

# 13. Chemical and biological warfare developments and arms control

RICHARD GUTHRIE, JOHN HART and FRIDA KUHLAU

## I. Introduction

In 2004 the states parties to the 1972 Biological and Toxin Weapons Convention (BTWC)<sup>1</sup> held their second annual expert and political meeting, which considered ways to enhance international capabilities for responding to, investigating and mitigating the effects of cases of alleged use of biological or toxin weapons or suspicious outbreaks of disease. The meeting also considered how to strengthen and broaden international institutional efforts and existing mechanisms for the surveillance, detection, diagnosis and combating of infectious diseases affecting humans, animals and plants.

The states parties to the 1993 Chemical Weapons Convention (CWC)<sup>2</sup> approved a request by Libya to convert two former chemical weapon production facilities (CWPFs) to peaceful purposes, after Libya's chemical weapon programme had been dismantled under international supervision, and decided to adopt a new system of budgeting for the operations of the Organisation for the Prohibition of Chemical Weapons (OPCW) starting in 2005.<sup>3</sup>

Activities related to Iraq in 2004 included the publication of an interim report and the effective completion of the inspection and investigation activities by the Iraq Survey Group in its search for nuclear, biological and chemical (NBC) weapons and weapon-related activities in that country. Controversy continued over what had been known about Iraqi activities and capabilities in the years before the military action of 2003, and how what was (and was not) known may have been interpreted or presented. A number of related official inquiries into the handling of intelligence reported in 2004.

In 2004 programmes were implemented in Iraq and Libya in order to redirect the work of former scientists and technicians who were part of the countries' former NBC weapon and longer-range missile programmes.

<sup>1</sup> The Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction is reproduced on the SIPRI Chemical and Biological Warfare Project Internet site at URL <<http://www.sipri.org/contents/cbwarfare/>>. The site includes complete lists of parties and signatory and non-signatory states to the convention. See also annex A in this volume.

<sup>2</sup> The Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction (corrected version), 8 Aug. 1994, is available on the SIPRI CBW project Internet site (see note 1). The 31 Oct. 1999 amendment to Part VI of the Verification Annex of the CWC is also reproduced there, as are complete lists of parties and signatory and non-signatory states to this convention. See also annex A in this volume.

<sup>3</sup> On Libya see chapter 14 in this volume.

On 28 April 2004 the United Nations (UN) Security Council adopted Resolution 1540 by consensus.<sup>4</sup> The resolution calls on UN member states to present, before 28 October, a national report on steps they have taken or intend to take to control materials and technologies that could be used for NBC weapons. Eighty-seven reports had been received by 7 December, plus one by the European Union (EU) collectively, to supplement the national reports by EU member states.<sup>5</sup> Not all of the submitted reports had been published by the end of the year, and because they are not publicly available it is not possible to give a comprehensive analysis of the results. However, it is clear that the process of compiling the reports has led to the identification of gaps in implementation of the key international instruments, particularly as regards issues related to biological weapons.

The key driver behind the adoption of Resolution 1540 was concern about potential terrorist acquisition of NBC materials and technologies. During 2004 attention was also drawn to the potential for raising the barriers to the acquisition of weapons of mass destruction (WMD) by non-state actors through the full implementation of multilateral treaties such as the BTWC and CWC.

Section II of this chapter discusses the results of the 2004 expert and political meetings of the BTWC parties. CWC-related developments are described in section III. Section IV describes developments in relation to Iraq. Section V discusses intelligence issues. Section VI covers other past and present activities and allegations, and section VII presents the conclusions.

## II. Biological weapon disarmament

The BTWC entered into force on 26 March 1975.<sup>6</sup> As of 3 December 2004, 153 states were parties to it, and an additional 16 states have signed but not ratified the BTWC.<sup>7</sup> Azerbaijan and Kyrgyzstan<sup>8</sup> acceded to the convention during 2004.

The BTWC is the only global convention prohibiting possession of a class of WMD that has no institutionalized verification and compliance mechanism. Negotiations that had been intended to provide such a mechanism came to an

<sup>4</sup> UN Security Council Resolution 1540, 28 Apr. 2004; it is reproduced in appendix 11A. See also chapters 11 and 17 in this volume.

<sup>5</sup> 'Letter dated 8 December 2004 from the Chairman of the Security Council Committee established pursuant to Resolution 1540 (2004) to the President of the Security Council', UN Security Council document S/2004/958/, 8 Dec. 2004; and S/2004/958/Corr.1, 23 Dec. 2004.

<sup>6</sup> See note 1.

