarding chemical industry and other Article VI issues, and further considered both the report of the third session of the SAB and the Director-General's note on the report. The facilitators had reported that the meeting of government experts supported the SAB findings and concluded that no decisions were required by the Conference as the SAB findings were self-evident. The SAB had concluded that

Adamsite (DM), a non-scheduled toxic chemical, should no longer be considered suitable as a riot control agent. If states parties decided to consider it for such purposes, the quantities would need to be consistent with this use. The Director-General had concluded that since Adamsite had no other legitimate uses except for research, larger stocks would need to be destroyed in accordance with the provisions on old and abandoned chemical weapons. In the Executive Council debate, Russia took issue with this conclusion and declared their Adamsite was not covered under the Convention and it was not in the Schedules. Others supported the Director-General's conclusions and considered them a useful clarification of the Convention's provisions. Another SAB recommendation related to analytical procedures. Discussion of the proposals was deferred as the Council continues to discuss technical issues related to sampling procedures.

Report of the Special Session of the Confidentiality Commission The Council noted the report of the Confidentiality Commission's special session, held 17–18 January. Some of the report's recommendations can be found below.

Use of Official Languages The Council reviewed progress made on this item during the intersessional consultations and decided to revisit the issue at its twenty-fourth session, with the intention of adopting a decision at that time.

Provisional Agenda of the Sixth Session of the Conference of the States Parties The council drafted a provisional agenda for the sixth session of the Conference. Included on the agenda, in addition to the numerous administrative tasks (such as the election of chairman, vice-chairman and Executive Council members, the programme and budget for 2002), were all budgetary issues faced by the Organization, the fostering of international cooperation for peaceful purposes in the field of chemical activities, and ensuring universality of the Convention.

Other Business The Director-General reported to the Council that 38 members of the Executive Council had presented their credentials to the Secretariat. The Secretariat was awaiting the appointment of new permanent representatives by Algeria, Mexico, and South Africa. The Director-General also briefed the Council on the status of implementation of the OPCW Headquarters Agreement, and cited that progress had been made on many of the outstanding issues.

Other issues brought to the fore over the last few months but not up for discussion during the Council session included: challenge inspections, facility agreements, industry verification issues, the OPCW Provident Fund, and classification of posts within the Organization.

The session ended without the adoption of a report. It was expected that a report would be adopted prior to the opening of the twenty-fourth session of the Council on 3 April; those actions agreed upon by the Council, however, could move forward in the interim. Meanwhile, the Council remained officially in session.

The *Draft Programme and Budget for 2002*, the *Draft Medium-Term Plan for 2003–2005*, and any proposals for a supplementary budget for 2001 will also be discussed by the Council at its twenty-fourth session. Also to be discussed are a draft report on the activities of the Executive Council over the previous year and the draft OPCW annual report for the year 2000. All of these will be submitted to the sixth session of the Conference in May.

The twenty-fourth session of the Council is scheduled for 3–6 April.

Action by Member States

Zambia and Dominica deposited their instruments of ratification to the CWC with the UN Secretary-General during the period under review, on 9 and 12 February respectively. With Zambia's ratification, only two members of the SADC — the Democratic Republic of the Congo is a signatory while Angola is neither a state party nor a signatory — remain outside of the CWC. A legislative workshop for the SADC and the Southern African region was organized by the Secretariat in Mbabane, Swaziland in November 2000. The workshop enjoyed wide participation from all states in the region, including Zambia.

Dominica is a member state of the 9-member OECS, which cooperated with the Secretariat last year in drafting integrated implementing legislation for the CWC. St Lucia is the only other OECS country to have ratified or acceded to the Convention so far. The Convention will enter into force for Zambia on 11 March and for Dominica on 14 March. These actions brought the total number of states parties, as of 14 March, to 143; the number of signatories stood at 31.

Moves toward accession or ratification had also been noted in the legislatures of other countries, both in Africa and Asia. It was hoped that these processes would be completed prior to the Conference in May.

Secretariat

Declaration Processing As of 1 March, initial declarations had been received from 138 states parties. Three initial declarations were still outstanding, all from those states that most recently became members of the Organization — Mozambique, Kiribati and the United Arab Emirates. During the period under review, three states parties — Gabon, Jamaica and Yemen — submitted their initial declarations to the Secretariat. Zambia and Dominica are both due to make their initial declarations in mid-April.

Inspections and Verification As of 2 March, 936 inspections had been completed or were ongoing at 446 sites in 49 states parties, including inspections of chemical weapons and chemical weapons-related facilities in Bosnia-Herzegovina, China, France, India, Iran, Japan, Russia, UK, the United States and two other states parties. The breakdown of inspections is as follows: 16 to ACW sites; 207 to CWDFs; 202 to CWPFS; 124 to CWSFs; 35 to OCW sites; 81 to Schedule 1 facilities; 154 to Schedule 2 plant sites; 65 to Schedule 3 plant sites; and 51 to DOC plant sites.

OPCW inspectors have spent a total of 82,262 days on mission.

Reductions in personnel monitoring CWDFs, as well as inspections of CWSFs and industrial sites were enacted during the period under review as part of the Secretariat's budget austerity measures. Despite this, the Secretariat had completed 17 inspections so far this year, and an additional five were ongoing. Full verification and inspection activities would be reinstated with the resolution of the outstanding budgetary issues.

Destruction As of 1 March, the OPCW had overseen the destruction of 5,538 metric tons of chemical agent (Category 1) and 1,578,407 munitions or containers — out of a declared total of 69,863 metric tons of chemical agent and 8,613,399 munitions or containers.

In those states parties undertaking destruction activities, as of 1 February: the United States had destroyed 18.7 per cent of its Category 1 chemical weapons and 99.5 per cent of its Category 3 chemical weapons, a state party of withheld identity had destroyed slightly over one per cent of its Category 1 chemical weapons and 100 per cent of its Category 3 chemical weapons. Three of the four countries which have declared chemical weapons stockpiles had fulfilled their obligation under the CWC to destroy one per cent of their chemical weapons by 29 April 2000.

During the period under review a second CWSF in the United States was declared closed after a final inspection conducted by the Secretariat. Also, the United States declared complete the destruction of a CWPFS at the Rocky Mountain Arsenal in Colorado.

The Russian government reassured the Secretariat that destruction of its Category 2 and Category 3 chemical weapons will be completed within the Convention's timelines and the Secretariat was prepared for destruction activities in Russia to accelerate in 2001.

Implementation of Article X On 9 January, the OPCW and the Canadian government in conjunction with Irvin Aerospace Canada Limited and Acton Rubber marked the beginning of a programme to supply equipment to the OPCW under Article X. The agreement includes the provision of state-of-the-art technology such as the Irvin CASCAD decontamination system.

The Fourth CW Chief Instructor Training Programme (CITPRO IV) is planned for 22–27 April in Spiez, Switzerland and is designed to aid states in establishing a basic chemical weapons protection capability and will accommodate up to 40 participants from member states. The OPCW Emergency Field Laboratory Training Programme (SEF-LAB) is scheduled for 13–18 May, also in Spiez. A Chemical Support Training Course, to be hosted jointly by the Swedish government and the Secretariat in Revinge, Sweden, during 6–25 August, is to focus on civilian protection and rescue and countermeasures in response to any terrorist attack using chemical weapons. All of these three training events are conditional upon sufficient funding being made available under the 2001 budget.

A CW Civil Defence Training Course that was scheduled for 26–30 March in Slovenska Lupca, Slovak Republic, has been postponed for the time being.

Implementation of Article XI Under the direction of the National Authority of Chile, with some support from the Secretariat, the “Second Regional Meeting of National Authorities of States Parties in the Latin American and Caribbean Region” will take place from 27 to 29 March in Vina del Mar, Chile. The meeting will concentrate primarily on three issues: the status of implementation of the Convention in the region, verification-related issues, and international cooperation projects in the region.

Negotiations began in September 2000 on a draft memorandum of understanding on cooperation between the World Customs Organization and the OPCW. The agreement is designed to strengthen national and international responses to illicit trafficking in chemicals covered by the CWC, and provide for consultation on issues of mutual interest. This includes the exchange of information and reciprocal attendance at meetings of each respective organization as well as cooperation in technical expertise and the establishment of technical assistance programmes at the national, regional, and international levels. The Council is expected to make a recommendation to the Conference on this matter.

A regional workshop on the CWC for the South Pacific region is scheduled to take place in Melbourne, Australia, during 30 April–3 May, to be hosted jointly by the government of Australia and the Secretariat. This would concentrate on promoting regional cooperation among member states from Southeast Asia and the South Pacific.

The third annual meeting of national authorities will take place during 11–13 May. In addition to a one-day workshop, representatives from national authorities would have the opportunity to hold regional meetings and consult with the Secretariat on issues arising from their experiences implementing the CWC. This year, the workshop is expected to emphasise the importance of implementing legislation and the regulation of the trade in chemicals. The convergence of this meeting and the Conference of the States Parties (14–18 May) provides the Secretariat with an opportunity to involve the national authorities and the delegations of member states in an intensive dialogue on the implementation of the Convention, including any problems encountered so far and possible solutions.

Due to constraints resulting from the Organization’s tenuous financial situation, the first planned national authority training course in 2001, originally scheduled for 26 February–6 March, had to be postponed. The imposed austerity measures also accounted for the paucity of Article X and XI programmes during the period under review.

Priority has, however, been given to the continuation and expansion of the OPCW Associate Programme. Following the success of the programme in 2000, the 2001 programme will be held 6 August–12 October and involve up to 14 participants. The possibility exists for the programme to be organized twice per year in the future. The programme brought together academic institutions, the chemical industry, and the Secretariat in work toward the utilisation of chemistry for peaceful purposes. The objectives of the Associate Programme are to facilitate national implementation of the CWC via the chemical industry, to build national capacity in member states, to promote trade,

and to educate future National Authority and Secretariat personnel.

Eighth Official Proficiency Test The eighth official proficiency test began on 8 November and involved 12 laboratories in 10 states parties (Belgium, the Czech Republic, India, Iran, the Netherlands, Poland, Romania, Singapore, Sweden, and the UK). The samples were prepared by a laboratory in the Republic of Korea and the evaluation was carried out by a second laboratory in the UK. On 5 February, a meeting was held to discuss the preliminary results of the evaluation.

The ninth and tenth official proficiency tests were respectively scheduled for April and October 2001. The ninth test, however, was postponed for reasons of economy, while the tenth remained provisionally planned for October.

Legal Issues The International Symposium on Cooperation and Legal Assistance for Effective Implementation of International Agreements was hosted by the Secretariat during 7–9 February. Over 200 representatives from government, law enforcement, and academia worldwide participated. They met in discussion panels to address such issues as: international police cooperation and jurisdiction, customs enforcement, protection against terrorism, criminalisation and prosecution, universal jurisdiction, and confidentiality. The symposium was designed primarily to address the implementation of Article VII.2 of the Convention, which obliges states parties to provide legal assistance to other states parties in the prosecution of crimes committed under the Convention. For many of the participants this was an unique opportunity to discuss the prevention and prosecution of international crime in such a multilateral environment.

Also participating in the symposium were those individuals nominated by states parties in Latin America and the Caribbean to comprise a network of legal experts for that region; the decision to form this body was made at the first regional meeting of national authorities in December 1999. This network held its first meeting on 12 February in The Hague following the legal symposium with representatives of six states parties participating — Argentina, Bolivia, Brazil, Cuba, Panama, and Saint Lucia. Debate in this first meeting focused on the need to obtain legislation from the states parties in the region, the difficulties faced by each state party with regard to implementation of the CWC, possibilities for the exchange of information among the states parties involved, and the need to be informed as to any existing bilateral or multilateral agreements in the field of cooperation or legal assistance. In the meeting, the network emphasised the need for continual communication between the designated legal experts comprising its membership.

The need for implementing legislation was also highlighted by the Director-General in his opening statement to the Council at its twenty-third session. As of the beginning of 2001, only 53 states parties, or 38 per cent of the Organization’s membership, had incorporated legislation to implement the CWC into their national legal framework.

Official Visits The Director-General travelled to Moscow during 5–9 February. While there, he met with the Deputy

Prime Minister, the Foreign Minister, the Chairman of the Interregional Commission on Chemical Disarmament, and the Director-General of the Munitions Agency. Discussions centred on the general overhaul of the Russian chemical weapons destruction programme, including an invitation to a group of OPCW experts to visit Moscow within the next few months to review the programme and a visit by Russian officials to The Hague in order to inform the Executive Council of the plans.

A delegation from the Swiss Parliament, led by the Speaker of the National Council, and including the Speaker of the Council of States and the Secretary-General of the Parliament, visited OPCW headquarters on 23 February. While in The Hague, Speaker of the Swiss National Council, Mr Peter Hess, addressed the Executive Council's twenty-third session. His remarks focused on the need for increased international financial support for the destruction of Russia's chemical weapons stockpile and other important aspects of international assistance, protection, and cooperation. He noted that the Swiss government has been very active in this field.

Outreach Activities On 24–25 January, the OPCW played host to nearly 200 students participating in The Hague International Model United Nations programme — a week-long role playing exercise. Those students serving on the mock UN First Committee were briefed on the CWC and OPCW and utilised OPCW headquarters for their committee debates.

On 14 February, the Secretariat held a briefing session exclusively for Permanent Representatives to the Organization in an effort to increase awareness of the work of the OPCW and high-level involvement among national delegations. The meeting stressed the importance of political participation and the role of the OPCW as a “frontrunner” organization in the field of multilateral arms control.

Plans for regional meetings and seminars in 2001 are being finalised; prospective locations include Ghana, India, the Pacific islands, the Republic of Korea, and Jamaica. However, the programme may be severely constrained by the current budgetary deficiencies.

Staffing A decision on implementing the results of the second job classification exercise was still pending before the Executive Council.

As of 2 March, 486 of the allotted 506 fixed-term posts in the Secretariat were occupied. Of these, 342 were in the professional and higher category and 144 were in the general service category. Including staff on short-term and temporary assistance contracts and others the total personnel strength was 539 from around 69 different nationalities. Women compose approximately 12 per cent of the OPCW staff in the professional category or higher, and about 20 per cent overall.

Subsidiary Bodies

Confidentiality Commission A special session of the Confidentiality Commission was held during 18–19 January in order to further review the confidentiality policies of the

Secretariat, a task assigned to the Commission by the Council at its eighteenth session.

Issues presented and discussed at this special session of the Commission included the scope and volume of confidential material to be processed and the level of classification applied to documents, as well as other issues concerning effective implementation of the OPCW confidentiality policy and the feasibility of electronic transfer of confidential information. The Commission recommended amendments to the Policy on Confidentiality in order to prevent over-classification of documents. The Secretariat was requested to prepare a proposal on this matter for consideration by the Council.

The Commission was scheduled to meet for its fifth session from 18 to 20 April, but this meeting has been postponed due to budgetary constraints.

Scientific Advisory Board The Scientific Advisory Board (SAB) continued its examination of issues falling within its purview — including destruction technologies, inspection equipment, the analysis of biomedical samples, and preparations for the first review conference — at its fourth session, which met during 5–6 February. The SAB's temporary working group on analytical procedures issued guidelines on the inclusion of certain non-scheduled chemicals and riot control agents in the Central OPCW Analytical Database. The report of this SAB session, accompanied by a note from the Director-General, will be submitted to the Council at its twenty-fourth session.

Future Work

Much of the current work is focused on preparations for the sixth session of the Conference of the States Parties, scheduled to convene in The Hague during 14–18 May. Many of the tasks assigned to the Executive Council and to the Secretariat by the Conference at its fifth session in May 2000 must be completed and submitted for consideration and debate at the sixth session. Among these are the authentication and certification procedure for the Central OPCW Analytical Database and on-site databases, guidelines on the designation of laboratories for the analysis of authentic samples, and the draft decision on the fostering of international cooperation for peaceful purposes in the field of chemical activities.

In his opening statement to the Council at its twenty-third session, the Director-General proposed convening an informal meeting of the Council on universality, with a view toward devising a comprehensive political strategy for the Organization as regards the Middle East and Northeast Asia. A focus on universality was also one aspect of Secretariat planning for the first CWC Review Conference, scheduled for 2003. Over the next year and a half, many of the activities undertaken by the Secretariat and the OPCW will be pursued with a view toward taking stock of the work accomplished so far and forecasting the issues that may be under discussion at the Review Conference.

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

Strengthening the Biological and Toxin Weapons Convention

A two-week session, the twenty-second, 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 12 to Friday 23 February 2001. As in the previous session in November/December, negotiations took place in a number of forums. The Friends of the Chair (FOCs) continued to hold some formal meetings to develop the text for which they are responsible as well as informal meetings and consultations with delegations to explore possible solutions to remove square brackets. The Chairman also continued his series of bilateral informal consultations with representatives of states parties to address the outstanding key issues in order to explore conceptual approaches to find common ground. Over 50 informal consultations, ranging from 30 minutes to 3 hours in duration, were held during the two week session.

Overall, the February session saw a further continuation of the change that had begun in the July/August 2000 session to less work being carried out in formal sessions and more “give and take” discussion in informal consultations. This was illustrated by the fact that out of 20 possible meetings during the two week session, there were actually 11 formal meetings. On some days, there were no formal meetings. This again indicated that the previous more formal methods of work are close to having achieved as much as is possible in developing agreed text and in the removal of square brackets and there is a greater need now to explore new informal and formal ways of reaching solutions which will attract wide support.

In the February session, 54 states parties and 3 signatory states participated; 2 more states parties than in the November/December session as 6 states (Bolivia, Guatemala, Iraq, Panama, Singapore and Yemen) participated in February whilst 4 states (Cyprus, Jamaica, Thailand and Viet Nam) did not. The same 3 signatory states participated as in November/December.

There was no change to the Friends of the Chair. The list of the Facilitators to assist the Ad Hoc Group saw the addition of Mr Reza Pourmand Tehrani of Iran to the list of those assisting Ambassador Don Mahley as facilitator for the Headquarters Agreement with the Host Country: Ambassador Krzysztof Jakubowski of Poland, Mr Adrian White of Australia, Mr Malik Azhar Ellahi of Pakistan, Ms Katarina Ragnitt of Sweden and Ms Anayansi Rodriguez Camejo of Cuba.

There was again a decrease in the number of new Working Papers (WPs) — to 7 in February from 10 in November/December 2000. The WPs (WP.438 to WP.444) were presented by the following states: two papers by South Africa and by the United States; single papers by the Netherlands and by the United Kingdom; and a paper by Australia, Austria, Belgium, Canada, Germany, Italy, Korea, Sweden and the UK. These focused on a number of issues — 3 relating to investigations, 2 relating to measures

to improve the implementation of Article III of the Convention (non-transfer), 1 on confidentiality and 1 on the seat of the Organization.

The outcome of the February session was produced as a complete update of the Protocol issued as an Annex to the procedural report (BWC/AD HOC GROUP/55 — because of the number of pages, this has been issued in two pieces: 55-1 and 55-2). This was thus the fifteenth version of the rolling text — previous versions having been produced in June 1997 (#35), July 1997 (#36), October 1997 (#38), February 1998 (#39) and June/July 1998 (#41), September/October 1998 (#43), January 1999 (#44), April 1999 (#45), July 1999 (#46), October 1999 (#47), February 2000 (#50), April 2000 (#51), August 2000 (#52) and December 2000 (#54). Again, as in December 2000, there is no Part II containing papers prepared by the Friends of the Chair of proposals for modified text for further consideration. This reflected the general change in the overall negotiations which have moved towards a more informal exploration of possible solutions.

The February session had fewer formal meetings as Friends of the Chair used informal and formal meetings as they judged appropriate to carry forward their work. The FOC meetings focused on definitions and objective criteria (2 meetings), compliance measures (1 ⁵/₆ meetings), and declaration formats (1 ⁵/₆ meetings) with between ¹/₆ to ²/₃ meeting on the preamble, investigations, confidentiality issues, measures related to Article X, seat of the organization, decision on the establishment of a Preparatory Commission and the Headquarters Agreement with the Host Country. There were 1 ¹/₂ meetings devoted to AHG plenary meetings. As already noted, the Chairman held over 50 bilateral consultations during the two week session.

The AHG meeting as usual saw an associated event involving NGOs — on 16 February the Department of Peace Studies of the University of Bradford presented and distributed a further *Briefing Paper* in its series: No 33 *The BTWC Protocol: Improving the Implementation of Article III of the Convention: Pragmatic Considerations* (available at <http://www.brad.ac.uk/acad/sbtwc>).

Political Developments

As usual a number of statements were made during the February session. On the opening day, Ambassador Tibor Tóth, Chairman of the Ad Hoc Group, in his opening remarks recalled that in his remarks at the end of the previous session in November/December 2000 he had put the work of the Ad Hoc Group into context so that all participants could better understand what remains to be done. He had said then that the most difficult work needed to be done in 2001 and:

it was now time to move away from talking about compromises to actually delivering such compromises.

Ambassador Tóth went on to note that the indicative programme for the 22nd session provides each Friend of the Chair with a meeting or part of a meeting with remaining meetings — some 11 out of the 20 available — allocated to the Ad Hoc Group or to informal consultation. It was important that Friends of the Chair carry forward their work in their own respective areas of the rolling text and, where possible, deliver the necessary compromises. Ambassador Tóth, however, recognised that it was becoming more difficult for the Friends of the Chair to achieve progress as:

It is no longer possible to consider the rolling text of the Protocol in its discrete sections, because the remaining areas of difference are linked to progress in other areas of text.

Ambassador Tóth said that he had given much thought to the working methods of the Ad Hoc Group during the 8 weeks since the last session as the overall number of square brackets had reached numerical stagnation during the past three sessions. He therefore judged that negotiations based solely on the procedures used so far would not allow the Ad Hoc Group to fulfil its mandate in the timeframe allocated to the work. He recalled that he had carried out a series of informal consultations at the 20th and 21st sessions in which he had had approximately 100 bilateral meetings with delegations in each session. He intended to continue these informal consultations at the 22nd session.

Ambassador Tóth also said that in addition to the bilateral consultations, and as a direct result of them, delegations had received a series of written elements related to certain parts of the text. At the last session, written elements addressing conceptual solutions based on the rolling text had been circulated related to: Declarations; Follow-up after submission of declarations; Randomly-selected transparency visits; Declaration clarification procedures; Transfers; Entry into force; Cooperation; and issues related to the Organization. A further series of written elements had been made available on Friday 9 February dealing with Definitions; Lists; Measures to ensure submission of declarations; Legal elements; Assistance; National implementation; and Organization. He invited delegations to let him have their views on all these written elements during the informal bilateral consultations during the 22nd session.

He went on to note that there is much to be done in the nine weeks of AHG session available to complete the work: not only has the rolling text to be finalized and a Protocol agreed that is acceptable to all, the report of the Ad Hoc Group has to be drafted, issues relating to the Preparatory Commission for the future Organization addressed, and a Special Conference convened to adopt the report before November 2001. He concluded by saying:

Every single delegation ... here now has to move from its long-standing favoured options towards a middle ground that brings an acceptable compromise to all delegations. That will, I know, be painful. ... Let us not forget what the ultimate goal of our endeavours is: it is not about a new treaty, it is about strengthening existing obligations and preventing human beings from being subjected to the willful infliction of disease. Only with such a bulwark in place will technological progress deliver its benefits to all countries and help make the world a safer place.

In the subsequent plenary session, a number of statements were made. Peter Goosen of South Africa spoke to

introduce two Working Papers. He went on to recall the consensus that the negotiation should be concluded so that its product can be considered by a Special Conference before the Review Conference in November–December 2001. South Africa believed that the method of negotiation adopted previously has taken the Ad Hoc Group as far as it is possible to go and that the time is now ripe for the Ad Hoc Group to move to a new methodology that will create the necessary foundation to meet the mandate within the timeframe agreed at the last Review Conference. South Africa went on to say that the only way to generate the new momentum is for the Chairman to take the initiative to bring before the Ad Hoc Group his best estimate of the compromises that should be considered as a basis for concluding the negotiations. He went on to say that South Africa had studied the building blocks circulated at the previous session which are only snapshots of certain elements of the text and for the necessary compromises to be seen there is a need to see the full picture. Given that there are nine weeks of negotiation time in three sessions before the Review Conference, South Africa believed that the full picture would only be achieved by the distribution of a complete compromise or vision text. It was the view of South Africa that such a text would need to be distributed as soon as possible before the end of this session.

Italy then spoke saying that during the last session it had welcomed the circulation of the first proposals for key parts of the rolling text. Italy was confident that those first building blocks on the way to being refined may soon be followed by the Chairman's consolidated text from which to take the final leap towards the conclusion of the Protocol. Italy noted that the Protocol must be realistic but at the same time effective. International cooperation in the field of biotechnology must be seriously implemented and enhanced for the common benefit of all states parties through Article VII of the Protocol.

Russia said that they were ready to work to find compromises as they recognised the decision of the Fourth Review Conference to complete the Protocol by the Fifth Review Conference. Russia was ready to study the compromise materials distributed at the last session and more recently for this session.

New Zealand spoke to associate themselves with the South African view on the need to move forward as soon as possible on the basis of having a complete picture of the Chairman's assessment of an adequate compromise for the completion of the Protocol as they believed that this was critical to maintaining momentum towards completion of the Protocol.

Ambassador Hu Xiaodi of China then spoke noting that this was the first meeting in the new century and saying:

Strengthening the effectiveness of the Biological Weapons Convention in a comprehensive and practical manner and freeing humanity from the threat of biological warfare at an early date is an important task the times entrust to us.

He went on to say:

After years of intensive work, the framework of the Protocol has gradually come into shape....The negotiation, in our judgement, is now making steady progress. However, great efforts remain to be made in order to complete our negotiation in a timely manner.

He said that China remains committed to completing the negotiation within the envisaged timeline. He noted that the Ad Hoc Group's working methodology had changed with informal consultations taking place more frequently with more compromise proposals being put forward and said that this is the logical development of multilateral negotiation. He concluded by saying:

The conclusion of the Protocol will only be the result of compromises made by all sides, which to a great extent depend on their political willingness.

Norway spoke briefly to support the South African views regarding reservations and to associate Norway with the intervention made by New Zealand.

Pakistan then spoke to express concern about the South African working papers which proposed moving chunks of text from the Annexes to the Articles and urged that the Ad Hoc Group should avoid such drastic structural changes in the rolling text. Pakistan believed that it was not the time to look at "texts that are sent from heaven" but that negotiations are the name of the game.

Australia then spoke to reiterate that chunks of text did not provide the full picture and Australia looked forward to having the full picture as to how the Ad Hoc Group might finalise their work. As to when the Chairman should provide the full picture, Australia believed this was a decision for the Chairman as he was the best judge of when this should be. Australia went on to say that it did not expect to see in every slab of text exactly Australia's preferred positions as this was not the nature of negotiations. Finally, Australia agreed that the Ad Hoc Group process hitherto had begun to be a little stale and to have outlived its purpose. Consequently, Australia looked forward to working with the Chairman and other delegations in drawing upon any kind of negotiating style including the informals and bilaterals and group discussions as that was a way to make progress.

Iran spoke to reiterate its readiness and willingness to fully cooperate in a constructive manner in order to successfully complete the negotiations within the deadline that the Ad Hoc Group expected and wished to fulfil. Iran recalled that they were among those who welcomed the modified methodology of negotiation and the holding of more informal consultations by the Friends of the Chair and the Chairman. Iran appreciated the informal consultations by the Chairman and welcomed the chunks of paper which he had prepared as the result of the consultations. However, it felt that producing a text parallel to the existing text would not be helpful. It was however keen to continue the informal consultations and to work towards reaching agreement.

Libya then spoke to express its satisfaction at what has been achieved in previous sessions and looked forward to the day when there is a clean text that meets the approval of all states parties which they hoped would not be too far off. Libya then went on to emphasise the importance of Article X of the Convention and Article VII of the Protocol as well as of Article VI of the Protocol on the provision of protection for states parties.

Finally, the Netherlands spoke to reaffirm their support for the points made by South Africa on reservations and on the timing of the issuing of the Chairman's text as an integral text and to associate the Netherlands with the support expressed also by New Zealand and Norway.

Further statements were made later in the Ad Hoc Group session notably one on Monday 19 February by Ambassador Salander of Sweden speaking on behalf of the EU, the nine associated Central and Eastern European countries and the associated countries Cyprus, Malta and Turkey. In this he recalled that the EU had made a statement during the previous session in which the EU outlined how it envisaged the future Protocol and which provisions it considered as being the heart of the Protocol. These points were still valid and instead of repeating them, he would focus on the question of how the Ad Hoc Group will be able:

to reach the final compromises necessary to meet the deadline set by the Fourth Review Conference and agreed upon by all States Parties.

He went on to say that the EU agreed with the Chairman's analysis in his opening statement regarding the state of the negotiations and added that the EU:

cannot see how the working method used presently in the Ad Hoc Group can take us much closer to the final compromises necessary for the conclusion of the Protocol. States Parties are stating the same national positions as so many times before instead of seeking solutions to the critical issues at stake. This is not surprising, since the remaining difficult compromises cannot be done in isolation. For this, the full picture is required.

He then said that what was being expected from the Chairman was his assessment of where the compromises are to be found and that:

It is only by such an input, a chairman's text, that the negotiations will be brought to a successful conclusion. We are also convinced that the Ad Hoc Group needs this input as soon as possible given the limited period of time left to us. There will always be uncertainties, but you, Mr Chairman are the only person with the complete understanding of the state of the negotiations on which to base your judgement. The EU has confidence in you exercising this judgement at the appropriate time.

The Emerging Regime

As noted above, out of 20 possible meetings during the two week session, there were actually 11 formal meetings with some days having no formal meetings at all. There were, at most, two meetings by any Friend of the Chair and it was evident that additional meetings were not being sought by the Friends of the Chair. There is a real sense that although there was one bracket bazaar, the incremental removal of square brackets has virtually ceased.

Three working papers addressed investigations. One by South Africa (WP.440) proposed moving chunks of text from the Annex on Investigations into the Article on Investigations because of concern that material in the Annexes might be subject to reservations. Two were presented by the United States — one (WP.441) proposing amended language for the Article and the Annex on investigations and the other (WP.442) proposing what it described as "technical improvements" in respect of the provisions in the Annex on investigations for sampling and identification for field and facility investigations. These "technical improvements" appear to reflect the US concern about possible loss of information rather than to ensure an

effective Protocol regime in that, for example, the language already out of square brackets in the rolling text requiring samples to be “analysed in two designated and certified laboratories” is removed and elsewhere language is proposed that even in field investigations the receiving state party can specify which tests or analyses are used or to refuse a sample. The US appears in such proposals to be seeking to blunt the ultimate measure of the Protocol.

Two working papers addressed Article III, Section F which is concerned with measures to strengthen the implementation of Article III of the Convention — the non-transfer obligations — which is almost certainly the most significant remaining issue for the Protocol. WP.443 (Australia, Austria, Belgium, Canada, Germany, Italy, Korea, Sweden and the UK) said that the key requirement of this section of the Protocol should be:

to provide a common basis for all States Parties to strengthen the effective implementation of their non-proliferation obligations under the BWC.

The text should therefore contain provisions on:

- The establishment of export controls through appropriate legislative or regulatory measures to ensure that all exchanges of potential dual-use items will only be used for prophylactic, protective or other peaceful purposes;...
- National regulations governing the transfer of specified dual-use items ... Such provisions should include:
 - A requirement for end-use certificates...
 - A requirement for States Parties to assess the non-proliferation credentials of the potential recipient including its adherence to the BWC and Protocol as well as other relevant multilateral arms control treaties;
- Increased transparency of transfers of dual-use items to build confidence in the implementation of the non-proliferation obligations of States Parties, for example,
 - Annual retrospective and aggregated reporting of transfers of certain high-risk dual-use equipment...;
 - Provision for bilateral consultation to provide assurance that a completed transfer has been made in accordance with the non-proliferation obligations of the Convention;
 - Provisions for post-shipment verification by the transferring State Party to provide assurance that such transfers are in compliance with the Convention.
- Encouraging strictly bilateral consultations in the event of a suspected violation of Article III of the Convention through an unduly authorised transfer....
- Encouraging States Parties to take additional export control measures beyond those specified in the Protocol.

WP.444 (UK) proposed “for greater clarity and precision” changes to the items of equipment listed, currently within square brackets, in Section F of the rolling text.

The second working paper by South Africa (WP.439) on confidentiality provisions proposed moving chunks of text from the Annex on Confidentiality into the Article on Confidentiality Provisions because of concern that material in the Annexes might be subject to reservations. The Netherlands working paper (WP.438) provides further explanation on points raised by several delegations concerning the

Netherlands’ bid to host the future Organization: the points are conference facilities, subsidies, accommodation, visas and the position of dependent family members.

Written Elements

As noted by Ambassador Tóth in his opening remarks to the session, written elements addressing conceptual solutions based on the rolling text had been circulated at the November/December session related to: Declarations; Follow-up after submission of declarations; Randomly-selected transparency visits; Declaration clarification procedures; Transfers; Entry into force; Cooperation; and issues related to the Organization. A further series of written elements had been made available on Friday 9 February dealing with: Definitions; Lists; Measures to ensure submission of declarations; Legal elements; Assistance; National implementation; and Organization. These written elements contain what might best be described as a “stripped down” or shorthand text in which many words are shortened — so that, for example, investigation becomes *inv*, request becomes *req* and state becomes *S* — thereby usefully encouraging the reader to consider the proposed language *de novo* and the proposed conceptual approach on its own merits. Further fragments were issued during the February session and immediately after the session so that delegations have received written elements addressing conceptual solutions based on the rolling text for virtually the whole of the Protocol.

The procedural report for the February session includes a paragraph recording that throughout the two weeks of the session, the Chairman had conducted a series of bilateral consultations with representatives of states parties participating in the work of the Ad Hoc Group. These consultations had focused on the key remaining issues and were:

aimed at a conceptual exploration of possible future solutions in the following areas: General Provisions; Definitions; Lists and Criteria, Equipment and Thresholds; Declarations; Measures to Ensure Submission of Declarations; Consultation, Clarification and Cooperation; Investigations; Additional Provisions on Declarations, Visits and Investigations; Confidentiality Provisions; Measures to Redress a Situation and to Ensure Compliance; Assistance and Protection Against Bacteriological (Biological) and Toxin Weapons; Scientific and Technological Exchange for Peaceful Purposes and Technical Cooperation; Confidence-Building Measures; The Organization; National Implementation Measures; Legal Issues; Lists and Criteria (Agents and Toxins); List of Equipment; Annex on Investigations; Annex on Confidentiality Provisions.

Prospects

In the closing meeting of the session, Ambassador Tóth said that what was emerging was a prevailing constructive mood and he thanked delegations who are enabling the Ad Hoc Group to take forward the process in a constructive way. He noted that although there had been less visible signs of progress during the session there had, nevertheless, been useful progress in the informal consultations carried out by the Friends of the Chair, between delegations and in the

Chairman's informal bilaterals. The informal bilaterals had given the Chairman both a more nuanced understanding of how delegations are approaching the outstanding issues and their early reaction concerning the written elements or building blocks that had been shared with delegations. From this, Ambassador Tóth said, there is a recognition of a need for a more holistic approach to issues. His intention was to use "these pieces of Swiss cheese with all the big holes in them" to try to move forward in terms of being able to have some ideas on the table for a more integrated consideration of issues. It was clear that delegations were reading with interest what is in the building blocks whilst at the same time they are more interested in what is not in the building blocks. Another aspect was that although the range covered by the building blocks was not the same as that of the draft Protocol, he asked delegations to take those building blocks and give them very careful attention as part of the endeavour to explore certain compromise avenues whilst going in a direction that delegations can tolerate.

The challenge for the future was that there was a recognition of the need to consider ideas in a more holistic way using a more composite set of proposals whilst at the same time care needed to be taken not to endanger the precious capital that has been accumulated since the summer of 1997 when the first version of the rolling text was placed on the table. Clean text in the rolling text is extremely important and there are also useful ideas in the rolling text. Consequently, while trying to prepare a set of more composite proposals for future consideration this was a very important element. He emphasised that the need for a more composite set of proposals did not come from the need to flex innovative or intellectual muscles but the intention would be to inherit the clean text part of the rolling text and whatever elements close to consensus might be drawn upon as a result of the work of the Friends of the Chair. He went on to point out that it was necessary to consider any set of new ideas in a detailed way from the point of view of not only what has been given but also what has been gained. It was clear that delegations are ready to consider ideas in a more holistic way as those ideas will assist the Ad Hoc Group in a balanced way to move the process forward. He concluded by making it very clear that great care needed to be taken to avoid endangering the possibilities for concluding the work of the Ad Hoc Group by too hasty action or with action that does not generate the right level of support.

The programme of work for the twenty-third session to be held from 23 April to 11 May was agreed with the 30 meetings allocated entirely to the Ad Hoc Group, apart from informal consultations on the two days (25 & 26 April) when the Preparatory Committee for the Review Conference will be meeting and meetings on the Seat of the Organization, the decision on the establishment of a Preparatory Commission and on the host country agreement as follows:

Seat of Organization	0.5
Preparatory Commission	1
Host Country Agreement	1
Informal	4
<u>Ad Hoc Group</u>	<u>23.5</u>
Total	30

The allocation of essentially all the meetings to the Ad Hoc Group confirms the indication that the Friends of the Chair have done as much as it is possible for them to do and that the April/May session will be addressing the complete picture.

The February session thus saw much informal consultation with relatively few formal meetings. Written elements addressing conceptual solutions based on the rolling text for virtually the whole Protocol were produced and circulated to delegations prior to, during and just after the session; these elements were in stripped down text which usefully encouraged delegations to consider them *de novo*. Several delegations encouraged the Chairman to present the whole picture as a composite text when the time was ripe. There is consequently a sense of anticipation that a composite text should be available for the April/May session.

There was a continuing commitment by all delegations in the February session to the completion of the negotiations by the Fifth Review Conference in November–December 2001. There is also a clear expectation that a complete picture should become available soon as it is widely recognized that such a complete picture is necessary to bring the negotiations to a successful conclusion. The appearance of further written elements prior to, during and after the February session again shows that the Ad Hoc Group is poised and ready to complete its work in 2001. It is evident that the Protocol negotiation can indeed be completed before the Fifth Review Conference.

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

The Continuing Trial of Wouter Basson

This report covers the period 10 October 2000 through 31 January 2001. A detailed account is posted on the HSP website.

The court moved to Florida during 10–23 October to hear the evidence of American attorney David Webster and that of his wife Jane Webster. It convened in US Middle District Court, Jacksonville, with Judge Willie Hartzenberg

presiding, under the rules and procedures of the South African legal system.

Basson was not present during these hearings, although all three members of his defence team — advocates Jaap

Cilliers and Tokkie van Zyl and attorney Adolf Malan — were, along with senior prosecutor Anton Ackerman and his assistant, Werner Bouwer.

Webster said that he set up three corporations in the Cayman Islands for Basson — WPW Investments, PCM International and Medchem. WPW was formed and served as the holding company for the group. It was never intended to be an operating company. At a later stage, substantial amounts of money were channeled through PCM and Medchem, before these corporations became dormant until “given” to Tjaart Viljoen (PCM) and Philip Mijburgh (Medchem) in 1991. Webster said that Basson was “constantly reshuffling” the structure of the group’s world-wide holdings.

The court reconvened in Pretoria on 30 October. The first witness to be called was Reverend Frank Chikane, once an outspoken anti-apartheid activist and currently director-general in the president’s office and secretary of the cabinet who told the court of his experiences in 1989 when he believed he was poisoned. Medical testimony indicated that the detection of a breakdown product of many organophosphates in Chikane’s urine, along with the earlier test results, provided “strong evidence”, that Chikane had been exposed to an organophosphate, although tests had not produced the parent compound.

Lieutenant-General Dirk Verbeek, chief director counter-intelligence from January 1988 to the beginning of 1993 testified that he was aware that Project Coast was designed to develop an offensive and defensive CBW capacity for the SADF. He said that in 1991/2 a counter-intelligence investigation was launched into Project Coast after apparent irregularities were identified. Verbeek said that he could not determine how the numerous companies which turned up, fitted into the project. The probe produced a list of 137 companies based on unconfirmed/unsubstantiated information. He said the counter-intelligence probe had been incomplete. [Note: this was the investigation previously cited by defence counsel Cilliers as having been thorough and comprehensive]

A later witness, ‘Mr H’, a Senior Staff Officer Project Security at Military Intelligence, testified that he was forced to tell Verbeek that the investigators had “no idea” what they were looking at in terms of Coast’s finances, and did not understand their esoteric nature — an expert would have to be found to decipher the transactions. It was this situation that led to the Auditor-General’s office being appointed to investigate Coast’s finances and, ultimately, to the Office for Serious Economic Offences launching their seven-year investigation in 1992.

Sybie van der Spuy, managing director of EMLC for 12 years from 1 November 1980, stated that when he first joined the company he found a room containing clothing which he was warned not to touch by an employee: “if you put those underpants on, you’ll be dead by tonight”. Van der Spuy stated he ordered the contents of this room to be destroyed.

Dr Jan Coetzee, founder and first managing director of EMLC claimed no knowledge of any such poisoned clothing, but said he was aware of experiments carried out with organophosphates on clothing in Rhodesia. Coetzee also testified that during August 1980 Johan Theron told him

he was involved in operations which required people to be injected before being thrown into the sea from aircraft.

Lieutenant-General Witkop Badenhorst testified that when he became Chief of Staff Intelligence in 1989 [a post he left in 1991] he had the Coast budget transferred from Military Intelligence because he was unhappy with the lack of checks and balances for expenditure. He introduced new auditing requirements for classified projects under his control. Coast, however, was a SAMS project, and Badenhorst was unable to enforce the same system, so he instead requested that control be transferred to Chief of Staff Finance.

Chemists recruited to Delta G Scientific in 1983, testified about their role in production of 24 tons of CR, of 1200 kg of methaqualone and the extracts of oil from about a ton and a half of cannabis. One chemist said he was aware of an Ecstasy project at DGS under the code name Baxil.

Affadavits stated that after Sentrachem bought Delta G Scientific in August 1993, drums were discovered containing sufficient materials to make some 950 kg of methaqualone. It was estimated that 3.5 million Mandrax tablets could have been made from these sources.

Dr Klaus Psotta, recruited to Delta G Scientific in June 1982, testified he was under no illusion about the nature of the company’s work in the CBW field. He was transferred to RRL in 1984. He said he knew Basson and saw him a lot at the two front companies. On Basson’s direct orders, Psotta was tasked to synthesise methaqualone. Other work done by Psotta was the synthesis of paraoxon, tabun, monensin and VX, although the latter was a complicated and difficult process and he progressed only as far as the first few steps.

Psotta also tested the stability of the organophosphate paraoxon in nicotine and alcohol. Asked if, while engaged in this work, he ever envisaged the use of paraoxon against enemies of the state, Psotta said given the political climate at the time, it would have been almost impossible to envisage any other purpose for paraoxon mixed with whisky, gin, and in cigarettes. In principle, he had no qualms about their use against “the enemy”. In cross examination, Adv Cilliers stated that the purpose of the experiments was to devise protection for VIPs.