<sup>7</sup> 'List of states parties', BTWC Meeting of States Parties document BWC/MSP/2004/INF.2, 3 Dec. 2004. Unless otherwise noted, all BTWC documents cited in this chapter are available on the UN documents Internet site at URL <<http://documents.un.org>>.

<sup>8</sup> There has been some confusion about the BTWC status of Kyrgyzstan because it has previously appeared on some lists of states parties and has considered itself bound by the BTWC since becoming an independent state in 1991. The country submitted a confidence-building measures (CBMs) return to the UN Department for Disarmament Affairs on 25 May 1993, an activity that is carried out under the auspices of the BTWC. However, deposit of the instrument of accession with the Russian authorities in Oct. 2004 now puts this matter beyond doubt.

abrupt halt in 2001.<sup>9</sup> During 2004, separate from the formal meetings of the BTWC parties, a number of statements urged that the convention and the broader regime of which it is a key component should be strengthened.

On 2 December the UN High-level Panel on Threats, Challenges and Change published its report.<sup>10</sup> In his introduction to the report, the UN Secretary-General welcomed the panel's 'innovative focus on issues of biological security' and noted its 'attention to the deterioration of our global health system, its vulnerability to new infectious disease; and the promise and peril of advances in biotechnology'.

The panel called for negotiations on a 'credible verification protocol' for the BTWC and on 'a new bio-security protocol to classify dangerous biological agents and establish binding international standards for the export of such agents'. It also suggested that 'the Security Council should avail itself of the Secretary-General's roster of inspectors for biological weapons', who should remain independent and work under UN staff codes. This roster of inspectors should also be available to 'advise the Council and liaise with WHO [World Health Organization] authorities in the event of a suspicious disease outbreak'. The panel also suggested that in the event that a state is unable to adequately quarantine large numbers of potential carriers of disease in an unusual outbreak, the Security Council 'should be prepared to support international action to assist in cordon operations'.

A number of academic studies on the future of the BTWC were published in 2004.<sup>11</sup> One prominent theme was the role of expert advice. For example, on 19 April the Royal Society in the United Kingdom noted: 'It is essential to support international agreements, such as the Biological Weapons Convention, through the formation of international scientific advisory panels to keep up with the rapid pace of technological advance in the relevant sciences'.<sup>12</sup>

The EU in its work on the BTWC under the EU Strategy against Proliferation of Weapons of Mass Destruction suggested that a 'group of experts' could be convened 'in order to develop specific suggestions to strengthen the BTWC, in particular as regards compliance, with a view to the Review Conference' and that this group could be useful in the context of the development of bio-security and bio-safety standards.

International assemblies of parliamentarians adopted resolutions calling for formal compliance mechanisms for the convention, such as the Assembly of

<sup>9</sup> Zanders, J. P., Hart, J. and Kuhlau, F., 'Chemical and biological weapon developments and arms control', *SIPRI Yearbook 2002: Armaments, Disarmament and International Security* (Oxford University Press: Oxford, 2002), p. 665–708.

<sup>10</sup> United Nations, 'A more secure world: our shared responsibility', Report of the High-level Panel on Threats, Challenges and Change, UN documents A/59/565, 4 Dec. 2004, and A/59/565/Corr.1, 6 Dec. 2004, URL <<http://www.un.org/ga/59/documentation/list5.html>>. The synopsis and summary of recommendations of the report are reproduced in the appendix to the Introduction in this volume.

<sup>11</sup> See, e.g., papers presented to the Weapons of Mass Destruction Commission URL <<http://www.wmdcommission.org>>.

<sup>12</sup> Royal Society, 'The individual and collective roles scientists can play in strengthening international treaties', Policy document 05/04, 19 Apr. 2004.

the Inter-Parliamentary Union, representing parliamentarians from over 140 countries.<sup>13</sup>

### The 2004 BTWC meetings

In 2004 the parties to the BTWC held a Meeting of Experts and a Meeting of States Parties, following on from similar meetings held in 2003.<sup>14</sup> The meetings, which will continue to be held annually until the Sixth Review Conference, scheduled for 2006, are the result of a decision taken by the reconvened Fifth Review Conference of the States Parties to the BTWC in 2002.