Rein Botha, who was with the National Intelligence Agency from July 1987 until he retired as section chief, counter-intelligence, in September 1999, testified about the four trunks of documents found after Basson’s arrest and the process that was undertaken catalogue these documents.

Mr H testified that he had accompanied Basson on a flight over the south Atlantic on 27 January 1993 during which 112 drums of various substances were dumped. Samples were taken from four of the drums which were kept in four plastic pill containers. Mr H said that after the flight Basson, Swanepoel and Mijburgh were despondent and angry that the substances had to be dumped. On 30 March 1993 Mr H was given three more plastic pillboxes containing samples for forensic analysis. Unlike the four taken in January, these were labeled — B, C and BX. Mr H says he had discussed the taking of samples with Verbeek prior to the flight, and Verbeek had decided that no samples should be taken, as this might “draw attention” to the covert CBW project. Although Mr H testified that he had seven pill containers in all, only four appear to have been handed over for testing — those

marked B, C and BX and one unmarked container. Tests by the SAP Forensic Laboratory identified B as BZ, BX as MDMA (Ecstasy), C as Cocaine and the contents of the unmarked container as methaqualone.

A number of witnesses testified in relation to the murder of Renamo secretary-general Orlando Cristina at the Fontana base north of Pretoria on 17 April 1983 and the fate of those suspected of the murder.

A Top Secret report recommending the elimination of the Cristina assassins was alleged to have been written by Basson. Two witnesses, who were amongst 32 persons listed at the end of the report, deny seeing the report until many years after the event. A police witness said that the document referring to the elimination of the suspects was not a typical police document.

Van Niekerk, of the Directorate Special Tasks (DST), said it had been the strict policy of the SADF that no documents were to be generated regarding the Christina murder since it was too sensitive and had the potential of creating embarrassment for the government, which up to that point had consistently denied any support for Renamo or that any Renamo members were resident in South Africa. He said there was never any doubt that Renamo would murder the Christina suspects, and he could thus see no reason for such recommendations to be set out in writing.

Van Niekerk told the court that the five suspects in the murder of Christina were handed over to Renamo to be court martialed at a remote location. The five were executed and their bodies thrown into the sea.

A number of witnesses placed Basson at the location where the investigation had taken place and that Basson had been present during an interrogation.

Basson formally denies any involvement in any recommendations regarding the fate of Cristina's killers, as this would have been "totally outside his field of expertise". He also denies that he compiled the "elimination" document.

Witnesses described their contributions to how the Civil Co-operation Bureau (CCB) acquired certain "products" and how the CCB had a wide range of methods at its disposal, including the use of poisons. An affidavit from Wouter Jacobus Basson [a cousin of the defendant], also known as Christo Brits, who was a CCB regional co-ordinator, described how the project to assassinate Dullah Omar with a silenced Makarov pistol was replaced with a plan to substitute the target's heart medication with a toxic substance.

Colonel Dawie Venter, a policeman in the Attorney General's Special Investigation Unit who has worked on the Basson case since March 1997, told the court how witnesses were approached and under what circumstances they had come to testify. He gave details of the obstacles that had been encountered in trying to get information from the South African National Defence Force.

Venter said the investigation had been anything but normal. The vast majority of witnesses had agreed to cooperate only to the extent they were advised to do so by their own legal representatives, and there had been "very little" spontaneity or opportunity to probe them beyond the written statements produced by their attorneys.

This review was compiled from reports written by Chandré Gould and Marlene Burger, of The Chemical and Biological Warfare Research Project at the Centre for Conflict Resolution, an independent institute associated with the University of Cape Town.

News Chronology

November 2000 through January 2001

What follows is taken from issue 51 of the Harvard Sussex Program CBW Chronicle, which provides a fuller coverage of events during the period under report here and also identifies the sources of information used for each record. All such sources are held in hard copy in the Sussex Harvard Information Bank, which is open to visitors by prior arrangement. For access to the Chronicle, or to the electronic CBW Events Database compiled from it, please apply to Julian Perry Robinson.

1 November In Baghdad, representatives of 1500 firms from 45 countries attend an international trade fair, notwithstanding the UN sanctions on Iraq.

1 November The UK Foreign and Commonwealth Office, responding in Parliament to a question about the Biological Weapons Convention and Russian compliance, says: "We very much hope that these negotiations [in Geneva, on a compliance protocol to strengthen the convention] will be successful, as such a protocol would improve transparency of the activities which could be abused for the development of biological weapons and provide internationally agreed mechanisms with which to pursue compliance concerns." Later, on 15 November, another question is asked, this time regarding Biopreparat and the manufacture of biological weapons in Russia. Again, the Minister refuses to comment on intelligence matters and expresses UK support for the BWC protocol.

2 November In Vienna, the United Nations Drug Control Programme, which has support from the United States and the United Kingdom to develop biological-control agents for the destruction of illicit cultivations of opium poppies, coca bushes and other such crops [see 2 Oct], issues a statement saying that "UNDCP is neither implementing, or planning to implement, or discussing the possibility of implementing a biocontrol project in Colombia [see 23 Oct] or anywhere else in the Andes".

2 November In France, a Defence Ministry spokesman, General Alain Ravel, confirms what had hitherto been officially denied, that, during the Persian Gulf War, an order had been issued to troops of the Daguet division to take pyridostigmine, the nerve-gas pre-treatment drug. Evidence on this had already been furnished to the parliamentary information mission on Gulf War syndrome [see 18 Oct] by the French Gulf

war veterans association Avigolfe. General Ravel stresses that his ministry will continue to collaborate with the mission.

2 November In New York, Scribners publishes *Saddam's Bomb Maker* by Jeff Stein, a journalist, and Khidhir Hamza, a former member of the Iraqi nuclear-weapons programme who had defected to the West in 1995. The book is subtitled *The Terrifying Inside Story of the Iraqi Nuclear and Biological Weapons Agenda* and includes accounts of Iraqi CBW programmes.

The book describes German involvement in the chemical weapons programme in the 1980s as follows: "Iraq's cover story with the Germans — of buying pesticide plants — was so thin as to be transparent. But German officials not only went along with it, they pretended not to understand the significance of the animal pens at the plant in Samara. They even helped make the technical adjustments needed to turn the plant into a full-production chemical weapons facility."

In the book, Hamza also recollects how chemical and biological weapons were tested on humans during the 1980s. "Saddam's use of chemical weapons on humans began with Iraq's own Shiites, not, as is commonly believed, the Kurds." From the early 1980s, thousands of Shiites were imprisoned as suspected fifth columnists sympathetic to the Islamic revolution underway in Iran. Hamza alleges that Iraqi scientists "wanted to confirm the efficacy of their chemical and biological weapons in the field, as well as test various vaccines and treatments for Iraqi soldiers assigned to handle the weapons. Thus began one of the most grisly episodes of these awful weapons in history — and a story that has never been told." The initial tests in 1984 at the German-built pesticide plant in Samara were designed to test the effectiveness of countermeasures against CBW. Around 100 hundred Shiite prisoners were sent to Samara for chemical tests and never returned. In 1985, about 50 prisoners were sent to Salman Pak for biological experiments, they too never returned. Field tests with Shiite prisoners being exposed to chemical agents were conducted near Khanaqin in Iraqi Kurdistan. Careful notes on meteorological conditions and the terrain were taken by the scientists. At Salman Pak, corpses from biological experiments were disinfected and buried in mass graves. Hamza claims that in late 1987 Saddam's cousin Ali Hassan al-Majid, also known as 'Ali the Chemist', introduced typhoid into the wells used by Kurds around Sulaimanya. Around the same time, Hamza says that al-Majid targeted Kurdish villages in the Balasan Valley near Arbil with chemical agents. By March 1988, Hamza writes that "the stage was set for a major gas experiment. The target was Halabjah [which] was chosen to be the first, full-scale recipient of a nerve-gas attack."

On the subject of Gulf War Syndrome, the book states that President Saddam Hussein ordered chemical and biological weapons to be buried in southern Iraq. "His thinking was that the Allies, following US tactical doctrine, would blow up the bunkers as they advanced, releasing plumes of invisible gas into the prevailing winds and ultimately onto themselves.... The pattern of contamination would be so disparate, the symptoms so amorphous, the sources of illness couldn't be easily identified.... In any event, if chemical residues were eventually detected, the Americans would only have themselves to blame. And the West would tie itself in knots over an appropriate retaliation." After the Gulf War, Hamza found that "the hospitals were filling with people exhibiting the same ailments that soaring number of Gulf War veterans in the West were complaining of. There was no doubt in my mind: Saddam had stricken his own people with biological or chemical weapons." Later Hamza says that "like Gulf War veterans in America and elsewhere, the number of Iraqis falling ill with a

mysterious soup of ailments—from skin rashes to headaches; neurological, intestinal, and lung problems; unbearable fatigue; birth deformities; and cancers, especially in the liver—continue to mount. The symptoms were showing up predominantly in the south and southwest, in the Shiite territories where chemical and biological weapons were cached in advance of Desert Storm and where, in some cases, the Allies blew them up, scattering their deadly spores to the wind."

2–4 November In Warsaw, there is a NATO Advanced Research Workshop on *Scientific and Technical Implications of the BTWC Protocol for Civil Industry*. The co-directors of the workshop are Colonel Professor Krzysztof Chomiczewski, Commandant of the Military Institute of Hygiene and Epidemiology, and Colonel Professor Henri Garrigue of the French delegation to the BWC Ad Hoc Group. The workshop is attended by 49 people from 17 countries. Many participants are from government departments and agencies involved in the negotiation of the BWC protocol, while others are from the OPCW and CWC National Authorities.

4 November In Japan, Defence Agency plans to expand its capabilities for protection against CBW weapons are reported in *Sankei Shimbun*. According to the newspaper, the agency plans to reorganize and strengthen its current 20-member CW protection platoons in the Ground Self Defence Force (GSDF) into chemical protection corps with 40-50 members in six of 13 divisions in FY 2001. In addition, the agency plans to buy more chemical reconnaissance vehicles to add to the 20 it already possesses. The newspaper also reports that the Defence Agency plans to launch full-scale research into defence against biological weapons at a GSDF research office to be established in March 2001. Also on 4 November, the US and Japan begin Keen Sword 01, a biennial military exercise involving 2,800 US service personnel and 10,500 Japanese troops. At the Aibano manoeuvre area ground troops conduct training in chemical warfare protection.

6 November In Atlanta, former US Senator Sam Nunn tells reporters that CNN founder Ted Turner is willing to commit a minimum of \$50 million a year for at least five years to help reduce international threats of weapons of mass destruction, including CBW. To this end, he and Turner have commissioned 16 papers from leading experts to identify the greatest threats, to describe what is being done to address them, to determine what still needs to be done, and to specify ways in which a private foundation could bridge gaps. Nunn and Turner have also established five task forces to help define the foundation's potential work programme. Remaining to be decided is whether he, Senator Nunn, would be the right person to run the foundation. There will be announcements on this and related matters in December or January. Meanwhile he has been talking about the initiative with senior security officials in Australia, Britain, France and Russia.

7 November In Japan, the Prime Minister's Office and the Foreign Ministry announce that an OPCW inspection has just been conducted, the interim report of which has confirmed that the disposal of the old chemical weapons retrieved from Lake Kussharo [see 23 Aug] had been properly conducted. Of the 26 munitions involved, the original mustard-lewisite fill had leaked away from all but two. The disposal facility is to be dismantled on 16 November and a local environmental research centre will then conduct a survey around the site, taking soil samples.

7 November In Russia, President Putin signs Federal Law no 136-FZ, *On social protection of citizens employed on work with chemical weapons*. The new legislation had been passed by the State Duma on 11 October and by the Federation Council on 25 October. It confirms that the Federal Budget will finance the social protection of citizens employed in hazardous work in the Russian chemdemil programme and describes payment, holiday, medical, housing and other benefits to which they are entitled.

7 November–8 December In France, there is the second UNMOVIC training course [see 11 Jul]. It is attended by 58 people from 23 countries. Like the previous one, it includes general lectures on the UNMOVIC mandate, its rights and obligations, the proscribed weapons programmes of Iraq, and discipline-specific training. There is also training regarding the history, religion and culture of Iraq, in accordance with Security Council Resolution 1284. The French government provides some of the trainers and visits to sites relevant to the study of various weapons disciplines and technologies.

Dr Hans Blix, Executive Chairman of UNMOVIC, states to course participants that many unknowns surround Iraq's four proscribed weapons programmes, for which no information exists post-1998. He says that the course will focus on the vagaries of monitoring, verification, and inspection and on how these activities would be carried out in full compliance with UN resolutions in the matter. Cooperation and progress on key disarmament issues, on the part of Iraq, would result in the suspension of sanctions. Dr Blix also says that once work was begun, UNMOVIC will pursue its mandate "with all deliberate speed."

The *New York Times* reports that Iraq has requested a meeting with the UN Secretary-General to discuss the impasse over weapons inspections. Kofi Annan says that he will meet Iraqi government representatives at a summit-level meeting of Islamic leaders in Qatar on 12 November. This is the first time since the adoption of Resolution 1284 in December 1999 that Iraq has requested a meeting with UN officials. Dr Blix had discussed the issue of Iraq with Kofi Annan before leaving for the UNMOVIC training course.

9 November In London, House of Stratus publishes *Gassed — British Chemical Warfare Experiments on Humans at Porton Down* by journalist Rob Evans. The book is based on more than a hundred interviews with 'guinea pigs' who had been exposed experimentally to chemical warfare agents and with Porton scientists, plus many hundreds of state papers in the Public Record Office. The publication receives widespread coverage in national and local UK newspapers.

The UK Ministry of Defence later states that "some 20,000 volunteers, national servicemen and non-conscripts", had taken part in the Porton Down volunteers programme since it began in 1916. The Ministry adds that "suggestions have been made that some Porton Down volunteers suffer unusual patterns of ill health because of their participation. The Ministry of Defence has seen no scientific evidence to support that belief, but takes such suggestions seriously."

9 November President Clinton extends Executive Order 12938 for a further year, declaring that the state of emergency which necessitated both it and its predecessors [see 13 Jul 99] still existed, namely the "unusual and extraordinary threat to the national security, foreign policy, and economy of the United States" posed by proliferation of weapons of mass destruction.

He also transmits to the Congress a report on activities under the order, covering the period from May–October 2000. On the Chemical Weapons Convention, the report says that the

US is "determined to seek full implementation of the concrete measures in the CWC designed to raise the costs and risks for states or other entities attempting to engage in chemical weapons-related activities. Receiving accurate and complete declarations from all States Parties will improve our knowledge of possible chemical weapons-related activities. Its inspection provisions provide for access by international inspectors to declared and potentially undeclared facilities and locations, thus making clandestine chemical weapons production and stockpiling more difficult, more risky, and more expensive." On the implementation of the CWC within the US, the report says: "The United States commenced its submission of industry declarations at the end of April 2000, and hosted its first industry inspection on May 8, 2000. Industry inspections are proceeding well. Our submission of the industry declarations to the OPCW and commencement of inspections, has strengthened US leadership in the organization as well as our ability to encourage other States Parties to make complete, accurate, and timely declarations."

On the negotiation of the BWC protocol, the report says that "differences in national views persist concerning such substantive areas as on-site activities, export controls, declarations, and technical assistance provisions. The United States remains strongly committed to the objective agreed to in the 1996 Review Conference, but will only accept a protocol that enhances US security and strengthens national and international efforts to address the BW threat... We are working closely with industry representatives to obtain technical input relevant to the development of US negotiating positions and then to reach international agreement on protocol provisions."

The report notes that no new sanctions determinations had been reached during the reporting period but that the US continues to cooperate with other countries in stopping shipments of proliferation concern.

9 November The US Department of Veterans Affairs announces a decision to add Type II diabetes to the list of diseases presumed associated with exposure to Agent Orange. The addition qualifies Vietnam veterans with Type II diabetes for disability compensation. The decision is in response to a recent report by the Institute of Medicine [see 11 Oct] which found "limited-suggestive" evidence of a link between the dioxins used in herbicides and adult-onset diabetes. With this latest addition, the following conditions are now considered 'service-connected' for Vietnam veterans: chloracne (a skin disorder); porphyria cutanea tarda; acute or subacute peripheral neuropathy (a skin disorder); non-Hodgkin's lymphoma; soft tissue sarcoma; Hodgkin's disease; multiple myeloma; prostate cancer; and respiratory cancers. In addition, Vietnam veterans' children with spina bifida are eligible for certain benefits and services.

9–12 November In Moscow, the governments of Russia and the UK co-sponsor an international seminar on the provision of assistance under Article X of the Chemical Weapons Convention. This is the third such annual assistance coordination workshop to be organized by the OPCW, following on from previous events in Sofia and Slovenska Lupca. The workshop was attended by 34 participants from 26 states parties. The workshops are designed for the OPCW Secretariat to provide an overview of the Organization's state of readiness to respond to an attack on a state party with chemical weapons and to allow states parties to present and explain their offers of assistance made under Article X.

10 November In Geneva, the latest issue of the UNIDIR quarterly, *Disarmament Forum*, is focused on biological

weapons under the title "Biological weapons: From the BWC to biotech".

10 November In the US, further delays in the FDA certification of the country's sole anthrax vaccine producer, BioPort Corporation, are announced. The announcement follows a routine FDA inspection during 10–26 October which found 18 flaws in the Michigan-based facility, more than half of them connected to filling and packaging. Other problems reported involved sterility, monitoring of manufacturing facilities and documentation. In response, BioPort management announces that it is now seeking an external contractor to bottle and pack the anthrax vaccine, while its packaging facilities are renovated. It could take more than a year for BioPort to renovate its packaging facilities and win FDA approval for them. BioPort's director of corporate services Mike Tanner is reported as saying "we're optimistic that we could see final approval by the middle of next year." The next day, it is reported that the FDA inspection had also found that BioPort had failed to properly track or investigate serious adverse reaction to the anthrax vaccine. One such case involved a servicewoman who died in June after adverse reactions to the anthrax vaccine. The FDA reported that inoculations from three particular batches of vaccine appear to have resulted in complaints, none of which had been investigated by BioPort. According to an FDA spokeswoman, the inspection report is not considered conclusive and will be followed by a more in-depth and fully-documented inspection.

11–20 November In The Czech Republic, the Office for the Control of the Prohibition of Chemical Weapons conducts a pilot course at Vyškov for live agent training of OPCW inspectors.

12–13 November At Cornell University, the Peace Studies Program, the Center for Nonproliferation Studies of the Monterey Institute of International Studies and the Center for Global Security Research jointly organize a workshop on *Agro-terrorism: What is the Threat?* A total of 37 people, mainly from US academia and government departments and agencies, attend the workshop. The workshop consists of four panels on outlining the issues, technical issues, case studies and response and countermeasures. There is also a dinner presentation by David Huxsoll of the US Department of Agriculture's Plum Island Animal Disease Center.

13 November The US National Domestic Preparedness Office [see 11 Dec 98] publishes remarks by William Patrick III, who used to head the Product Development Division of the former US biological-weapons programme. Asked what poses the greatest bioterrorist threat to the United States, Patrick had responded: "State supported terrorists developing a dry powder, either anthrax, tularemia, or smallpox, and entering into the country through the auspices of the UN. 75 to 100 grams of dry powder, composed of small particles, void of electrostatic charge, and with good secondary aerosol properties would result in large numbers of casualties [if] the powder were placed in an internal environment such as [...] the NY subway system." Asked whether the means for making BW particles without electrostatic charge exist today he had replied: "I certainly hope not. All of our weaponized agents were processed so they had no electrostatic charge or a minimum amount of charge. That knowledge rests with me and possibly two other people from the old program. This will remain with me because this know-how would significantly increase the potential threat caused by bioterrorists." On the feasibility of plague as a terrorist weapon Patrick had said: "Pneumonic

plague is difficult to weaponize. The moon, the tides, and one's soul have to be in alignment to produce a moderate size culture that retains its virulence. The bio decay of the organism at night is about 10 to 12% per minute; decay is geometric in nature. Moreover, bio decay in sunlight even sunlight at sundown is sufficient to produce a bio decay of 50 to 60% per minute, therefore the life of an infectious plague cloud is very short indeed. The dose for man based on the Soviet program, stated that the aerosol dose for man is 3,000 cells. It would be a difficult task for even rogue nations to effectively weaponize plague. The Soviets obviously succeeded in developing plague as a liquid agent, however, they were unable to freeze-dry it." Asked if the bioterrorist threat is overstated, Patrick had replied as follows: "I believe that in the appropriate hands a bioweapon is feasible. I do not believe that Tom, Dick, and Harry type of terrorists can prepare an agent and disseminate it properly to cause many casualties. Sophisticated groups with state support, as well as disgruntled microbiologists and chemical engineers in our university system could pose a threat. Countries such as Iraq and Iran might hire unemployed scientists from the former Soviet Union, with detailed info regarding weaponization. This event would significantly improve BW programs and would thus increase our vulnerability. My experience in Iraq led me to conclude that even with the appropriate strain of anthrax, they were not successful in producing a high quality anthrax product. They were able to achieve a concentration of between 1 and 3×10^8 spores per ml at the end of a 40 hr fermentation. This product would not have met US specifications, and would have been dumped. Their efforts to weaponize, that is the agent in efficient munitions and delivery systems, lack even more credibility.