The mandate for the 2004 meetings was to ‘discuss, and promote common understanding and effective action’ on ‘enhancing international capabilities for responding to, investigating and mitigating the effects of cases of alleged use of biological or toxin weapons or suspicious outbreaks of disease’ and ‘strengthening and broadening national and international institutional efforts and existing mechanisms for the surveillance, detection, diagnosis and combating of infectious diseases affecting humans, animals, and plants’.<sup>15</sup>

The significance of the issues was underlined in a working paper submitted by Hungary which noted that since the adoption of the mandate the world has experienced new threats from infectious disease, notably severe acute respiratory syndrome (SARS) and avian influenza. Hungary also stressed that the control of such threats depends on prompt and transparent reporting of cases and on a robust system of global surveillance and response, and that such a system ‘will also strengthen protection against a third infectious threat that became prominent in the [northern] autumn of 2001, namely, the risk that biological agents would deliberately be used to cause harm’.<sup>16</sup>

The *Meeting of Experts* was held in Geneva on 19–30 July 2004.<sup>17</sup> Participants from 87 states parties, 4 signatory states, 2 observer states, 4 specialized agencies and intergovernmental organizations (IGOs), and 10 non-governmental organizations (NGOs) attended.<sup>18</sup> The first week was dedicated

<sup>13</sup> ‘The Role of Parliaments in Strengthening Multilateral Regimes for Non-Proliferation of Weapons and for Disarmament, in the Light of New Security Challenges’, Resolution adopted by the 111th Inter-Parliamentary Assembly, 1 Oct. 2004.

<sup>14</sup> Guthrie, R. *et al.*, ‘Chemical and biological warfare developments and arms control’, *SIPRI Yearbook 2004: Armaments, Disarmament and International Security* (Oxford University Press: Oxford, 2004), p. 661–67.

<sup>15</sup> ‘Final Document of the Fifth Review Conference of the States Parties to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) Weapons and on Their Destruction’, BTWC Review Conference document BWC/CONF.V/17, para. 18 (a), p. 3, available at URL <[http://www.opbw.org/rev\\_cons/5rc/5rc\\_conf.htm](http://www.opbw.org/rev_cons/5rc/5rc_conf.htm)>.

<sup>16</sup> Hungary, ‘Challenges of the second year of the follow-up process’, Meeting of Experts document BWC/MSP/2004/MX/WP.83, 6 Aug. 2004.

<sup>17</sup> Pearson, G. S., ‘Report from Geneva: the Biological Weapons Convention new process’, *CBW Conventions Bulletin*, no. 65 (Sep. 2004), pp. 12–20, URL <<http://www.sussex.ac.uk/spru/hsp/cbwcb65.pdf>>. Peter Goosen of South Africa was chairman of the meeting.

<sup>18</sup> ‘List of participants’, BTWC Meeting of Experts document BWC/MSP/2004/MX/INF.5, 30 July 2004. The signatory states were Egypt, Madagascar, Myanmar and the United Arab Emirates; the observer states were Israel and Kazakhstan; and the agencies and IGOs were the Food and Agriculture

to a discussion of surveillance and detection issues and the second week to response issues.

The parties submitted 83 working papers.<sup>19</sup> Unlike the 2003 Meeting of Experts, in which presentations by the states parties were assembled in daily collations and consolidated in Part II of the final report of the meeting, in 2004 the chairman prepared an informal chronological listing of issues raised under each of the topics, and both lists were appended to the report of the meeting.<sup>20</sup>

The *Meeting of States Parties* was held in Geneva on 6–10 December.<sup>21</sup> Participants from 89 states parties, 5 signatory states, 2 observer states, 4 specialized agencies and IGOs, and 15 NGOs attended.<sup>22</sup>

At both sets of meetings there was little controversy over the issues relating to detection and surveillance of disease. The role of international bodies such as the WHO, the Office International des Epizooties (OIE) and the Food and Agriculture Organization (FAO) in dealing with unusual outbreaks of disease was seen as valuable, but concern was expressed that such organizations should not go beyond their general mandates to become involved in investigations of alleged deliberate use.

There was significant disagreement among the states parties on how the international community should proceed in relation to existing mechanisms that could be used to investigate unusual outbreaks of disease that may turn into allegations of biological warfare.

A number of states drew attention to the authority of the UN Secretary-General to investigate the alleged use of biological weapons.<sup>23</sup> Addressing this subject in the BTWC meetings, however, was resisted by other parties. For example, the United States indicated that, as the powers in question derived from UN resolutions citing the 1925 Geneva Protocol,<sup>24</sup> it was not for the parties of the BTWC to review them. A number of parties (including Iran) expressed a concern that the Secretary-General's mechanism was a distraction from preparation of a 'proper' verification system for the convention.

There was a clear divergence of opinion on investigation issues during the preparation of a final report, and this divergence was reflected in the final report itself. It noted: 'the Secretary-General's investigation mechanism, set

Organization, the International Committee of the Red Cross (ICRC), the WHO and the Office International des Epizooties.