13–14 November In Moscow, a public forum is organised by Green Cross on *Challenges to Implementation of the CWC in Russia*. The first day of the forum is devoted to discussing the financial, legal, environmental, economic, medical and social challenges at the domestic level in Russia. The key organizations involved in the federal destruction programme provide an update on current chemdemil efforts and an overview of the new structures and plans within the programme. Representatives of the six regions in which chemical weapons are stockpiled give a regional and local perspective. On the second day, attention turns to the international level, with the focus on past and present international assistance programmes, lessons learned and proposals for future international cooperation. During the forum, Zinovy Pak, the director of the Russian Munitions Agency, says that an amount six times larger than the previous sum is planned for 2001 and that Russia will fulfil its CWC obligations. However, Academician Anatoly Kuntsevich says that there is no need to rush to comply with the Convention's requirements within the 10 year timescale. He is reported as saying "our 'poison' can wait, it is sufficiently 'well packed' and is as yet absolutely safe. If the world community is so concerned for its fate, let it assist more actively. Their fears are beyond our means."

14 November In Russia, four biological research institutes, including three that were formerly associated with biological weapons, are joining with the Idaho National Engineering and Environmental Laboratory (INEEL) and Diversa Corporation, which is a California-based bio-engineering firm, to establish a Russian Ecological Biotrade Center, so it is announced by Diversa and the US Energy Department, which manages INEEL. The project is part of the Energy Department's Initiatives for Proliferation Prevention (IPP) programme [see 10 Dec 99]. Its purpose is to explore the "biodiversity potential" of Russia for "developing important new commercial products",

including “novel bioactive compounds from selected pristine and contaminated environments in Russia”. The Department of Energy will provide \$1 million towards the two-year project, with additional funding from Diversa. According to the IPP programme manager at INEEL, Bill Toth, “it is the goal of this project to identify commercial bio-molecular products that will provide revenue to make the ecological center self-sustaining after DOE funding ends.”

14 November The UK Foreign and Commonwealth Office responds to a parliamentary question about the possibility of UK arms exports to Israel since 1990 having been used in southern Lebanon or against civilians in the Occupied Territories. It says that it has no evidence of this, but it goes on: “The Government have, however, long had concerns that CS gas exported from the UK has been used by the Israeli Security Forces against Palestinians and Israeli Arabs. Consequently, since taking office, the Government have refused all applications for permanent licences to export CS gas to Israel.”

According to a report in the *Jerusalem Post*, France, too, has refused an Israeli request for tear-gas weapons. The report claims that the Israeli security establishment is looking for a way to disperse tear gas from a high altitude, and also to be studying other forms of non-lethal weaponry. Apparently, an Israeli Defence Force contingent travelled to the USA a few weeks before the recent Palestinian uprising to “seriously examine a non-lethal weapons system.” The report also says that the Israeli Defence Ministry had a meeting with the Knesset Committee on Defence Spending and with Finance Ministry officials to discuss the need for non-lethal weapons. The report cites “defence sources” as saying that research and development on non-lethal weapons has been speeded up. Similar developments are reported by *Defense News*. In an interview, Major General Isaac Ben-Israel, director of research and development for the Israel Defence Forces, says that “some things we’re already using in the field, but we aren’t announcing our capabilities, because it only takes about a month for the other side to come up with countermeasures”. According to Ben-Israel, his directorate has already funded dozens of development programmes, more than ten of which are undergoing final testing and others which are in production. On the subject of disabling chemicals, Ben-Israel says: “Even though the Chemical Weapons Convention allows tear gas and other agents for crowd control, the state of Israel has some moral, historical and cultural qualms about using gasses.”

14 November In the US Congress, the General Accounting Office issues a report on *Chemical and Biological Defense: Units Better Equipped, but Training and Readiness Reporting problems Remain*. Following the Gulf War, studies had shown that US forces were not fully prepared to defend against chemical or biological weapons. In 1996, the GAO reported that many early-deploying Army divisions still had many of the same problems experienced during the Gulf War [see 12 Mar 96].

The current report was written at the request of the late Herbert Bateman, chair of the Subcommittee on Military Readiness of the House Committee on Armed Services. It is based on reviews of three Army divisions, two Air Force fighter wings and one Marine Corps expeditionary force, although the specific units are not identified. The GAO undertook to see if each unit had the required personnel protection, detection and decontamination equipment and medical supplies and to see if they incorporate chemical and biological defense training into readiness exercises and had authorized personnel to provide this training.

The report found that the units reviewed had all their individual protective equipment and most medical supplies and

detection and decontamination equipment. However, the report found that commanders were not integrating chemical and biological defence into unit exercises and the training was not always realistic. On the whole, though, units were better equipped than in 1996.

14 November The US Department of Defense announces that it plans to build a vaccine production facility to act as a second source for the supply of anthrax vaccine in view of the problems experienced with the current commercial supplier, BioPort [see 10 Nov]. The DoD had solicited expressions of interest back in June [see 30 Jun] and now reveals that it has received responses from a number of companies. Announcing the Department’s decision, Anna Johnson-Winegar says that BioPort’s problems in achieving FDA certification for its facility was “certainly a contributing factor” but she adds that the Department has “had an issue with vaccines for a number of years. It’s a good business decision for us.” Before it can go ahead, the \$500 million project must get Congressional approval, although many in Congress have been arguing for just such a government-owned contractor-operated facility to be established [see 12 Jul]. A new facility could take up to six years to design, build and open for production.

One private contractor which did express interest in operating a government owned facility was Battelle Memorial Institute, which is already a subcontractor for BioPort.

15 November In Tokyo, a former Japanese soldier testifies about his involvement in biological warfare experiments in China during the Second World War. Yoshio Shinozuka [see 1 Jul 98] is the first member of Unit 731 to acknowledge before a court its role in Japan’s biological warfare in northern China. He has been called as a witness for around 180 Chinese suing the Japanese government for compensation and an apology for deaths allegedly caused by Unit 731’s activities. The case had been filed in 1997 and claims that at least 2,100 people were killed in Japanese surgical experiments on Chinese people [see 11 Aug 97 and 22 Sep 99]. According to a later *New York Times* report, this case, which is now in its final stages, has got further than any other seeking damages for crimes committed by the Imperial Army. One reason is the painstaking legal research on the case and the fact that the judge has allowed the introduction of extensive evidence instead of handing down a quick dismissal, as in previous cases. The role of the veterans is also vital to the case, which is described as “already one of the most important to bring Japan to account for the worst episodes of its wartime past”. Explaining his decision to testify, Shinozuka says that he felt “these acts must not be buried away, or else we are condemned to go from darkness to darkness”.

Shinozuka testifies that before an attack on Nomonhan near the Mongolian border, he was responsible for transferring dysentery and typhoid germs from test tubes into bigger jars and taking them to a waiting train. He also tells how he took part in surgical experiments on Chinese civilians after they had been infected with typhoid, cholera, dysentery and other diseases by army doctors and how he helped in the mass production of biological warfare agents for porcelain bombs dropped during Japanese raids in southern China. Later the same day, another Unit 731 veteran, Shoichi Matsumoto testifies that he spread plague-infected fleas from a plane he was piloting over Hangzhou in 1940 and Nanjing in 1941.

15 November The UK Ministry of Defence, responding to a Parliamentary question about the use of pigs in chemical-burn experiments at DERA/CBD Porton Down, describes how skin burns caused by mustard gas heal extremely slowly and are

prone to potentially life-threatening infection: the Porton studies, involving two plastic surgeons, "have conclusively shown that the technique of dermabrasion can significantly accelerate the healing of such burns and reduce the risk of infection". The techniques developed improve the rate of healing by three or fourfold, according to the minister. The evaluation of dermabrasion was completed at the end of September 1998 and the results have been published in the open technical literature. Current research is focused on evaluating novel protective creams that have the potential to reduce the severity of mustard gas burns following exposure.

15 November In Pennsylvania, a US District Court acquits businessman Thomas Eaton of using a chemical weapon. This charge, a federal one, carries a maximum sentence of life imprisonment. Eaton had been accused of introducing chlorine gas into the home of a union official. A 400-litre tank of chlorine had been found outside the house, the inhabitants of which had not been seriously affected.

15–17 November In Geneva, there is the fourth *International Security Forum: Coping with the New Security Challenges of Europe* [see 19–21 Oct 98]. The forum is organized jointly by the Geneva Centre for Security Policy (GCSP), the Swiss Defence Ministry, the Graduate Institute of International Studies, the Eidgenössische Technische Hochschule Zurich and the International Relations and Security Network. On 17 November, there is a workshop within the "cluster of competence" on arms control and disarmament chaired by Fred Tanner and Yuri Nazarkin of the GCSP. Of the 18 papers submitted, one, by Heiner Staub of the AC-Laboratorium Spiez, deals with compliance with the CWC, while another, by Marie Chevrier and Iris Hunger, deals with compliance under the BWC.

15–17 November In Portsmouth, New Hampshire, the Non-Lethal Technology Innovation Center at the University of New Hampshire hosts the second *Non-Lethal Technology and Academic Research Symposium* (NTAR II). The symposium is co-sponsored by the Joint Non-Lethal Weapons Directorate and the National Institute of Justice. During the symposium, there is a presentation on "non-lethal nanotechnology solutions to weapons of mass destruction" by Dr Kenneth Klabunde of Kansas State University, and also a "chem-bio" panel.

16–20 November In Viet Nam, President Clinton is on a state visit, being the first US president to visit the country since President Nixon three decades previously, during the height of the Vietnam War. During a broadcast speech he reaffirms the intention of the United States to co-operate with Viet Nam in, among other things, studying the effects of toxic chemicals that had been used during the war. Vietnamese perceptions of these effects have long continued to obstruct the restoration of good relations between the two countries. At a banquet for President Clinton in Hanoi, Vietnamese Vice-President Tran Duc Luong speaks of cooperation in the cleaning-up of former military bases contaminated by defoliants such as Agent Orange and in aid to victims of these chemicals.

17 November In Russia, the government issues instruction no. 1627-r, *Assignment of responsibilities among federal organs of executive power participating in the fulfilment of international agreements in the sphere of chemical weapons*. This instruction transfers [see 27 Jul] many of the responsibilities formerly held by the RF Ministry of Defence for the chemdemil programme to the Russian Agency for Munitions, headed by Zinovyi Pak. The latter is now responsible for fulfilling Russia's responsibilities under the CWC and is the

plenipotentiary organ for collaboration with the OPCW; co-ordinates work among executive agencies in Russia; is (this is confirmed by a subsequent government instruction, no. 1644-r of 21 November 2000) the state contractor for all work carried out under the CW destruction programme, including storage and transport of stockpiles; participates along with other executive organs in international co-operation on chemical disarmament; is responsible for co-ordinating with the OPCW control over Russian facilities falling within the scope of the CWC and for OPCW inspection visits; is responsible for collating data on CWC scheduled chemicals and other relevant information; and is responsible for liaising with local populations regarding the CW destruction process. The RF Ministry of Defence's responsibilities are now limited mainly to taking part, by agreement with the Munitions Agency, in research, construction and personnel work linked with safe storage and destruction of chemical weapons and participates within its sphere of competence in international negotiations and inspection visits linked with the CWC. The instruction also defines the responsibilities of other federal agencies.

18–19 November In Geneva, the Pugwash Study Group on the Implementation of the CBW Conventions conducts its 14th workshop *Key Issues for the Fifth BWC Review Conference 2001*. Participating are 60 people from 18 countries.

20 November In Geneva, the BWC Ad Hoc Group reconvenes for its twenty-first session [see 7 Aug]. Participating are 52 states parties (the same as those that participated in the twentieth session [see 10 Jul] but with Jamaica and Viet Nam participating instead of Slovenia) and 3 signatory states (Morocco, as before and Egypt and Myanmar). The session is due to end on 8 December.

20 November In Geneva, the French CD delegation (France currently holds the rotating six-month presidency of the European Union) hosts an EU-NGO meeting on the BWC Protocol. The meeting is attended by Ad Hoc Group delegates of most EU member states and around 20 representatives of 12 NGOs. The meeting hears presentations from Graham Pearson of the University of Bradford's Department of Peace Studies, Matthew Meselson of the Harvard Sussex Program, Oliver Meier of VERTIC, Barbara Hatch Rosenberg of the Federation of American Scientists and Kathryn Nixdorff of the International Network of Engineers and Scientists for Global Responsibility. The presentations are followed by discussion on declarations, declaration follow-up procedures, export controls and cooperation.

20 November In The Hague, the OPCW Technical Secretariat publishes the November issue of its quarterly journal, *OPCW Synthesis*. In addition to OPCW contributions, the issue contains eight articles by prominent outside experts, the masthead emphasizing that the "views expressed in *Synthesis* reflect those of the authors and do not necessarily reflect the views of the OPCW". Several of the outside articles address the relationship between the CWC and chemical industry, including articles by representatives of the US, Japanese and European chemical industries. Also presented are articles on the CWC-related policies of two prominent non-member states, Egypt and Israel, one by Professor Gerald Steinberg of Bar-Ilan University and one by Moukhtar El Fayoumi, a retired Egyptian army general. [Note: these two articles are a fine addition to the debate on how the CWC can contribute to security in the region. They are constructive in both tone and content, and particularly pleasing, also, in their apposition.]

21 November In Geneva, during the twenty-first session of the BWC Ad Hoc Group, a further [see 13 Jul] briefing is provided by the Quaker United Nations Office in conjunction with the University of Bradford Department of Peace Studies at which a new Bradford briefing paper on Strengthening the Biological Weapons Convention is presented by the two editors of the series, Graham Pearson and Malcolm Dando: no 32, *Scientific and Technical Implications of the Implementation of the BTWC Protocol* by Graham Pearson, developed from a recent NATO Advanced Research Workshop in Warsaw [see 2-4 Nov]. Also presented is a further 'evaluation paper' in the other Bradford series, The BTWC Protocol: no 19, *The BTWC Protocol: Proposed Complete Text for an Integrated Regime*. This is an update of a previously issued evaluation paper [see 13 Jul] authored by Graham Pearson, Malcolm Dando, Ian Kenyon and Nicholas Sims. The briefing is attended by 45 people from 22 delegations.

21 November In Belgium, *Het Laatste Nieuws* states that four Belgian soldiers had died in Kosovo after exposure to chemical [sic] weapons, the newspaper reporting toxicologist Aubin Heyndrickx [see 3 May 95 and 4 Jun 99] as attributing their death to a virus spread by the Serbs. Defence Minister André Flahaut subsequently tells Parliament that the report has been investigated and that no evidence has been found for Serbian use of biological weapons.

Heyndrickx is later quoted in the Kosovo weekly *Zeri i Kosoves* as saying "I think the cancer of the soldiers was caused by biological warfare agents that were used by the Serbs during the war, and they could have been used against the soldiers while they were serving there as well." The weekly goes on to report that the Serbian army used sarin against KLA forces near Llap and Koshare in Kosovo during the 1999 NATO air campaign [see 4 Jun 99] and claims that sarin was also used against Albanian schoolchildren in Kosovo in 1990 [see 20-22 Mar 90 and 19 Dec 99]. Heyndrickx had examined victims of the Koshare attack and says that they were displaying signs of exposure to biological warfare agents. However, he also says that Western technology is not sophisticated enough to prove that NATO veterans are suffering the effects of biological weapons, adding that "it is the Russians who first produced biological and chemical munitions. The regime of Saddam Husayn, and later Serbia were taught how to produce them."

21 November The UK Ministry of Defence announces that its Gulf Veterans' Illnesses Unit is to take charge of "new arrangements" for participants in the Porton Down volunteer programme [see 9 Nov] who now have concerns about their health. Parliament is told that the GVIU will be resourced for this new responsibility, and the arrangements are described as follows by a junior Defence minister, Dr Lewis Moonie: "Suggestions have been made that some Porton Down volunteers suffer unusual patterns of ill health because of their participation. The Ministry of Defence has seen no scientific evidence to support that belief, but takes such suggestions seriously. Therefore we are: offering volunteers the opportunity for a thorough medical assessment if they have concerns about their health ...; seeking advice from the Medical Research Council on an independent epidemiological study ...; creating a multidisciplinary policy focus within the Ministry of Defence which will be responsible for addressing volunteers' health concerns and liaising with other Government Departments; approaching this issue with openness and a commitment to dialogue with volunteers and their representatives; making public any information which may be of assistance to former volunteers ...; continuing to co-operate fully and provide assistance to the ongoing Wiltshire police inquiry into trials at

Porton Down [see 19 Jun]." In answer to another question, Dr Moonie says that there are no plans for an independent investigation into the volunteer programme, besides that already being conducted by the Wiltshire Constabulary. Also on 21 November, the Deputy Chief Medical Officer of the Department of Health Dr Pat Troop issues guidance to medical practitioners who may be approached by Porton volunteers in the wake of the MoD's announcement. The note gives details of the Medical Assessment Programme (MAP) at St. Thomas' Hospital [see 30 Jan 99] and general toxicity notes on chemical warfare agents, including questions which Porton volunteers might ask along with suggested responses.

22 November In Brussels, Mikhail Gorbachev, in his capacity as president of Green Cross International [see 21 Sep], begins a series of speaking engagements on the dangers posed by chemical weapons with an address to the Belgian Senate. In his speech, he concentrates on the continued existence of chemical weapons stockpiles which he describes as "a threat to all of us". He goes on to say that "nerve gases, mustard gas, lewisite and other dangerous chemical agents kill indiscriminately, especially when they are detonated by terrorist groups in public places or leak from stockpile sites.... These old arsenals also constitute serious public health and environmental hazards to local communities. But our main concern must be global security. The proliferation threat is real. Many of them are small enough to fit into a backpack yet powerful enough to kill thousands. Moreover, they are vulnerable to theft and diversion." While describing the CWC as an "historic breakthrough" he says that it "has not been adequately implemented" due to a lack of resources within Russia and limited international assistance. Gorbachev calls the US Senate's decision to withdraw funding for the Shchuch'ye destruction facility [see 30 Oct] as "short-sighted" and urges other countries to contribute to the destruction of Russian chemical weapons.

23 November In Tehran, the head of the Legal Office for War Veterans, Abbas Khani, tells a seminar that more than 15,000 veterans who had suffered the effects of chemical weapons during the Iraq war had died during the 12 years since the war ended.

The Iranian news agency IRNA also reports that the United States had provided Iraq with chemical weapons it had used during the war and, for this reason, the Iranian Judiciary has said it will take legal action against the United States through the International Court of Justice.

23 November In Geneva, the World Health Organization conducts a briefing on *Global Health Security — Filling the Surveillance Gaps: New Alliances against Infectious Diseases*. The briefing is aimed at staff of permanent and disarmament missions responsible for WHO and disarmament and also BWC Ad Hoc Group delegates. Among the WHO projects described is the *Alliance Against Infectious Diseases*, the aim of which is to strengthen global public health. In so doing — a WHO note explains — the project also offers an opportunity to BWC states parties to implement their obligations under Article X of the BWC, through mobilizing new resources and partnerships.

25 November In Russia, changes in the chemical-weapons destruction programme seem to be presaged by the head of the Munitions Agency [see 17 Nov], Zinovy Pak, in an interview published in *Moscow Times*. Describing the current situation, Pak says that "the budget hasn't allowed us to finance this program — we simply lack the financial means to move forward at the required pace. To a certain extent there may also have

been some lack of a concrete commitment on the part of the government. When it came down to deciding how to divide the scarce resources of the federal budget, there may have been some hesitation about putting it into chemical weapons destruction." He describes the previous funds allocated for the chemdemil programme as "totally insufficient" but points out that funding for 2001 has been increased sixfold [see 13–14 Nov]. On the transfer of the chemdemil programme from the Defence Ministry to his Munitions Agency, Pak says that "we can be more focused and active. We put all our strength into supporting this program. This is a significant change. As head of the Ammunition Agency, chemical weapons are my main concern. The Defense Ministry, on the other hand, had many other issues on its agenda and [chemdemil] was not the only program that was underfunded and behind schedule." Pak says that the minimum cost of implementing the current federal chemdemil plan would be \$7 billion, a figure which he describes as "simply not realistic for us." He therefore says that "we do have to reconsider our plans" and reveals that the existing plan to build destruction facilities at each storage site is being rethought [see also 30 Oct President Clinton]: "In view of how well preserved our stockpiles are, we can certify that chemicals may be transported without any danger to the population. We can guarantee 100 percent safety. But I prefer not to go into this issue now." Pak describes the social construction aspect of the chemdemil programme as "our debt to the population." On the subject of international assistance, Pak says that his aim is "for the whole program to be funded 50 percent by the Russian Federation and 50 percent by foreign governments. Many foreign assistance programs have been very modest — more moral than material." Addressing the attitude of the US Congress to funding for the Russian chemdemil programme, Pak says "everything will depend on the attitude of the United States and more precisely on the goodwill of the US Congress....But I can understand they were a bit shocked by the miserly [level of] funding provided by Russia itself in recent years and so they set conditions on further assistance. We are now ready to meet all of these conditions." Pak also says that he will ensure "total transparency" for Russia's work with foreign donors: "I will personally guarantee [funds] will be appropriately disbursed up to the last kopek."

27 November In Iraqi Kurdistan, the medical survey of the region that is being conducted under the supervision of Professor Christine Gosden of the University of Liverpool [see 15–21 Jul] supported by US government funds has now canvassed 1 percent of the region's population and 10 per cent of the population of Halabja, around 40,000 people in all. The interviews had been conducted by local doctors using a pictogram developed by Professor Gosden to overcome cultural barriers to discussing sensitive health matters. The survey has found that rates of congenital abnormalities are four to five times those suffered by victims of the atomic bomb attack on Hiroshima and that cancer rates are four times the Middle East average. In an article in *US News and World Report*, Professor Gosden explains that the inhabitants of the region are frustrated at the lack of international aid: "They've been experimented on already. They must have help." There is very little scientific study of the long-term effects of chemical weapons on unprotected civilians, as most cases of CW use have been against troops, generally young, fit men.