<sup>19</sup> For a complete list of documents from the Meeting of Experts see 'Report of the Meeting of Experts', BTWC Meeting of Experts document BWC/MSP/2004/MX/3, 11 Aug. 2004.

<sup>20</sup> 'Report of the Meeting of Experts (note 19).

<sup>21</sup> Pearson, G. S., 'Report from Geneva: the Biological Weapons Convention Meeting of States Parties', *CBW Conventions Bulletin*, no. 66 (Dec. 2004), pp. 21–34, URL <<http://www.sussex.ac.uk/spru/hsp/cbwcb66.pdf>>. Peter Goosen of South Africa was also chairman of this meeting.

<sup>22</sup> 'List of participants', BTWC States Parties documents BWC/MSP/2004/INF.3, 10 Dec. 2004; and BWC/MSP/2004/INF.3/Add.1, 14 Dec. 2004. The signatory states in attendance were Egypt, Madagascar, Myanmar, Syria and the United Arab Emirates; the observer states were Israel and Kazakhstan; and the agencies and IGOs were the FAO, the ICRC, the WHO and the OIE.

<sup>23</sup> For background to this authority see Lundin, S. J., 'Multilateral and bilateral talks on chemical and biological weapons', *SIPRI Yearbook 1990: World Armaments and Disarmament* (Oxford University Press: Oxford, 1990) pp. 539–40.

<sup>24</sup> On the protocol, its parties and signatories see annex A in this volume.

out in A/44/561 and endorsed by the General Assembly in its resolution A/Res/45/57, represents an international institutional mechanism for investigating cases of alleged use of biological or toxin weapons'.<sup>25</sup> However, on the final day, text which placed the consideration being given by the UN General Assembly to reviewing the Secretary-General's mechanism for investigation of cases of alleged use of biological or toxin weapons in the context of the Sixth BTWC Review Conference was dropped from the draft report because consensus could not be reached.

The meeting decided that the 2005 meetings, which will deal with the issues of codes of conduct, would be held on 13–24 June and 5–9 December. There is still no common understanding of how the outcomes of the series of annual meetings will be handled at the 2006 Review Conference.

### III. Chemical weapon disarmament

As of 31 December 2004, 167 states had ratified or acceded to the CWC and a further 16 states had signed but not ratified it,<sup>26</sup> while 11 countries had neither signed nor ratified the convention.<sup>27</sup> The UN General Assembly adopted a resolution which *inter alia* stressed the importance of ensuring that the CWC achieves universal membership and that it be effectively implemented.<sup>28</sup> In November 2004 Austria presented a proposal to the EU for joint efforts on the issue of challenge inspections under the CWC.

#### The OPCW Action Plans

The OPCW Action Plans on universality and on national implementation made significant progress in 2004.<sup>29</sup> Eight states became parties to the CWC during 2004. As of 31 October 2004, 136 parties (82 per cent) had established or designated a National Authority to the OPCW;<sup>31</sup> 96 parties (58 per cent)

<sup>25</sup> 'Report of the Meeting of States Parties', BTWC Meeting of States Parties document BWC/MSP/2004/3, 14 Dec. 2004

<sup>26</sup> Chad, Libya, Madagascar, Marshall Islands, Saint Kitts and Nevis, Solomon Islands, Sierra Leone and Tuvalu became parties to the CWC in 2004. The states which have signed, but not ratified or acceded to, the CWC are the Bahamas, Bhutan, Cambodia, the Central African Republic, Comoros, Congo, the Democratic Republic of the Congo, Djibouti, the Dominican Republic, Grenada, Guinea-Bissau, Haiti, Honduras, Israel, Liberia and Myanmar. See also annex A in this volume.

<sup>27</sup> The states that had not signed or ratified the CWC as of 31 Dec. 2004 were Angola, Antigua and Barbuda, Barbados, Egypt, Iraq, North Korea, Lebanon, Niue, Somalia, Syria and Vanuatu.

<sup>28</sup> UN General Assembly Resolution A/RES/59/72, 10 Dec. 2004.

<sup>29</sup> The Action Plan on universality aims to bring about global membership of the CWC. The Action Plan on national implementation aims to ensure that all states parties effectively implement their obligations under Article VII (National Implementation Measures) of the CWC, including through the adoption of proper penal legislation. For a more detailed description of this plan see Tabassi, L. and Spence, S., 'Improving CWC implementation: the OPCW Action Plan', Verification Research, Training and Information Centre (VERTIC), *Verification 2004* (VERTIC: London, 2004), pp. 45–64; and Guthrie *et al.* (note 14), p. 670.