27 November In Italy, the Defence Minister is asked in parliament whether the country will in fact be able to meet the deadline laid down in the CWC for destruction of its old chemical weapons, and why the workforce hitherto dedicated to this task has recently been cut back. The background pre-

amble in the written parliamentary question notes that the NBC defence establishment at Civitavecchia had been responsible not only for destruction of chemical weapons but also for cleaning-up the civil and military sites where the weapons were originally made or stored. In the course of this work, large quantities of CW agents (mustard, phenyldichloroarsine, lewisite, diphenylchloroarsine, adamsite and phosgene) and filled CW projectiles have been recovered and transferred to Civitavecchia. The mustard gas (130 tonnes) had been destroyed prior to entry into force of the CWC [see 17 Aug 97], and work is currently under way on the destruction of the adamsite, phosgene and chemical-filled projectiles. The recent cuts had obliged the weapons-dismantling facility at Spilimbergo, near Pordenone, to send about 40,000 chemical projectiles to Civitavecchia, where, at its present rate of progress, chemdemil work will not be complete until 2047.

27–28 November At the UN in New York, the UNMOVIC college of commissioners convenes for its third meeting [see 23–24 Aug]. As at the previous ones, there are observers from the IAEA and OPCW. The main agenda item is preparation for the commencement of work in Iraq. The college welcomes the chairman's suggestion that at its next meeting it would receive and discuss a draft inventory of unresolved disarmament issues prepared by UNMOVIC staff, or at least a progress report on current work on the subject. The commissioners are consulted on and supported principles for sampling and analysis, which would form the basis of detailed guidelines for such activities. Two briefings are given, one by UNMOVIC staff and one by the IAEA, which are followed by a discussion on overhead imagery.

27 November–1 December In Singapore, Vietnamese officials and representatives of the US National Institute of Environmental Health Sciences are scheduled to advance the planning for a joint US–Vietnamese research programme on dioxin pollution and other aspects of Agent Orange [see 18 Aug and 16–20 Nov].

27 November–8 December At the UN in New York, the Preparatory Commission for the International Criminal Court (ICC) convenes for its sixth session [see 30 Jun]. The session is expected to concentrate on practical arrangements for the establishment of the Court. Such issues include consideration of a draft relationship agreement between the Court and the UN, a draft on the privileges and immunities of the Court and a draft on the financing of the Court. The opening day of the session also sees announcements by South Africa and Germany that they have completed their domestic ratification processes and would soon deposit their instruments of ratification with the Secretary-General (South Africa deposits on the same day and Germany on 11 December). The UAE has become the 116th country to sign the ICC Statute.

28 November The United Arab Emirates deposits its instrument of ratification of the CWC. In 30 days time, on 28 December, it will thus become the 141st state party to the treaty.

28 November The Palestinian *Al-Hayat Al-Jadida* reports that a man described as a Hamas bomb-maker, Ibrahim Beni Ouda, who had been killed five days previously when his car exploded in the West Bank, had "secretly produced a chemical substance capable of killing thousands of Israelis if placed in the center of an Israeli city". The newspaper attributes this information to an unidentified source in Hamas who also says that Israel had ordered the man's assassination, recognizing the danger which he posed.

28 November A London law firm announces that the hundred-plus veterans of the Porton Down Volunteer Programme [see 21 Nov] who it is representing are to sue the UK Ministry of Defence for damages. The day previously, the firm, Russell Jones and Walker, had presented a proposal to the Ministry of Defence for modest compensation for veterans for the failure of the ministry to obtain prior informed consent for the chemical warfare agents tests. The scheme would not have included compensation for the long-term injuries alleged by many veterans. However, the MoD rejected the proposal arguing that it had no evidence of "unusual ill-health". Lawyer Alan Care expressed his disappointment at the rejection and the MoD's unwillingness to go beyond its offer of further medical assessments [see 21 Nov]. RJW has advised its clients not to cooperate with the Medical Assessment Programme which it sees as "ill considered". In a press release, RJW announces that it will "issue proceedings against the MoD for damages by effectively a US style 'class' action for damages for assault and battery and will be seeking leading Counsel's opinion forthwith." The case could lead to "thousands" of veterans claiming "millions of pounds" according to Care.

28 November At United Nations headquarters in New York, Secretary-General Kofi Annan meets with Iraqi permanent representative Saeed Hasan, following up his meeting with Iraqi government representatives in Qatar earlier this month [see 7 Nov–8 Dec]. It is reported that they agree to begin a dialogue in early 2001 on ending the deadlock over weapons inspections and sanctions.

However, on 30 November, Iraqi deputy prime minister Tariq Aziz, who is in Moscow for talks with Russian foreign minister Igor Ivanov, reportedly responds with "a blunt no" when asked if Iraq would accept the return of UN weapons inspectors. The talks between the two men are described as "difficult" by unidentified diplomats. Although Russia would like to see sanctions on Iraq lifted, it has urged Iraq to enter into a dialogue with the UN about resuming inspections.

28–29 November In Washington, there is the second *National Symposium on Medical and Public Health Response to Bioterrorism* [see 16–17 Feb 99]. Again, the symposium is co-sponsored by the Johns Hopkins Center for Civilian Biodefense Studies, the Department of Health and Human Services and the Infectious Diseases Society of America. The symposium is attended by 900 participants from all but one of the US states and 10 foreign countries. Describing the aim of the symposium later in the Center for Civilian Biodefense Studies' quarterly, its director, Dr D A Henderson, says that "the framework of the 2000 symposium was to describe how biological weapons are a new form of national security threat by way of critically endangering the public's health with epidemic disease. The specific charge for the 2000 symposium was to depict specific components of the problem and offer plausible paths forward." Many papers are presented during the symposium, including Paul Braken speaking on "biological weapons as a strategic threat", Admiral Stansfield Turner speaking on "envisioning world-wide disarmament" and Scott Lillibridge on "intentional epidemics as a human rights issue". On 28 November, there is a special dinner presentation by Richard Butler [see 25 May], now diplomat-in-resident at the Council on Foreign Relations. An abstract of Butler's presentation, posted on the Center for Civilian Biodefense Studies website, contains the following: "Among the key requirements for rendering biological weapons 'crimes against humanity' are establishing a global norm rendering biological weapons completely unacceptable in civil society. Such a norm would enable the community of nations to conduct themselves

in a unified manner, thereby strengthening adherence to an eradication convention. This norm also demands reliable, consistent and credible enforcement and means of verification. In order for enforcements to be made effective, relevant national law needs to be developed (e.g. BW Crimes Against Humanity Treaty). Furthermore, we must establish a place where reports of criminal activity would be adjudicated — a world jury and court." Speaking on the topic of "advances in biotechnology: promise and peril" George Poste, the chief executive officer of Health Technology Networks, says "biology for the first time is losing its innocence. If you speak to many in the biomedical community...they're quite shocked to think that some of the things they've been working on could have malignant applications." Many of the presentations and papers are to be published later in the journal *Public Health Reports*.

28–30 November In Mbabane, Swaziland, the government and the OPCW Secretariat convene a regional workshop on *Implementing Legislation and International Cooperation Issues*. The workshop is intended primarily for CWC states parties and signatory states who are also members of the Southern African Development Conference (SADC). A total of 40 participants from Botswana, Lesotho, Madagascar, Malawi, Mauritius, Namibia, South Africa, Swaziland and Zimbabwe attend.

29 November On Johnston Island in the Pacific, the US Army completes the destruction of the stockpile of chemical weapons there. The last weapons to be destroyed in the incinerators of the Johnston Atoll Chemical Agent Disposal System (JACADS) are land mines containing VX; 13,302 of the total US stockpile of 100,000 such mines had been stored on Johnston Island. Over the past ten years, has destroyed more than 400,000 rockets, projectiles, bombs, mortars, one-ton containers and mines, as well as 2,000 tonnes of sarin, VX and HD. The chemical weapons destroyed by JACADS amount to around six per cent of the total US stockpile.

As they have been since 1997, inspectors from the OPCW are on hand to witness the destruction of the last chemical weapons. On 12 December, the US formally notifies the OPCW Secretariat that all chemical weapons on Johnston Atoll have been destroyed. Later, during 8–11 January, OPCW inspectors conduct a close-out inspection of the co-located Chemical Weapons Storage Facility to verify that all the chemical weapons stored on Johnston Atoll have been destroyed. The CWSF is then closed, the second such facility to be closed in the USA. The JACADS facility will then have to be dismantled and cleaned, a process which could take several years. A formal ceremony is scheduled for autumn 2001.

29 November In Germany, at the ABC- und Selbstschuttschule der Bundeswehr in Sonthofen, the touring exhibition on biological weapons and their history, *Schwarzer Tod und Amikäfer*, ends a one-month showing. The next display will be at the Wilhelm-Fabry-Museum in Hilden, near Düsseldorf, during 11 March–29 April 2001. The exhibition is organised by Professor Dr Erhard Geissler of the Max-Delbrück-Centrum für Molekulare Medizin, Berlin-Buch.

30 November In Harbin, the discovery is announced of original documents about anthrax experiments conducted by Unit 731 during September 1931 to August 1940. It is the first time that original Japanese documents relating to germ warfare have been found in China. According to the documents, experiments were carried out on cattle, horses, sheep, guinea pigs and white rats. The vice-curator of Harbin's museum of Unit 731 crimes says that the documents could be part of the

records of experiments kept by Unit 100 which concentrated on the development of anthrax as a weapon.

30 November In Moscow, the head of the Russian Audit Chamber, Sergey Stepashin, and US Comptroller General David Walker conduct talks on the possibility of joint investigation of, among other things, matters relating to chemical weapons and their elimination.

30 November The US Defense Department announces that it is reducing further [see 10 Jul] its Anthrax Vaccine Immunization Program (AVIP). Under the changes, only personnel serving in areas around Iraq for more than 30 days will receive the vaccine, announces Pentagon spokesman Ken Bacon. By discontinuing the vaccination of personnel serving in South Korea, the DoD estimates that it can save around 12,500 doses per month, which should make the remaining 60,000 doses stretch over the next year. Bacon adds that the Defense Department hopes that the sole producer of the anthrax vaccine in the US, BioPort Corporation [see 10 Nov], will have received FDA approval and be producing more vaccine by the third or fourth quarter of 2001. The Department is also working to find an alternate supplier of the vaccine [see 14 Nov].

30 November–1 December In Florida, a workshop on bioterrorism and the media is attended by federal, state and county officials, media representatives and scientists. The meeting had been convened by the Centers for Disease Control and Prevention, the board of supervisors of Pinellas County, and the University of Southern Florida. The focus is on preparedness for acts of bioterrorism, and a recurrent theme is the need to prevent panic.

1 December In Japan, the Ministry of Health and Welfare has convened a research group to draft a crisis-management manual prescribing measures for responding to terrorist attacks involving toxic chemicals. The group is headed by Tsuyoshi Sugimoto of the Japan Poison Information Centre. Besides the draft manual, which is designed to enable users rapidly to determine the kind of chemical involved in an incident and to guide responsive and remedial action, the group has also compiled a chemical-weapons data-base incorporating information on numerous different toxic agents.

1 December In London, police officer Richard Sams is jailed for three years after being found guilty, at the Old Bailey criminal court, of misusing his CS Spray weapon. He is the first officer to be convicted for misuse of the spray.

1 December At Harvard University, a seminar on *The CWC and the Middle East* is given in the Belfer Center for Science and International Affairs by one of its International Security Program fellows, Dr Eitan Barak.

1 December The UN Secretary-General transmits to the Security Council UNMOVIC's third quarterly report [see 28 Aug]. The report covers the period from 1 September to 30 November including the third meeting of the college of commissioners [see 27–28 Nov]. UNMOVIC chairman Hans Blix reports that there are currently 43 staff based in New York, from 20 countries. In addition, there are 23 people on the roster of trained and qualified inspectors. He also reports on the ongoing second training course [see 7 Nov–8 Dec] taking place in France for 58 people from 23 nationalities. With the completion of the course, Blix says that roster of inspectors should increase to 72, around a third to half the number of inspectors which UNMOVIC would need if allowed back into Iraq. During the

period under review, Blix has provided monthly briefings to the president of the Security Council and has held consultations with representatives of the governments of China, Japan, Singapore, Malaysia, Bahrain, France and Russia. He has also had talks with the director-generals of the IAEA and OPCW. The report goes on to list a number of substantive activities which UNMOVIC has undertaken. Along with the IAEA, UNMOVIC staff have continued to revise and update the lists of dual-use items and materials covered by the export/import monitoring mechanism. The joint UNMOVIC/IAEA unit has continued to receive notifications of exports to Iraq of dual-use goods. Blix also details UNMOVIC activities in preparation for the resumption of inspections in Iraq. Studies are underway to determine the priority of sites to be inspected and the formats of reporting from Iraq. The formats of declarations by Iraq are also being reviewed and revised. UNMOVIC staff are also undertaking studies aimed at the identification of sites at which dual-use items may have been used or installed since UNSCOM ceased operations in December 1998 and are drawing up an inventory of unresolved disarmament issues. The report concludes that "it is evident that UNMOVIC has increased its readiness to carry out its mandated activities".

3–4 December In Scotland, the Non-Lethal Weapons Research Project of the University of Bradford holds a workshop in Edinburgh on the *Future of Non-Lethal Weapons: Technologies, Operations, Ethics and Law*.

4 December In South Korea, the Ministry of Defence publishes a white paper on the country's "main enemy", referring among other things to a "huge stockpile" of biological and chemical weapons in North Korea.

4 December In the Czech Republic, at Mikulov in south Moravia, the Chief of the Army General Staff, Jiri Sedivy, meets with his Austrian counterpart Horst Pleiner, Inspector General of the Austrian Army, to resume discussion of Czech-Austrian cooperation in the field of chemical defence. The cooperation takes the form of training courses using Czech training centres.

4 December In Seattle, the US District Court convicts the former head of the Washington State Militia, John Pitner, and co-defendant Tracy Lee Brown on charges of conspiring to make chemical and other weapons. According to the prosecution, they had wanted to form a private army in order to defend America from a feared invasion by United Nations troops.

4–7 December In Singapore, there is the second *Singapore International Symposium on Protection Against Toxic Substances* (SISPAT II). National presentations are made by representatives from the USA, Sweden, France, the Netherlands and the hosts, Singapore. The OPCW is represented by the director of its verification division, Ron Manley. There is a pre-symposium meeting on *International Cooperation and Networking in Defence Against Chemical and Biological Threats*. Subsequent media reporting focuses on the threat of CW use by terrorists and in regional conflicts as opposed to the large-scale conflicts for which much of the protective equipment was designed. Singapore also announces that it plans for its DSO National Laboratories' Centre for Chemical Defence to become an OPCW-designated laboratory within the next two years.

4–9 December In Johannesburg, under the auspices of the UN Environment Programme, the Intergovernmental Negotiating Committee for an International Legally Binding

Instrument for Implementing International Action on Certain Persistent Organic Pollutants reconvenes for its fifth session, INC-5. Participating are 122 countries, nine UN bodies and other specialized agencies, three other international organizations and 99 non-governmental organizations and other bodies; a total of 600 people. As intended, the committee finalizes its work with the adoption of a draft convention on persistent organic pollutants (POPs). The convention sets out control measures covering the production, import, export, disposal and use of an initial list of 12 POPs. The list consists of eight pesticides (aldrin, chlordane, DDT, dieldrin, endrin, heptachlor, mirex and toxaphene), two industrial chemicals (PCBs and hexachlorobenzene, which is also a pesticide) and two unwanted by-products of combustion and industrial processes (dioxins and furans). A review committee will consider additions to the list on a regular basis. The treaty will be formally adopted by a diplomatic conference in Stockholm during 22–23 May 2001. Once adopted, the treaty requires 50 ratifications before it can enter into force.

5 December In Israel, the Supreme Court rejects the appeal of Nahum Manbar against his conviction and 16-year gaol sentence for supplying the Iranian CW programme during 1990–95 [see 17 Jun 98 and 20 Aug 99]. Later, on 9 January 2001, the Court releases a censored, 82 page copy of its ruling which endorses the findings and conclusions reached by the Tel Aviv district court in 1998. According to a report in the *Jerusalem Post*, in 1998 the state charged that Manbar had signed a contract in 1990 to provide Iran with know-how for the establishment of a factory producing 96 per cent thionyl chloride and the necessary equipment; that he undertook to supply Iran with know-how and a list of all the equipment required to build factories to produce mustard gas, tabun, sarin and soman; and that in 1993 he signed a memorandum of understanding to provide the know-how and a list of equipment necessary to construct a facility for the manufacture of VX-filled binary shells. In his appeal, Manbar had argued that he was not aware that thionyl chloride had military uses and that the mustard gas and nerve agent contract was false and only intended to get more money out of the Iranians. He also claimed that the VX project did not get off the ground.

5 December The OPCW Secretariat publishes the conditions it applies to the granting of financial support to research projects. The general prerequisite is that research must fall within the letter and spirit of Article XI, in other words it must facilitate the development and application of chemistry for purposes not prohibited by the CWC. A research proposal should be relevant to the development goals of the state party concerned, while projects promoting South-South cooperation would be considered particularly worthy of support. The research areas in which the OPCW may provide grants are listed as: technologies for the destruction of toxic chemicals in a safe and environmentally sound manner; management, with respect to the handling and use, of toxic chemicals; development of analytical methods and validation techniques for toxic chemicals; verification techniques and methods relevant to the CWC; medical treatment and prophylactics for exposure to toxic chemicals; alternatives to scheduled chemicals for purposes not prohibited by the CWC; and risk assessment with respect to toxic chemicals.

5 December In the United Kingdom, the government has just made a special grant of £870,000 to the Wiltshire Constabulary to help with the costs of Operation Antler, the investigation into chemical weapons tests conducted on service personnel at CBD Porton Down [see 19 Jun and 21 Nov]. It is also reported

that some of the scientists who conducted the tests could face criminal charges for assault, wounding and the administration of poisons. The head of the police investigation, Detective Superintendent Gerry Lockett, has written to more than 400 Porton volunteers telling each to which agent they were exposed. Although the Ministry of Defence itself cannot be prosecuted due to Crown Immunity, Lockett notes that immunity does not apply to individuals either formerly or currently employed by the MoD who have committed criminal offences. He is quoted as saying that “the individuals responsible for the studies must still be alive in order to provide evidence as witnesses or be formally interviewed as potential offenders. The final decision for prosecution is one for the Crown Prosecution Service.”

5 December At the UN in New York, the Security Council passes resolution 1330 which extends for a further 180 days the provisions of resolution 986 which established the ‘oil-for-food’ programme in 1995. At paragraph 19, the resolution reiterates the request included in resolution 1284 for UNMOVIC and the IAEA to complete the revision and updating of the lists of items and technology to which the import/export mechanism applies. It therefore sets 5 June 2001 as the date by which such review and updating must be carried out. The Executive Chairman of UNMOVIC later reports that his staff held consultations with representatives of interested states on suggested revisions to the chemical and biological lists in New York during 13–14 February 2001.

5 December In the United States, where the Environmental Protection Agency has just reached a voluntary agreement with Syngenta, the chief manufacturer of diazinon, to phase out all home and garden applications of the pesticide over the next four years, the government announces a ban on the chemical, which used to be one of the country’s most widely used insecticides. Although some commercial crop-protection uses will still be permitted, the decision is portrayed as “a major milestone in pesticide regulation, effectively marking the end of organophosphates” (OPs). The Food Quality Protection Act of 1996 had required sweeping safety reviews of all pesticides, starting with the OPs, and among the resultant studies were ones linking them to neurological and other disorders in children. Syngenta officials are reported as saying that “they can’t justify paying for new studies needed to prove diazinon’s safety for consumer use”.

5 December The US Defense Department releases Volume 5 in the series *A Review of the Scientific Literature as it Pertains to Gulf War Illnesses* that it had commissioned from the RAND Corporation [see 19 Oct 99]. By William Augerson, the new volume is entitled *Chemical and Biological Warfare Agents* and, in 265 pages, summarizes what the open literature reports on the health effects of such CBW agents as might conceivably have affected Desert Shield/Storm service personnel. RAND had initially been asked to review sarin, cyclosarin (GF), thiosarin, mustard gas and phosgene oxime, these being agents that Iraq was thought to possess, but had later added tabun, soman, VX, lewisite, other mustards (Q, T, HT and HN), ricin, aflatoxin and trichothecene mycotoxins. No microbial agents are considered. The report observes that very little of the literature reviewed addressed possible long-term effects of exposure to agent-dosages below those that cause acute clinical symptoms, and concludes that “Considerably more research is needed in this area before even preliminary suppositions can be formulated”. Among the recommendations of the report is that “interactions between the various chemical warfare agents and other chemicals on the battlefield,

as well as other psychosocial factors, such as stress, will need to be examined to develop a more complete understanding of the possible health consequences of exposure to chemical and biological warfare agents”.

The Defense Department, in the person of Dr Bernard Rostker, the Under Secretary for Personnel and Readiness, also releases new projections of the nerve-gas plume that might have been established during the demolition operations at Khamisiyah in Iraq during March 1991 [see 7 Dec 99]. In 1997 the department had notified about 100,000 US veterans that the Khamisiyah demolitions might possibly have exposed them to low levels of sarin. Based on updated data and modelling, the new projections suggest that about one third of those veterans would have been outside the plume, while another 35,000 might have been within it. New notifications have now been sent out to all the veterans concerned.

5–6 December In Edinburgh, Jane’s Information Group convenes NLW 2000, its fourth conference on non-lethal weapons [see 1–2 Nov 99]. The subject of the conference is *Operational and Practical Challenges: Bringing the Military and the Law Together*. According to its brochure, the “use of Non-Lethal Weapons by both the military and law enforcement organisations, is growing at an unprecedented rate. As peacekeeping operations in the Balkans and violent protests in Europe and North America have clearly demonstrated, the need for effective and reliable non-lethal options has never been greater”. Once again, the conference is chaired by Professor Malcolm Dando of the University of Bradford.

One aspect of the conference that receives subsequent media attention is the suggestion by Russell Glenn from RAND that the CWC be “updated” so that researchers can develop gases which calm crowds rather than kill them. Col George Fenton, head of the US Joint Non-Lethal Weapons Directorate says that he would like “a magic dust that would put everyone in a building to sleep, combatants and non-combatants”. Fenton also announces that he has been tasked with organizing a high-level multinational conference scheduled for late 2001. According to John Alexander, formerly of the Los Alamos National Laboratory, the CBW treaties are already “doomed” as they are, or will be, broken by rogue states or groups. By abandoning the treaties he says, the US could deploy weapons which can destroy plastic engine fittings or make rubber tyres brittle. However, David Fidler of Indiana University argues that renegotiating the CBW treaties would be “disastrous” as it would re-ignite some countries’ desire for weapons of mass destruction. The OPCW also comments on the suggestion: Dr Ralf Trapp, its head of government relations, says that rewriting the CWC would endanger world security “creating a spiral of increasing risk”. Echoing this, Joseph Rutigliano, a US Marine Corps attorney, says that using advanced weapons on less developed nations could provoke them to respond with nerve gas or other lethal agents.

5–7 December The US Army Medical Research Institute of Chemical Defense (USAMRICD) presents a second annual satellite broadcast on *The Medical Response to Chemical Warfare and Terrorism*. The broadcast incorporates sections from the 1999 programme, and additional and revised material including interviews with scientists discussing their research on medical countermeasures, updates on treatment and field-management issues, and a live question-and-answer segment with a panel of experts.

6 December In Beijing, the official English-language newspaper *China Daily* carries a long article reiterating the accusations of germ warfare that had been made against the

United States during the Korean War. The article quotes from a recently published Chinese account by a military historian at the Army Academy of Military Sciences, Senior Colonel Qi Dexue. The article also quotes extensively from *The United States and Biological Warfare* (1998) by the Canadian scholars Stephen Endicott and Edward Hagerman [see 20 Jan 99] but makes no mention of the criticism of that work or of the contrary evidence that has subsequently been adduced by Milton Leitenberg and Kathryn Weathersby [see 25 Mar 99].

6 December Afghanistan may retaliate with CBW weapons against any new US attack on Usamah Bin-Ladin, so Shaykh Wakil Ahmad, the Taliban Foreign Minister, reportedly stated at a recent news conference in Quetta upon his return from last month’s Islamic summit in Doha. It is also reported that in his two most recent interviews, Bin-Ladin defended his right and the right of Muslims to possess chemical, biological and nuclear weapons. In Pakistan some weeks previously, an editorial in the Peshawar *Wahdat* had given credence to a press report stating that “the United States and Russia have jointly conspired to use chemical weapons against the eminent Arab holy warrior, Usamah Bin Ladin”.

6 December The OPCW Secretariat releases an assessment of its approach to the verification of old chemical weapons produced between 1925 and 1946. Since June, the Secretariat has been implementing the “usability” criteria set out in its document released in February. In this period, the Secretariat carried eight OCW inspections in seven states parties. The “usability” criteria were applied in four of the inspections; during the other four no OCW from the period 1925–46 were present. The current document sets out to assess the results of this approach and to address and resolve the issues which have arisen through its use. It states that “in their current form, the usability criteria are technically sound, necessary and appropriate”.

6 December The OPCW Secretariat announces the strengthening of the international cooperation and assistance activities of the Organization. In its note announcing these changes, the Secretariat explains its action as follows: “While Article XI provides a context for the peace dividend of the disarmament and non-proliferation objectives under the Convention, Article X serves as its safety net. Both provisions are of primary importance for achieving true universality of the Convention and therefore the ultimate success of its regime.” The changes involve a restructuring of the Secretariat’s international cooperation and assistance division and a consolidation of the relevant parts of the OPCW programme and budget. While retaining its original three-branch structure, the ICA division’s emergency assistance and protection branches are merged and a new branch, implementation support, is created. The international cooperation branch remains as is, but is given a more substantive mandate. The new implementation support branch will plan and coordinate all Secretariat activities in relation to assisting states parties with CWC implementation. According to the note “the Branch will thus become the focal point for analysis of the problems associated with the implementation of the Convention and for rendering the necessary support to the relevant National Authorities in all key areas, including declarations and inspections, legal issues, administrative capacity building, regional and international cooperation, and assistance and protection.” The note also announces that each branch will be headed by an official at a D-1 level.

6 December In the United Kingdom, the Queen opens the 2000–01 session of Parliament. She announces that the

government will publish a draft bill “to improve the transparency of export controls and to establish their purpose”. The announcement follows a government white paper on strategic export controls in 1998 [see 1 Jul 98] and the recommendation of the Scott inquiry [see 15 Feb 96] that the then government study the establishment of a new legislative framework for export controls to replace the 1939 Import, Export and Customs Powers (Defence) Act. However, the government acknowledges that there is unlikely to be time in the 2000–01 legislative calendar for the draft bill with a general election likely to be called in early 2001. In January, Sir Richard Scott had criticised the delay in action since his report was published in 1996 as “extraordinary and unacceptable” [see 17 Jan]. The draft bill will strengthen controls on nuclear, chemical and biological weapons and will also include provisions for the control of intangible technology transfers.

7 December In Geneva, the BWC Ad Hoc Group hears presentations from the Dutch and Swiss governments on their respective bids for the seat of the future OPBW.

The Dutch bid is introduced by CD permanent representative Chris Sanders and the vice-mayor of The Hague Bas Verkerk. Arguing that The Hague is the “bio-logical” choice of location for the Organization, Sanders says “we believe that location of OPCW and OPBW in the same city will bring many benefits to both organisations. Not only will the two organisations be able to constantly learn from each other’s experiences, they will also be able to jointly help achieve the political mass necessary for the eradication of these inhuman weapons of mass destruction. Furthermore, diplomatic representation to these two organisations in one city will be an efficient choice for States Parties and both OPCW delegations and National Authorities will benefit from the presence of a related international organisation in The Hague.” The details of the Dutch bid are presented in a 60-plus page response to the questionnaire issued by the friend of the chair on the seat of the organization earlier in the year. The bid includes the following elements: a building constructed in cooperation with the OPBW PrepCom with up to 10,000 metres of office space; land provided free of charge, funding of conference facilities for plenary meetings of the PrepCom and Conference of the States Parties for up to 10 years; free accommodation for the PrepCom for a maximum of five years and all the privileges and immunities for staff and delegation members which are currently granted to the OPCW.

The Swiss presentation is entitled *Geneva’s Humanitarian Tradition: The Best Cure for Biological War*. It notes that since the 1925 Geneva Protocol “Geneva has been home to all international efforts to ban biological weapons”. The details of the bid are contained in the 60-page response to the aforementioned questionnaire. They include: rent-free premises for five years and subsidised rents thereafter; a free plot of land if the Organization decides to construct its own building; subsidised office rents for permanent delegations from developing countries; and the same privileges and immunities for staff members as apply to other international organizations in the city.

7 December In France, the Assemblée Nationale Commission de la Défense Nationale et des Forces Armées submits its report on the proliferation of weapons of mass destruction and their delivery systems, which has been produced by Deputies Pierre Lellouche, Guy-Michel Chauveau and Aloyse Warhouver [see 31 May].

7–12 December In London, British and North Korean officials hold talks on a variety of subjects, including non-proliferation

and the agreement to establish diplomatic relations between their two countries.

8 December In Russia, the Director-General of the Munitions Agency, Zinovi Pak, tells reporters that the United States is to invest as much as \$286.5 million in the building of the chemdemil facility at Shchuchye [see 30 Oct]. Detailed US-Russia talks on the subject are scheduled to begin the next day. According to the CTR programme manager for chemdemil, Adolph Ernst, the Russians are keen to see the Shchuchye facility become operational by 2004, much earlier than the previous target of 2008. Three days later, Senator Richard Lugar arrives in Moscow for a ten-day visit during which he will hold talks with Defence Ministry staff and visit a number of facilities, including Shchuchye.

8 December In Geneva, the twenty-first session of the BWC Ad Hoc Group [see 20 Nov] comes to an end. Speaking to journalists, Ad Hoc Group chairman Tibor Toth says “We have not made very spectacular progress...At the same time this is a period of quiet investment. My hope is that the investment will provide the yields next year”. An unidentified senior US official is quoted in *Arms Control Today* as saying that the negotiations could soon head into the endgame. Another senior diplomat says that “there is a feeling that one could foresee the right mix of solutions” to outstanding issues. The twenty-first session had “proved to many delegations” that the goal of completing the protocol by the fifth BWC review conference which begins in November 2001 is “doable”, according to the unidentified diplomat. As in its previous session, much of the work of the Ad Hoc Group has revolved around private consultations with the chairman. Seth Brugger, quoted in *Arms Control Reporter*, notes that “given that the private consultations are the session’s focal point but remain private, it is difficult to measure the degree of progress the Ad Hoc Group has made”.

8 December The OPCW Director-General issues a statement to all delegations and all subscribers to *OPCW Synthesis* on two articles about the Middle East that had appeared in the November issue of the magazine [see 20 Nov]. The statement regrets that only a general disclaimer appeared in *Synthesis* with no specific reference to the two articles. This situation led to what the statement describes as “the publication of what can be summarised as unsubstantiated allegations against the Islamic Republic of Iran and its commitment to the CWC, as well as allegations of the ineffectiveness of the CWC regime in general”. The Director-General announces that he has ordered a full investigation into the publication of material which caused “serious embarrassment to the State Party concerned and, indeed, to the Secretariat itself”.

The statement continues, “on the substance of the matter the Secretariat wishes to reiterate that it has no reason whatsoever to question Iran’s full compliance with the CWC, and that the application of verification measures in Iran is strictly in accordance with the Convention. There are no grounds for any concern or ambiguity in this regard. Furthermore, all verification activities in the Islamic Republic of Iran have been conducted in an atmosphere of openness and transparency, and with the full cooperation of the Iranian Government. Equally, none of the 140 other States Parties has raised any such concerns within the OPCW, which is the sole competent and legitimate authority to verify compliance with the Convention. The Secretariat also rejects the above-mentioned allegations of the ineffectiveness of the CWC regime. ... I would like to conclude with offering, once again, our sincere apologies to the Islamic republic of Iran.” The statement is also widely reported in the Iranian media.

On 27 December, one of the authors of the two articles, Professor Steinberg, responds to the statement in a clarification which he circulates on 4 January. The clarification includes the following: "In analyzing Israeli policy, it is necessary to understand that aspects of Iran policy regarding the CWC are part of this concern. If the OPCW and the government of the Islamic Republic of Iran can demonstrate that these concerns are invalid, this would be a positive development." It goes on to say that "the Director-General's statement and the assertion that Iran is in full compliance with the CWC ignores the substantial questions on this issue, and highlights the concerns of analysts and policy makers around the world regarding the politicization of this organization. In summary, the reasons for an investigation into the publication of these articles, the claim of 'serious embarrassment' to the OPCW Secretariat, and the apology to the Iranian government are unclear."

8–9 December In Zurich, Green Cross International holds a workshop on strategies for the internationalization of the CWC campaign that was launched in Switzerland earlier in the year [see 21 Sep]. The workshop is intended to make national Green Cross organizations aware of the CWC campaign and the issues involved. It is also intended to secure commitments from the other Green Cross organizations to begin, or at least contribute to, CWC campaigns in their own countries, with the support of Green Cross Switzerland. Green Cross International president Mikhail Gorbachev has begun a series of international speaking engagements to raise awareness of the issue in other countries [see 22 Nov].

10 December In Australia, there is a symposium on bioterrorism within the framework of the international congresses on virology and bacteriology that are taking place in Sydney. As at a similar symposium the year previously [see 8 Aug 99 and 15 Aug 99], presentations are heard from Ken Alibek, Christopher Davis and Donald Henderson, the newspaper reports of which make them sound much like the previous years'.

11 December In Tokyo, a Public Hearing on Crimes Against Women in Recent Wars and Conflicts is sponsored by non-governmental organizations. Testimony is given on damage to reproductive ability caused by chemical weapons, and also on rape and forced sterilization. Testifying are 15 women from 14 countries. Among them is Truong Thi Ngoc Lan from Viet Nam, who associates the physical and mental afflictions of her 31-year old son with her own exposure to chemicals during the Vietnam War.

11–14 December In Tehran, a Russian delegation led by Yuriy Kapralov, director of the security and disarmament department of the Russian Foreign Ministry, conducts bilateral talks with Iranian officials. The news agency ITAR-TASS describes the talks as the latest regular round of consultations on nuclear non-proliferation, the CWC, the BWC and other aspects of arms control and international security.

11–15 December In France, representatives of states parties to the Convention on Biodiversity, and of other states as well, convene in Montpellier for the inaugural meeting of the Intergovernmental Committee for the Cartagena Protocol on Biosafety. A statement on biological weapons for crop eradication [see 2 Nov Vienna], endorsed by numerous NGOs, is circulated during the meeting. The statement calls for the meeting to include discussion of biological crop eradication agents in its agenda and urges governments to "condemn the development and any use of genetically engineered organisms

for use as biological weapons to eradicate crops as a plain violation of the spirit and letter of the Biosafety Protocol." The statement goes on to invite governments "to reject the use of biological agents to trigger plant disease epidemics in crops, such as strains of *Fusarium oxysporum* and *Pleospora papaveraceae*, whether genetically modified, products of mutagenesis or other breeding, or naturally occurring virulent isolates, to eradicate illicit crops in Colombia and the Andes....We also invite governments to commit to reject the use of biotechnological development in the production of biological agents as biological weapons." The statement is endorsed by 73 NGOs.

12 December In Bern, Mikhail Gorbachev, in his capacity as president of Green Cross International, continues his series of speaking engagements [see 8–9 Dec] on the dangers posed by chemical weapons with an address to the Swiss parliament. He mentions the environmental effects of stored chemical weapons, especially those in Russia, and the risk that terrorists could steal chemical weapons from storage sites.

12 December In the United Kingdom, the government is criticized in the House of Lords for its licensing of exports to Sudan of two chemicals on the Australia Group CW-agent precursor control list [see 21 Jul]. When the government had been asked, in October, how it had assured itself that the exported chemicals — triethanolamine and sodium sulphide — would not be used in the manufacture of chemical weapons, a Trade & Industry Minister, Lord Sainsbury, had stated that, as "confidential information is involved, the parties concerned will be asked if they consent to its disclosure". It now transpires, from a speech by the questioner, Baroness Cox, that two of the companies had, during the interim, objected to disclosure.

13 December In Japan, the Defence Agency will shortly be opening a BW research unit, so it is reported in the *Daily Yomiuri* [see also 4 Nov]. The research unit is scheduled to open in March in the Mishuku garrison in Setagaya Ward in Tokyo. The unit will be used to formulate Japan's response to biological weapons, a threat which has been taken more seriously since the launch of a missile by North Korea over Japan in 1998, following a proposal by the US. It is later reported that a Defence Agency panel has proposed that hospitals and public bodies conduct drills to prepare for potential bioterrorist attacks. The panel also recommends that the Agency compile guidelines for the diagnosis and treatment of illnesses and organize special squads around the country to respond to attacks. The proposals should be submitted by the panel in February. The draft FY 2001 budget sets aside 2.9 billion yen for countermeasures against chemical, biological and nuclear attacks.

13 December In Hanoi, a local police source tells reporters that 55 schoolchildren had been poisoned over the past few days by chemicals left over from the Vietnam War. Said to have been involved is CS gas abandoned by American troops and now used by local families to control ants and termites [see also 19 Jan 98].

13 December The US General Accounting Office publishes a report, *State Department: Serious Problems in the Anthrax Vaccine Immunization Program*, detailing serious problems in the State Department's voluntary programme to vaccinate its overseas staff against anthrax.

13 December The US National Intelligence Council (NIC) publishes a report, *Global Trends 2015: A Dialogue About the*

Future with Nongovernment Experts. The report expands upon a previous report, *Global Trends 2010* which was published in 1997. *Global Trends 2015* has had input not only from the National Intelligence Officers who make up the NIC, but also from outside experts, particularly through a series of major conferences co-sponsored with other government and academic institutes. The report identifies seven key 'drivers' which will shape the world in 2015: demographics, natural resources and the environment, science and technology, the global economy and globalization, national and international governance, future conflict, and the role of the United States. One threat identified under the future conflict driver is of "asymmetric threats in which state and nonstate adversaries avoid direct engagements with the US military but devise strategies, tactics, and weapons — some improved by 'sidewise' technology — to minimize US strengths and exploit perceived weaknesses." The report also analyzes the character of future conflicts in which weapons of mass destruction are widely available: "The risks of escalation inherent in direct armed conflict will be magnified by the availability of WMD; consequently, proliferation will tend to spur a reversion to prolonged, lower-level conflict by other means: intimidation, subversion, terrorism, proxies, and guerrilla operations." Addressing chemical and biological threats to the US, the report assesses that such threats "will become more widespread; such capabilities are easier to develop, hide, and deploy than nuclear weapons. Some terrorists or insurgents will attempt to use such weapons against US interests—against the United States itself, its forces or facilities overseas, or its allies. Moreover, the United States would be affected by the use of such weapons anywhere in the world because Washington would be called on to help contain the damage and to provide scientific expertise and economic assistance to deal with the effects. Such weapons could be delivered through a variety of means, including missiles, unmanned aerial vehicles, or covertly via land, air, and sea." The report describes the future arms control agenda as "uncertain". It goes on to say that "prospects for bilateral arms control between the major powers will be dim over the next 15 years; progress in multilateral regimes — with less intrusive and lower-certainty monitoring — probably will grow sporadically....Efforts will be incremental, focusing mainly on extensions, modifications or adaptations of existing treaties, such as START III between the United States and Russia or a protocol enhancing verification of the Biological Weapons Convention. ... Formal agreements probably will contain limited monitoring or verification provisions." On the subject of technology transfers the report says "export regimes and sanctions will be difficult to manage and less effective in controlling arms and weapons technology transfers."

14 December From Japan, the Director General of the Office for Abandoned Chemical Weapons [see 1 Apr 99], Akio Suda, publishes an article in *The ASA Newsletter* reviewing progress in the destruction of Japanese chemical weapons abandoned in China [see 13–27 Sep]. He states that April 2007 is the target date for completion of the chemdemil programme, but recognizes that it is "not an easy target at all". The study or development of a technology system for the demilitarization of the major types of ACW should lead to the construction of pilot facilities and then complete facilities. In FY 2000, the government of Japan has allocated \$33 million for excavation work, technology research and tests and other activities. According to Suda, the main excavation effort will be focused in Haerbaling, where 90 per cent of the total ACW are estimated to be buried. However, due to the scale of the operation and the condition of the munitions, it will take "several years of preparation" before excavation can begin. In the article, he also gives more detail on the recent excavation in Beian [see 13–27

Sep] during which 897 chemical munitions had been recovered and transported to a storage facility.

14 December In Brussels, NATO publishes its report on *Options for Confidence and Security Building Measures (CSBMs), Verification, Non-Proliferation, Arms Control and Disarmament*. The report had been called for by the 1999 Washington Summit of NATO heads of state [see 23–25 Apr 99], since which time NATO has undertaken what the report describes as "an extensive and comprehensive evaluation of overall developments, have taken stock of Allies' efforts in these fields, and have considered a number of options for the future". The report gives an overview of developments during the last decade in the nuclear, biological and chemical environment and of the activities of NATO's newly established WMD Centre [see 22 May].

14 December In the UK House of Commons, there is a debate on strategic export controls and in particular on the recent reports of the Quadripartite Select Committee and the government's responses thereto [see 21 Jul and 25 Jul]. During the debate, the issue of the export of CS gas to Israel is raised by Dr Phyllis Starkey: "The Minister said last month in a written answer [see 14 Nov] that the Government had not approved any licences for permanent export of CS gas to the Israeli Government because of concern about the use of the gas against Palestinians and Israeli Arabs. I welcome the fact that he also said that he had refused those applications but I should be grateful if he would explain how that statement is consistent with the 1998 Government report on strategic arms exports [see 3 Nov 99], which details CS grenades, presumably containing CS gas, among standard individual export licences issued. That does not seem consistent." In response, Foreign Office Minister Peter Hain, says "I have yet to be shown that an export licence that has been agreed by the present Government has resulted in arms being used in contravention of our criteria that it should not be possible for them to be used for external aggression or internal repression. ... If anyone comes up with evidence relating to Indonesia, Israel or anywhere else, we will act appropriately and learn from the experience, but that has not happened, which is significant. We stopped the export of CS gas that could be used by the Israeli defence force or in the occupied territories. Since the troubles have set in with such apparent permanence in the past few weeks, we have scrutinised each licence application carefully to see whether it conforms with our strict criteria."

14 December In Washington, DC, the Center for Strategic and International Studies releases a report, *Combating Chemical, Biological, Radiological, and Nuclear Terrorism*, by the CBRN Terrorism Task Force, led by Frank Cilluffo, of the CSIS Homeland Defense Working Group. The executive summary of the report opens thus: "The United States currently lacks a comprehensive strategy for countering the threat of terrorism involving nuclear, radiological, chemical, and—most glaringly—biological weapons. Although federal, state, and local governments have made impressive strides to prepare for terrorism using these weapons—the whole remains less than the sum of the parts. As a result, the US is now at a crossroads. While credit must be given where it is due, the time has come for cold-eyed assessment and evaluation based on program reviews and other measures of effectiveness. This report offers a roadmap of near-term and long-term priorities for senior federal officials to marshal federal, state, local, private sector, and nongovernmental resources for defending the US homeland against CBRN (chemical, biological, radiological, and nuclear) terrorism." In its consideration of preventative

measures the report recommends the following: "Build international consensus against CBRN weapons proliferators. Developing a consensus of leading nations that CBRN terrorism is a problem critical to each state's security, and causing the international community to close ranks in isolating states that do develop such weapons, should be one of the President's most important diplomatic initiatives. Strengthen the Biological Warfare [sic] Convention (BWC) while finding a reasonable balance with industry's main concerns. Though an imperfect instrument (verification being difficult and enforcement even more so), the BWC is valuable because it strengthens the international norm against development of biological weapons and helps discourage nations bent on acquiring biological warfare capabilities."

The report concludes: "A comprehensive strategy for CBRN counterterrorism must marshal and harmonize federal, state and local resources. Newcomers to the national security arena, such as the biomedical and public health communities, will be critical to this effort. Developing, implementing, and sustaining such a strategy should be one of the highest priorities for US national security in the 21st century."

15 December In Russia, the governor of Penza Region, Vasiliy Bochkarev, determines that the stocks of chemical weapons located in the region (chiefly nerve-gas munitions, at Leonidovka [see 26 Sep 94]) should be transported to the Kurgan region, even though this is currently illegal under federal law [see 30 Oct, President Clinton], for destruction in the chemdemil facility under construction at Shchuch'ye.

15 December The OPCW concludes its first Associate Programme [see 18 May]. The three month course had been conducted at the OPCW, the University of Surrey in the UK and at numerous industrial chemical plants in the Netherlands. The programme included participants from 12 countries in Africa, Asia, Eastern Europe and Latin America.

15 December In the United States, the President and the Congress receive the second annual report of the Advisory Panel to Assess Domestic Response Capabilities for Terrorism Involving Weapons of Mass Destruction, which is chaired by the Governor of Virginia, James S. Gilmore, III [see 15 Dec 99]. In this second report, the advisory panel focuses on an assessment of specific programmes for combating terrorism and larger questions of national strategy and federal organization. In this regard, it found that "the United States has no coherent, functional national strategy for combating terrorism". The report therefore recommends that the next president should establish a National Office for Combating Terrorism in the Executive Office of the President and that the Senate and House of Representatives should establish either a joint terrorism committee or separate committees in each House. On the subject of improving functional capabilities, the report recommends an expansion and improvement in research, development, test and evaluation of reliable sensors so that the capability for chemical and biological agents is no less than current capability for nuclear and radiological agents. On 17 July, the panel had received a briefing from the Defense Department's Joint Program Office for Biological Defense which provided an overview of methods used to detect biological agents in different environments. The report includes the following on the domestic control of material and equipment which could be used by terrorists: "Controls inside our borders that can hamper efforts of potential terrorists — be they foreign or domestic — by denying them their 'tools of the trade', can be established or strengthened without additional authority. We recommend the Department of Justice, in consultation with

appropriate committees of the Congress as well as knowledgeable members of the scientific, health, and medical communities, and State and local government, continually review existing statutory authorities and regulations. The purpose would be to propose specific prohibitions, or at least mandatory reporting procedures, on the domestic sale and purchase of precursors and special equipment that pose a direct, significant risk of being used to make and deliver CBRN weapons or agents." In this, the report echoes the recent recommendations of the National Commission on Terrorism [see 12 Oct and 5 Jun]. In its many appendices, the report includes a case study of domestic preparedness measures in Israel. Another appendix provides an overview of the TOPOFF 2000 exercise [see 20–30 May], observations of which two panel members reported to the advisory panel at its 17 July meeting.

19 December In Guam, the Governor's Office and the Airport Authority reportedly receive an e-mailed threat of CBW attack. Local reporter Gumataotao quotes the message as follows: "As we did what we wanted with the US embassies, we have a propaganda from our leader Usamah Bin Laden to destroy Guam, which is a union territory of the US government. Our main objective is to spread our message and not harm children and innocent people. The attack on Guam will take place on Christmas Eve by deploying V-agents and hazardous bioagents." Hotels, restaurants and public places are specified as targets for the threatened attack.

19 December In the US Defense Department, the Office of the Special Assistant for Gulf War Illnesses posts a new Environmental Exposure Report on the internet, *Depleted Uranium in the Gulf (II)*. It is a second interim report and is intended to "determine whether DU posed an unacceptable health risk to American forces and whether personnel had been adequately trained to deal with this risk". It updates its predecessor [see 4 Aug 98], taking in the findings from seven DU studies published during the interim, including ones from the RAND Corporation [see 15 Apr 99] and the US Institute of Medicine [see 7 Sep] and also reviewing the medical testing of DU-exposed veterans. The report concludes thus: "Based on data developed to date, we believe that while DU could pose a chemical hazard at high doses, Gulf War veterans did not experience intakes high enough to affect their health. Furthermore, the available evidence indicates that due to DU's low-level radioactivity, adverse radiological health effects are not expected. The available scientific and medical evidence to date does not support claims that DU caused or is causing Gulf War veterans' illnesses. Nevertheless, medical research to date has suggested several areas of concern for soldiers with embedded DU fragments that warrant further medical follow-up which DoD and VA are committed to perform. This investigation is ongoing, and we will continue to apply the lessons learned to safeguard the health of our servicemembers."

20 December In the United States, the Presidential Special Oversight Board for Department of Defense Investigations of Gulf War Chemical and Biological Incidents [see 16 Nov 99] submits its final report to the Secretary of Defense. Among the numerous topics covered in its 90 pages is the transition from OSAGWI to OSAGWIMRMD (the Office of the Special Assistant for Gulf War Illnesses, Medical Readiness and Military Deployments), as well as OSAGWI case narratives and environmental exposure reports, Presidential Advisory Committee *Special Report* recommendations, an overview of Gulf War illnesses, the role of stress as a contributing actor in Gulf War undiagnosed illnesses, lessons learned from the Gulf War

and ongoing initiatives, and Board findings, recommendations and observations.

21 December In Washington, DC, an editorial in the Stimson Center newsletter *The CBW Chronicle* identifies two issues that should head the chemical-biological priorities of the administration of President-elect George W Bush. One is removal of the "killer conditions" from the US CWC implementing legislation that could preclude challenge inspections at US facilities and removal of inspection samples from US soil. The other issue is compliance with the legislation passed by the Congress a year previously, the *National Security and Corporate Fairness under the Biological Weapons Convention Act*, obliging the federal government to conduct a series of trial investigations of the monitoring techniques envisaged in the draft BWC Protocol [see 29 Nov 99].

23 December In Afghanistan [see 6 Dec], the Taliban weekly *Shari'at*, reporting the increasing international isolation of the country because of the sanctions imposed upon it by the UN Security Council, writes of US "hints towards the unleashing of a biological war against Afghanistan in collaboration with Russia and Britain under the pretext of eliminating poppies" [see also 28 Jun 98 and 2 Oct].

23 December In Iran, the Ground Forces ideological-political department announces the death of another chemically wounded Iraq War veteran, Second Lieutenant Reza Shahraki. A further such death, that of Esma'il Khavari, is announced a week later, bringing to 25 the number that have died during the present year. More than 30,000 veterans are said still to suffer from chemical injuries, in addition to the 15,000 and more chemically wounded veterans that have died since the end of the war [see 23 Nov].

23 December In Italy, leaked military documents are reported in *La Repubblica* that associate depleted uranium (DU) munitions with the deaths from leukaemia of Italian soldiers who had served in Kosovo and Bosnia. A week later it transpires that the Italian military prosecutor is examining five fatalities among 20 cases of what the Italian media are calling 'Balkans syndrome'. During the interim, Belgian Defence Minister André Flahaut had called for EU defence ministers to study the issue; a linkage between DU exposure and unexplained illnesses in Belgian veterans of Kosovo had long been drawn in the Belgian press. His action followed reports that the Portuguese Defence Ministry had ordered medical tests for its soldiers serving in Kosovo, one of whom had just died of leukaemia, to check for radiation. Over the next two weeks, after Italy requests that NATO investigate claims that six of its Balkan veterans had died after exposure to DU, and as increasing numbers of veterans in other countries come forward with reports of unexplained illnesses, and the governments of these countries including Germany, Portugal and Greece demand that NATO take action, the DU association becomes a major political issue throughout Europe, even though the counterpart association between DU and 'Gulf War syndrome' has largely been discredited [see 19 Dec].

27 December In the United States, the Information Systems Office of the Defense Advanced Research Projects Agency solicits research proposals, through *Commerce Business Daily*, for a bio-surveillance system that could provide early warning of covert release of pathogens by terrorists. The solicitation materials explain the venture thus: "A DARPA ISO seedling project demonstrated that it is possible to identify an abnormal health event due to a terrorist release of a pathogenic agent

several days before identification by the medical community. The effort mined grocery store, pharmacy and absentee databases as well as gained access to health care records, after obtaining and receiving voluntary permission for such access, to find disease indicators as inputs to abnormal disease detection algorithms. The effort focused on a small geographic area using a limited number of databases as a concept exploration task. The Bio-Surveillance System program intends to demonstrate that it is feasible to 1) develop an integrated system using diverse military, government (federal, state and local) and commercial databases from geographically dispersed locations, 2) glean applicable data from these databases while maintaining patient primary privileges, 3) analyse the data to discern abnormal biological events from normal epidemiology patterns and 4) provide alerts to the appropriate DOD emergency response infrastructure. The program should result in the development of 1) a system prototype for a city-wide area that includes a significant DOD population, 2) an emulation capability for validation testing to ensure that the detection and classification algorithms/models are robust in an extensive variety of scenarios, 3) autonomous detection algorithms and 4) various disease and epidemiological models to support detection, classification and attack characterization".

DARPA anticipates spending \$23.5 million on this data-mining and reporting idea during FY 2001–04, issuing maybe two or three parallel contracts.

28 December In Moscow, the Director-General of the State Research and Development Institute of Organic Chemistry and Technology, Viktor Petrunin, tells reporters that R2.7 billion (US \$95.9 million) has been allocated from the 2001 state budget for destruction of chemical weapons, this being six times more than the 2000 allocation [see also 25 Nov]. He says that costs of destroying the entire stockpile, as required by the Chemical Weapons Convention, is estimated at \$6–7 billion. Western countries have thus far promised some \$0.37 billion towards this, of which about \$250 million has been forthcoming.

31 December President Clinton authorises US signature of the Rome Statute for the International Criminal Court [see 27 Nov–8 Dec] on the day it is closed for signature. Joining him in this belated signature are the governments of Iran and Israel. In his statement following the signing, the President says: "In taking this action, we join more than 130 other countries that have signed by the December 31, 2000 deadline established in the Treaty. We do so to reaffirm our strong support for international accountability and for bringing to justice perpetrators of genocide, war crimes, and crimes against humanity. We do so as well because we wish to remain engaged in making the ICC an instrument of impartial and effective justice in the years to come." He adds: "In signing, however, we are not abandoning our concerns about significant flaws in the treaty. In particular, we are concerned that when the Court comes into existence, it will not only exercise authority over personnel of states that have ratified the Treaty, but also claim jurisdiction over personnel of states that have not. With signature, however, we will be in a position to influence the evolution of the Court. Without signature, we will not." Senate Foreign Relations Committee Chairman Jesse Helms issues a statement denouncing Clinton's action and saying that "this decision will not stand". The treaty requires ratification of its signatures, and there must be 60 ratifications before the treaty can enter into force; thus far, there have been 27.

1 January US Central Intelligence Agency reporting on Iraqi nuclear and CBW sites at the time of the Persian Gulf War is

criticized by retired USAF General Charles Horner, who had been Air Commander of US Central Command during the war. Speaking at the recent Cantigny conference, *Desert Storm: Who Won the First Post Cold War Hot War?*, he had said that the “nuclear, biological and chemical targeting grew sixfold when the [UNSCOM] inspections started after the war”. He had continued: “Our intelligence was miserable. We ought to be honest about this. ... The CIA might have been doing wonderful work in Washington, but the intelligence they gathered filtered down to us as little more than gossip.”

2 January In Israel, *Ha'aretz* reports that the government is to reconsider its decision against joining the Biological Weapons Convention. The newspaper says that impetus for this has come from the Foreign Ministry, which argues that Israel will otherwise be unable to influence the BWC Protocol negotiation; the Defence Ministry, however, remains opposed but has agreed to deliberate the issue.

Meanwhile, with the talks with the Palestinian Authority apparently failing, the current intelligence assessment before Prime Minister Barak is reportedly that the probability of regional war is no longer low.

2 January In the United States, at Lawrence Livermore National Laboratory in California, a study of the factors responsible for virulence in the plague bacterium, *Yersinia pestis*, is being funded at a rate of \$0.75 million per year out of Laboratory Directed Research and Development funds.

3 January In Moscow, the director of the Research and Development Institute of Organic Chemistry and Technology, Viktor Petrunin, announces completion of assembly and certification of the Central Analytical Laboratory that has been built under the US Cooperative Threat Reduction programme to support the Russian chemdemil effort. The facility consists of 27 laboratories in more than a hundred rooms.

4 January In Israel, IDF radio reports that Palestinians have begun using explosive charges, the casings of which have been soaked with poisonous chemical materials in order to enhance fragmentation damage.

4 January In Bosnia-Herzegovina, the coalition party BOSS calls for the establishment of an independent state commission to investigate the causes of the sharp increase in the incidence in the country of leukaemia and other such health problems [see also 23 Dec 00 Italy]. It cites possible causes, among them past use of chemical weapons, and also radioactive agents.

4 January The US General Accounting Office releases a report that it had submitted to its requesters a month previously, *Combating Terrorism: Federal Response Teams Provide Varied Capabilities; Opportunities Remain to Improve Coordination*.

4 January The US Army Program Manager for Assembled Chemical Weapons Assessment transmits the 2000 ACWA report to Congress. The programme has been running since 1996, evaluating chemdemil technologies alternative to the current incinerative technology. The report describes how ACWA has thus far identified six alternative technologies. From the initial three demonstrations in 1999, two technologies (neutralization/biotreatment and neutralization/supercritical water oxidation [SCWO]) have moved forward this past year into Engineering Design Studies (EDS). From the second group of three demonstrated in 2000 (SCWO/gas phase

chemical reduction, solvated electron technology, and electrochemical), one or more will likely proceed to EDS in 2001. Of the nine US stockpiles of chemical weapons, only two sites — Pueblo, CO, and Blue Grass, KY — have yet to decide which technology to deploy for the stockpile destruction process. Both sites have fully assembled chemical weapons (as opposed to agent stored in bulk tanks) and will consider one or more of the technologies demonstrated over the past two years in the ACWA program. The other seven sites may use at least one of the alternative technologies recommended by ACWA to complement or aid the base-line incineration technology.

4 January In Colombia, Environment Minister Juan Mayr [see 15 Oct 00] announces his decision to abandon a controversial national project that would have sought to develop biological-control agents to eradicate coca plants. This follows the decision by the UN Drug Control Programme to withdraw from all such biocontrol efforts in the Andes [see 2 Nov 00]. The attitude of the US administration towards projects of this type is set out shortly afterwards in its progress report on human rights in Colombia: “With respect to mycoherbicides, we have made clear that the United States will support a program approved by the Government of Colombia of rigorous, carefully supervised research and testing in Colombia to determine whether mycoherbicides are safe, effective, and superior to chemical eradication methods. Such support would require a broader national security assessment, including consideration of the potential impact on biological weapons proliferation and terrorism, to determine that the use of this particular drug control tool is in our national interest.”

5 January The US White House issues *A New National Strategy for the New Century*. This portrays arms control as an essential element of national strategy — “a critical complement to our efforts to defend our nation through our own military strength” — and includes the following: “We seek to strengthen the Biological Weapons Convention (BWC) with a new international regime to ensure compliance. We are negotiating with other BWC member states in an effort to reach consensus on a protocol to the BWC that would implement an inspection system to enhance compliance and promote transparency.”

5 January In the United States, a Department of Defense Directive issued today establishes the position of Assistant to the Secretary of Defense for Civil Support. The ATSD(CS) is to “serve as the principal staff assistant and civilian advisor to the Secretary and Deputy Secretary of Defense for the oversight of policy, requirements, priorities, resources, and programs related to the DoD role in managing the consequences of a domestic incident involving the inadvertent, accidental, or deliberate release of chemical, biological, radiological, nuclear material or high yield explosives (CBRNE)”. The directive sets out the responsibilities and functions involved, relationships to other DoD elements, and the authorities delegated to the position-holder. The “increasing volatility of the threat and time sensitivities associated with providing effective support to the Lead Federal Agency charged with CBRNE consequence management” are the reasons later stated for the new post in the Defense Secretary’s 2001 annual report to the Congress.

An enclosure with the directive sets out definitions. Among them is *Terrorism*: “The calculated use of violence or threat of violence to inculcate fear; intended to coerce or to intimidate governments or societies in the pursuit of goals that are generally political, religious, or ideological”. Another is *Weapon of Mass Destruction* [see also 23 Sep 96]: “Any weapon, device, or material that is intended or has the capability to cause death or serious bodily injury to a significant number of

people through the accidental or deliberate release, dissemination or impact of toxic or poisonous chemicals or their precursors; a disease organism; or radiation or radioactivity, to include large scale high explosives”.

7 January In Germany, the second chemdemil incinerator at Munster, which was scheduled to have entered service three years ago, is still not operational, and old chemical weapons unearthed from land-burial sites continue to arrive for processing. The army officer in charge of the disposal team, Manfred Dornblut, is quoted thus: “The bunkers are filled to overflowing. Officially we have no more space but the C-weapons keep on coming”. Not only that; contaminated soil from firing-ranges and other sites around the country is being trucked in for remediation at a rate of 40,000 tons per week.

8 January The UK Home Office responds to a parliamentary question about the CS Spray weapons with which most of the country’s police forces are now equipped: “In the 18-month period from 1 April 1999 to 30 September 2000, 459 incidents involving the use of CS spray by police officers were referred to the Police Complaints Authority. Some of the incidents will have taken place before 1 April 1999. In the same period, 48 complaints concerning the use of CS spray were upheld.”

8 January In Washington, DC, CNN founder Ted Turner and former US Senator Sam Nunn hold a news briefing to launch a new charitable organization, the Nuclear Threat Initiative, which they will co-chair, and to which Turner has committed a minimum of \$250 million [see 6 Nov 00]. Its purpose is, in the words of Turner, “to take pragmatic and effective steps to reduce the threat of nuclear weapons and other weapons of mass destruction as comprehensively and urgently as is feasible”. Nunn says: “In the regional arena, we will help build international awareness about the dangers posed by weapons of mass destruction by strengthening international, nongovernmental organizations, and by promoting international dialogue on ways to reduce weapon of mass destruction dangers. Education will form an important component of this initiative, and it is essential for our regional efforts [as distinct from efforts in the United States and Russia]. In this regard, we plan to support educational initiatives that inform and engage students, the public and governmental leaders on issues related to nuclear and other weapons. The emphasis of this initiative will be on action — making real and significant progress to reduce the most significant threats.” As to the foundation itself, Nunn is to be its chief executive, and it is to have an international governing board. The president and chief operating officer of the Initiative is to be former Deputy Energy Secretary Charles Curtis, who, with Senator Nunn, had been co-directing the scoping study for the Initiative.

9 January The UK Defence Ministry responds to a parliamentary question about the chemicals administered to individuals taking part in the Service Volunteer Programme at CBD Porton [see 28 Nov]. Since 1990, the following chemicals had been administered: the antibiotics ciprofloxacin and doxycycline; the anti-emetics ondansetron and granisetron; the carbamates pyridostigmine and physostigmine; the anticholinergics hyoscine and pilocarpine; the oxime HI-6; and the solvent DMSO. Prior to 1990, the administered chemicals included: nerve agents; vesicants (mainly mustard); riot control agents (CS and others); prospective therapies (atropine, oximes, anticonvulsants, carbamates); artificial SMOG; samples of rubber and fabric formulations; and sternutators (organic compounds of arsenic). The ministry also states that well over 20,000 volunteers had taken part in the trials since

1940 [but see 9 Nov 00 London], and that the only death had been that of Ronald Maddison in 1953 [see 19 Aug 99].

10 January From Australia, findings of a study in genetic engineering conducted in Canberra during 1998–99 that have serious implications for biological warfare are announced by the London *New Scientist* prior to publication in the *Journal of Virology*. Researchers at the Australian National University School of Medical Research and the Co-operative Research Centre for the Biological Control of Pest Animals had been seeking to make a mouse contraceptive by inserting a gene for the bioregulator protein interleukin 4 (IL-4) into a mousepox virus. The virus is not normally highly harmful to mice, and it was thought that expressed IL-4 would stimulate antibodies against mouse eggs, thereby rendering infertile any mouse infected with the recombinant virus. What was observed, however, was that the IL-4 suppressed the cell-mediated response that combats viral infection, so that all the exposed mice died of mousepox. It was also found that immunization against the virus with mousepox vaccine was far less effective. Here, then, was a rare case in which genetic modification had actually increased the virulence of a pathogen. The study had been approved beforehand by the Genetic Manipulation Advisory Committee. The findings were submitted for publication, in July 2000, only after a lengthy period of consultation within the Australian government, including its Defence Department, and the scientific community. In its own release about the work on 11 January, the Commonwealth Scientific and Industrial Research Organization (which is one of the CRC’s sponsors) said that the best protection against misuse was publicity and worldwide warning. The release quotes the Chief of CSIRO Molecular Science, Dr Annabelle Duncan, thus: “Discoveries such as this are being made all the time. The important thing is to ensure they are used for good — not for destructive purposes. That is why we urge awareness and vigilance.” She also stresses the importance of strengthening the BWC. In some contrast, a spokesman for the UK Defence Ministry biological research facility at Porton Down says: “Making scientists aware of the full potential of their discoveries is important, but inevitably it carries the same risk in bringing possibilities to the attention of the unscrupulous.”

10 January In the French Assemblée Nationale, the National Defence and Armed Forces Commission decides to expand the mandate of its information mission on Gulf War syndrome [see 2 Nov 00] to include Balkans syndrome [see 23 Dec 00].

10 January US Energy Department programmes for assisting Russia in dismantling weapons of mass destruction and associated activities are evaluated in a report published today by a bipartisan task force established nine months previously under the co-chairmanship of former Senate Majority Leader Howard Baker and former White House Counsel Lloyd Cutler. Its mandate had required the task force “to provide appraisals and recommendations to the Secretary of Energy regarding the policy priorities established by DOE to pursue cooperative nonproliferation and nuclear safety programs with Russia, with an eye to identifying crucial program areas that may not have been addressed in the past”. The report, however, is concerned almost entirely with nuclear weapons, and offers no comment or recommendation on, for example, the CBW elements of the DOE Initiatives for Proliferation Prevention programme [see 24 Feb 99].

10 January US Defense Secretary William Cohen releases the third edition of *Proliferation: Threat and Response* [see 25 Nov 97]. It provides updated information about countries

thought to be developing nuclear or CBW weapons or the means to deliver them and also about NBC terrorism. The new edition also, for the first time, addresses threats to agriculture and livestock.

In his preface, Secretary Cohen writes: "At least 25 countries now possess — or are in the process of acquiring and developing — capabilities to inflict mass casualties and destruction: nuclear, biological and chemical (NBC) weapons or the means to deliver them". What these words actually mean is not made clear in the report, which addresses the NBC capabilities of only ten countries, namely China, India, Iran, Iraq, Libya, North Korea, Pakistan, Russia, Sudan and Syria. Here the accounts given would, if true, mean that China, Iran, Libya and North Korea are definitely violating the Biological Weapons Convention, that Iraq and Russia might possibly be violating it, and that Syria would be doing so if it were a party. Likewise, China and Iran are portrayed as violating the Chemical Weapons Convention, Russia and Sudan possibly so, and, if they were parties, North Korea and Syria as well, plus, possibly, Iraq. As for India and Pakistan, the message of the report is that both countries have dual-capable technology that could allow rapid breakout from the BWC and the CWC. In a table, 14 animal diseases and 7 plant diseases are identified that "threaten US agricultural productivity". A table on "common chemical warfare agents" includes trifluoronitrosomethane (TFNM) as an agent that "penetrates air filters". In a further tabulation, the USSR is said to have produced thousands of tons of BW agents annually, "including anthrax, smallpox, plague, tularemia, glanders, and Venezuelan equine encephalitis". Among the report's other striking assertions is the statement that "Iran has yet to acknowledge that it, too, used chemical weapons during the Iran-Iraq War".

Angry reactions are voiced in countries cited in the report. Chinese Foreign Ministry spokesman Zhu Bangao terms the claims made in the report "groundless and extremely irresponsible." He adds: "China has always stood for the comprehensive prohibition and thorough destruction of all weapons of mass destruction and abided by relevant international obligations and commitments."

11 January US Defense Secretary Designate Donald Rumsfeld, speaking at his confirmation hearing before the Senate Armed Services Committee, says that US policy for managing the proliferation of weapons of mass destruction "should be aimed at devaluing investment in weapons of mass destruction and their delivery systems by potential adversaries".

11 January In the United States, toxic chemicals are again used for a state killing, in this case the capital punishment by lethal injection of a woman in Oklahoma who had been found guilty of murder.

12 January In the US Defense Department, the Office of the Special Assistant for Gulf War Illnesses publishes an Environmental Exposure Report on *Pesticides*. It is an interim report from the OSAGWI investigation into the use of pesticides during the Persian Gulf War and the exposure thereto of personnel in the area, including veterans now afflicted by undiagnosed illnesses. The investigation focused on 15 pesticides of potential concern (POPCs), which contain at total of 12 active ingredients, and studied the levels of exposure experienced by a select group of Gulf War veterans. The report found no evidence of widespread pesticide poisonings during the Gulf War but recommends additional research.

A related RAND Corporation study, *Pesticides*, is also posted on the Gulfink website today. The study is Volume 8 in

the series *A Review of the Scientific Literature as it Pertains to Gulf War Illnesses* [see 5 Dec 00] that had been commissioned by the Defense Department. Another RAND study, *Pesticide Use During the Gulf War: A Survey of Gulf War Veterans*, had been posted three days previously.

13 January In Iraqi Kurdistan, the Sulaymaniyah *Rozhi Gel*, which is the bimonthly newspaper of the Iraqi Kurdistan Liberation Party, proposes that 6 January, which is the birth date of the Iraqi Army (in 1921), should in future be a day of commemoration for the Anfal operation [see 18 Sep 00] and for the bombardment of Halabjah with chemical weapons.

15–16 January In China, a national conference on implementation of the CWC takes place in Shanghai, attended by officials from the Foreign Ministry, the State Economic and Trade Commission, the Legislative Affairs Office of the State Council, the State Administration of Industry and Commerce, and local officials. Among the presentations and topics discussed is a working report from the CWC National Implementation Office (NIO), which, after the recent government reorganization, has moved from the Ministry of Chemical Industry and State Administration of Chemical and Petrochemical Industries to the State Economic and Trade Commission. Reporting the conference, Xinhua explains that the NIO is the executive of the leading Group for implementation, which has been headed since 1997 by Vice-Premier Wu Bangguo: the NIO is responsible for the routine work of the Group.

16 January In the United States, the White House issues a report, *Health Consequences of the Gulf War: An Ongoing Analysis*, which, in the words of the accompanying press release, "provides an overview of the background, clinical programs, research and investigations, compensation initiatives, outreach efforts and lessons learned from the last seven years of the Administration's efforts to better understand the causes of illnesses arising from the Gulf War". To date, the Departments of Defense, Health and Human Services, and Veterans Affairs have initiated more than 192 research projects on Gulf War Illness, at a cost of over \$155 million.

17 January The European Parliament votes 339–202 in favour of a resolution demanding that all European military forces in NATO ban the use of depleted uranium (DU) weapons until their use has been shown to be safe. The day previously, the Swiss Federal Institute of Technology in Spiez reported having found an unnatural isotope of uranium in a spent DU projectile retrieved from Kosovo. The day before that, the NATO Committee of Chiefs of Military Medical Services had met in Brussels to consider the DU-leukaemia linkage reports [see 23 Dec 00]. A week later, on 24 January, the NATO Supreme Allied Commander in Europe announces that NATO troops in Kosovo will continue to use DU munitions if needs be. A NATO spokesman says that a 50-nation committee established two weeks previously by NATO had found no evidence to support the linkage [see also 19 Dec 00].

17 January At the OPCW in The Hague, there is a meeting bringing together importing and exporting countries to discuss the difficulties which the Secretariat has experienced in matching import-export declarations from states parties. The Director-General had observed in his opening statement to the Council at its twenty-first session [see 3–6 Oct 00] that the amounts of chemicals declared by the respective parties do not correspond in 70–80 per cent of cases. Reasons for these discrepancies identified by the Secretariat include off-shore

transactions, clerical errors, different calculation methods, and customs-related difficulties (such as free trade areas).

17 January In The Hague, the OPCW Director-General convenes an informal briefing to discuss the current financial situation of the Organization.

17 January President Clinton certifies the continued effectiveness of the Australia Group in a letter to the leaders of Congress [see also 13 Jan 99]: "The Australia Group remains a viable mechanism for limiting the spread of chemical and biological weapons-related materials and technology, and 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."

18 January In the United States the RAND Corporation releases two new reports in its Gulf War Illnesses series. One, *Psychological and Psychosocial Consequences of Combat and Deployment with Special Emphasis on the Gulf War*, is by Dr David Marlow, a RAND consultant formerly chief of military psychiatry at the Walter Reed Army Institute of Research. This demonstrates that stress is a contributing factor to many illnesses, and may, for example, make people more vulnerable to environmental pathogens.. It argues that, "to be most helpful to veterans, we must deal with the complexity of the symptoms and potential causes and not simply focus on hypothesized or 'hoped for' singular cause of Gulf War illness".

The second study is another volume — numbered Volume 1 — in the series *A Review of the Scientific Literature as it Pertains to Gulf War Illnesses* [see 12 Jan]: *Infectious Diseases*, by a RAND research team led by pathologist Lee Hilborne of the UCLA School of Medicine. The team had considered almost all infectious diseases thought to have been present in the Gulf during the war, as well as diseases that might have been caused by two Iraqi biological-warfare agents: anthrax and botulism. The team found that the incidence of infectious disease among US troops in the Gulf had been low, and that those soldiers who did become infected received proper diagnosis and treatment. The RAND news release continues: "However, the researchers could not entirely rule out mycoplasma infection as a possible cause of illness for some individuals. Mycoplasma, the smallest known bacteria that exists without a cell wall, is difficult to detect. Some published reports [see 9 Mar 97] theorize that it might play a role in the illness of some veterans. The RAND study notes that research to test the hypothesis is underway."

18–19 January In India, at INS Shivaji, Lonavala near Pune, the inaugural address at a two-day seminar on Nuclear, Biological and Chemical Defence is given by Vice Admiral Harinder Singh, flag officer commanding-in-chief of the Southern Command. According to the PTI report on the seminar, Admiral Singh calls for "urgent steps to meet the asymmetric threats in the form of chemical and biological weapons emerging from the low intensity proxy wars". Another speaker, Vice-Admiral A S Krishnan, says that CBW appeared to be gaining a slow but steady foothold in the form of use of chemical and biological agents against military as well as civilian groups, continuing: "However, the large scale open usage of biological and chemical weapons is not likely by the nations in war situations on account of the Bacteriological and Toxin Weapons Convention and the Chemical Weapons Convention". Participating in the seminar are senior defence scientists (including ones from

Defence Lab Jodhpur and DRDE Gwalior), officers from all three armed services, and representatives of industry.

19 January In Moscow, members of the Russian Security Council meet in the Kremlin on the instructions of President Putin to discuss the interaction of federal and regional departments in carrying out state policy on chemical weapons. The conference is chaired by the Secretary of the Security Council, Sergey Ivanov. Participants advocate the creation of a State Commission on Chemical Disarmament that would act to coordinate activities with respect to Russia's chemical weapon stockpile at both the federal and regional levels. Sergey Kiriyyenko, presidential representative in the Volga federal district, would head the commission, and the Russian Munitions Agency would aid the commission in fulfilling its mandate.

The Russian Foreign Ministry, meanwhile, has issued a release stating that foreign assistance for the Russian chem-demil programme is insufficient: "It is obvious that, despite the political assurances we received before the ratification of the Convention on the Prohibition of the Development, Production and Stockpiling and Use of Chemical Weapons and on their Destruction, the assistance from the international community is not adequate to the scale of the difficult task Russia is resolving in complex economic conditions." The document goes on to say that the amount of aid currently expected "meets about 7 per cent of the needs of the Russian programme for chemical weapons disposal."

A week later the Russian Munitions Agency announces that it has established a subordinate body, the Federal Department for the Safe Storage and Elimination of Chemical Weapons. This department will have the primary function of pursuing the development of environmentally safe technology for the destruction of chemical weapons. A former deputy commander of the Defence Ministry RKhB Protection Troops, Lt-Gen Valeriy Kapashin, has been selected to head the new department.

20 January President George W Bush says, during his inaugural address, that he will "confront weapons of mass destruction, so that a new century is spared new horrors".

22 January The Australia Group launches its long-awaited website at www.australiagroup.net which states: "This website is a cooperative venture among the members of the Australia Group, an informal consultative gathering of nations committed to ridding the world of chemical and biological weapons. It is funded by participants in the Australia Group, and administered on behalf of participants by the Government of Australia in its informal role as Chair." Included on the site is a complete collection of the AG Common Control Lists.

22 January Iraq has rebuilt two factories in an industrial complex in Falluja that had been suspected of producing chemical and biological weapons and bombed in December 1998, according to unidentified US officials citing satellite imagery quoted in the *New York Times*. The newspaper states that one of the factories produced castor oil, from which ricin can be a by-product. The other factory is said to be for pesticides. Production of chlorine is said to have resumed at a third factory in the complex. Commenting on this newspaper report shortly afterwards, an unidentified senior official of the UK Ministry of Defence says there is "no threat yet" from Iraqi nuclear, chemical or biological weapons. He adds, however, that, if there were evidence of Iraq working on weapons of mass destruction, Britain and the US would have no hesitation in bombing relevant sites.

23 January In Italy, exposure to mustard gas of many hundreds of civilians is the subject of *L'iprite in Puglia: 50 anni di colpevoli silenzi*, which is now published in the latest issue of the PRC journal *Rifondazione Informa*. Based on the research of Danny Sivo, who is the party's health official for Puglia, the study describes the consequences of the destruction of a supply ship loaded with mustard gas during a German air-raid on Bari harbour in December 1943. It also describes how 236 people, especially Molfetta fisherman, have become exposed to mustard gas from sea-dumped munitions during 1946–99. Reporting this, *La Repubblica* also draws attention to the former mustard-gas factory at Foggia, where the extent to which the site has been cleaned up remains obscure.

24 January In Tokyo District Court, at a further hearing in the suit filed in 1997 in which some 180 Chinese plaintiffs are seeking compensation and governmental apology for deaths of relatives during Unit 731 biological experimentation [see 15 Nov 00], a 68-year-old Chinese bacteriologist, Huang Ketai, testifies that at least 109 people died of bubonic plague in 1940 after Japanese war planes spread infected fleas over the city of Ningbo [see 16 Feb 98]. And a 70-year-old Chinese physician, Qiu Mingxuan, testifies that retreating Japanese forces had let loose fleas tainted with cholera, typhoid, anthrax and plague in a single attack in Zhenjian province.

24 January In Iraq, a four-person team from the International Atomic Energy Agency, led by Ahmed Abu Zahra, completes another of the continuing IAEA inspections of the country's nuclear capabilities. Such findings as it may have made regarding nuclear weapons are not disclosed. Abu Zahra tells reporters that the team had inspected and measured nuclear material containing low-enriched, natural and depleted uranium, and that the data collected were to be analysed further before findings are made public. UNMOVIC [see 1 Dec 00] inspections in Iraq, required under Security Council resolution 1284 (1999), have yet to commence. Deputy Prime Minister Tariq Aziz had said on Doha television a week previously: "Our position regarding resolution 1284 ... has remained unchanged: we will absolutely not deal with this resolution, not at all" [see also 28 Nov 00]. However, a high-level Iraqi delegation is due to begin talks with UN Secretary-General Kofi Annan on 26 February.

24 January In the UK House of Commons, where the Foreign Secretary has been asked to place copies of the recent returns under the BWC confidence-building measures [see 10 Sep 99] in the Library, FCO Minister Peter Hain puts forward the following opinion: "The confidence building measures (CBM's) drawn up by the states parties to the biological weapons convention (BWC) are first submitted to the United Nations centre for disarmament and then shared on a Government-to-Government basis. The UK does not therefore presently have agreement to make the contents of these documents public. This can only be given by the BWC review conference which next takes place on 19 November to 17 December 2001 in Geneva. The UK will press for wider dissemination of this information on that occasion. A decision to place a copy of the UK CBM's in the House of Commons Library will be made after the necessary consultations with the other Government Departments, laboratories, and commercial companies which contribute to the UK's returns."

25 January The UK Defence Ministry, responding to parliamentary questions about exposure of service volunteers to the oripavine derivative TL 2636 at Porton Down, has chosen to present the following explanation [see also 1 Feb 96]: "The

volunteer studies were undertaken because there was concern that this or similar compounds may be deployed against the UK armed forces to cause temporary incapacitation." The studies were conducted during August 1961 to November 1963, with an additional trial in January 1968. The response continues: "A total of 141 service volunteers were involved in these studies which concluded that oripavine had the potential to cause both physical and mental incapacitation".

26 January In The Hague, the OPCW Executive Council meets in informal session to discuss the OPCW budget and programme of work for 2001. [For further details, see *Progress in The Hague*, above]

28 January Iraq has been transferring biological weapons abroad, according to a Kurdish doctor who had been "conscripted into the Iraqi army's biological weapons unit" and, some months ago, had fled to Denmark by way of Iran and Turkey. Without any particular attempt at authentication, *WorldNetDaily* now publishes what the doctor, Hassan Abdul Salaam, had recently told its interviewer: "We worked diligently in labs that were set up by the Russians — mobile units like domes the Eskimos live in, but bigger. The security around the workstations was incredible. The firepower and the caliber of the soldiers was like a Special Forces operation. ... We worked with many toxins, preparing them for shipment out of Iraq. We had to work at odd hours, too, because the Iraqis were aware of the times the American satellites would be passing by overhead. I know these biological weapons were headed for Sudan, Libya, Algeria and possibly to some underground movements in Egypt, Saudi Arabia, and Afghanistan. And, of course, the PLO can't wait to get their hands on them. But Saddam wants to use them on Israel himself so, as long as Saddam is alive, the PLO won't get any biological weapons from Iraq."

28 January In Denver, Colorado, at Rocky Mountain Arsenal, a sarin-filled M139 bomblet is safely destroyed by US Army munitions experts using the mobile Explosive Destruction System (EDS). The bomblet, a grapefruit-sized spherical aluminium-cased device originally intended for clustering in warheads for Honest John heavy artillery rockets, 368 bomblets per warhead, was one of six that had been discovered on 16 October and subsequently in a debris trench at the arsenal. Designed to hold nearly 0.6 kilograms of nerve gas, the bomblets would have been manufactured at the arsenal during the 1950s. The destruction of the six bomblets is expected to take about 12 days to complete. The EDS had just completed testing in England, during which, according to the US Army, it had neutralized more than a pound of sarin from 38 weapons.

29 January At Harvard University, in the Belfer Center for Science and International Affairs, the Australian microbiologist and former UNSCOM Principal Inspector Rod Barton speaks at a special lunchtime session of the HSP Cambridge CBW Colloquium. His topic is "Unravelling Iraq's biological warfare program: a personal account".

29 January In Panama, Foreign Minister José Miguel Alemán is quoted in *El Panama America* as saying that a delegation from the American Academy of Science [sic] is currently conducting a study of Iguana and San José Islands to determine any existing levels of contamination from chemical weapons abandoned by the United States [see 30 Jun 99], and that, if contamination is confirmed, Panama will demand that the United States decontaminates the islands.

Forthcoming events

3–6 April, The Hague — Twenty-fourth session, OPCW Executive Council (subsequent session: 27–28 June)

23 April, Geneva — briefing on bioweapons organized by the Sunshine Project, details on www.sunshine-project.org

23 April–11 May, Geneva — Twenty-third session, BWC Ad Hoc Group (subsequent session: 23 July–17 August)

25–27 April, Geneva — Preparatory Committee for the Fifth BWC Review Conference (19 Nov–7 Dec)

14–18 May, The Hague — Sixth Session of the OPCW Conference of the States Parties

18 May, London — Genewatch conference on *Biological Weapons and Genetic Technologies*, details on www.genewatch.org

9 June, Dresden — Sunshine Project seminar on *Biological Weapons in the 21st Century*, details on www.sunshine-project.org

15–19 June, Stockholm — *CBW Protection Symposium VII*, details on www.cbwsymp.foa.se

18–25 June, Florence — NATO ARW on *Enhancing Biocontrol Agents and Handling Risks*

23–24 June, Oegstgeest — Pugwash Workshop on *Approaching the First CWC Review Conference*

28–30 September, Wiston House, Sussex — Wilton Park conference on *Control regimes for chemical and biological materials: towards a safer and more prosperous world*, details on www.wiltonpark.org.uk

30 January In Italy, the Environment Minister is asked in parliament whether sea-dumped mustard gas has been responsible for the 236 cases of poisoning, including five deaths, among the fishermen of Molfetta since 1946 [see 23 Jan] and whether a cleaning-up operation ought to be undertaken.

30–31 January In Ottawa, the Jean Edmonds government building, in which many hundreds of Immigration Department and Industry Department officials work, is effectively closed down while security and emergency services deal with a suspicious envelope from which powder, possibly bacterial, had spilled. The envelope had been addressed to Environment Minister Elinor Caplan. Mail-room employees are treated in hospital with antibiotics. The incident is subsequently seen to have been a hoax, as are similar episodes in Victoria shortly before and in Toronto shortly afterwards.

31 January The United States Commission on National Security/21st Century [see 15 Sep 99] has now produced its final report, the findings of which are released at a news briefing by co-chairmen Warren Rudman and Gary Hart, both former US senators. The Commission proposes major restructuring of the country's security apparatus, including shrinking of the Defense Department, streamlining of the State Department, and the conflation of the National Guard, the Federal Emergency Management Agency, the Customs Service, the Border Patrol and the Coast Guard into a single new cabinet-level National Homeland Security Agency. The Commission also advocates greater emphasis on science and mathematics in the education of the country's youth.

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

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