<sup>31</sup> The National Authority serves as a focal point for liaison between the OPCW and the states parties. Some states have added additional functions to enhance national implementation of the CWC.

had reported adoption of general domestic legislative or administrative measures to the Technical Secretariat (TS); and 53 parties (32 per cent) had adopted and reported national legislation covering all key enforcement areas required by the CWC.<sup>32</sup>

OPCW Action Plan efforts have received external funding. A number of states have provided cost-free consultants to the OPCW. The Council of the European Union adopted a Joint Action on support for activities by the OPCW in the framework of the EU Strategy against Proliferation of Weapons of Mass Destruction. Under the plan, starting in 2005 the Council will provide €1 841 000 (c. \$2 465 000) to the OPCW to support programmes in the area of universality, national implementation and international cooperation.<sup>33</sup> Romania and the USA distributed a CWC implementation and assistance programme package.<sup>34</sup>

### **The Conference of the States Parties to the CWC**

The Ninth Session of the Conference of the States Parties (CSP) to the CWC was held on 29 November–2 December.<sup>35</sup> It approved the OPCW 2005 budget of €75 695 000 (c. \$103 220 000). Of this amount, the CSP estimated that €4 417 600 (c. \$6 000 000) will be received through Article IV (Chemical weapons) and Article V (CWPFs) reimbursements (see below), and that interest income will comprise €600 000 (c. \$820 000).<sup>36</sup>

The CSP amended the OPCW Financial Regulations and also took decisions on the Working Capital Fund and on late reimbursements by the states parties to the OPCW for ‘direct costs’<sup>37</sup> incurred during inspections carried out under Articles IV and V of the CWC. These costs are to be reimbursed by the inspected state party unless the Executive Council decides otherwise.<sup>38</sup> However, the OPCW has periodically experienced budgetary difficulties partly because some estimates of the amount of money to be reimbursed have been

<sup>32</sup> OPCW, ‘Note by the Director-General, report on the OPCW plan of action regarding the implementation of Article VII obligations’, OPCW document C-9/DG.7, 23 Nov. 2004 pp. 3–4.

<sup>33</sup> ‘Council Joint Action 2004/797/CFSP of 22 November 2004 on support for OPCW activities in the framework of the implementation of the EU Strategy against Proliferation of Weapons of Mass Destruction’, *Official Journal of the European Union*, L349/63 (25 Nov. 2004), pp. 63–69. The Joint Action is also published in Council document 14519/04. The OPCW was officially informed of the Joint Action via ‘Note by the Kingdom of the Netherlands on behalf of the European Union, joint action on support for OPCW activities in the framework of the EU strategy against proliferation of weapons of mass destruction’, OPCW document C-9/NAT.2, 29 Nov. 2004.

<sup>34</sup> US Chemical Weapons Convention Web Site, ‘Implementation and Assistance Programme (IAP)’, URL <[http://www.cwc.gov/Global\\_Outreach/IAP](http://www.cwc.gov/Global_Outreach/IAP)>.

<sup>35</sup> The CSP was scheduled to end on 3 Dec. but completed its work ahead of schedule.

<sup>36</sup> OPCW, ‘Programme and budget of the OPCW for 2005’, OPCW document C-9/DEC.14, 2 Dec. 2004.

<sup>37</sup> During the 1993–97 Preparatory Commission period it was agreed that parties that receive inspections carried out under Articles IV and V are to pay the costs of inspection that would not have been incurred had the inspection not occurred (i.e., the ‘direct costs’ of inspection). This was done in order to avoid the OPCW members having to collectively subsidize the verification of chemical weapon facilities and destruction of stockpiles that are located in a limited number of states.

<sup>38</sup> CWC, Article IV, para. 16.

too high. In addition, the payment of reimbursements has been delayed in some cases because of variation in how the parties' budgeting and payment procedures are structured.<sup>39</sup> The CSP therefore decided to increase the size of the OPCW's Working Capital Fund and to increase the flexibility of the OPCW's Financial Regulations to help address these and related issues.<sup>40</sup>

The CSP also approved the introduction of results-based budgeting (RBB) in 2005<sup>41</sup> as part of an effort to standardize the way in which budgets are formulated and structured by international organizations. The International Atomic Energy Agency (IAEA), the EU and the UN have implemented RBB, reflecting a strong desire by some states for the management model in general. The effect of RBB within the OPCW will probably not be fully known for several years. In addition, complete evaluation of its effectiveness will require detailed understanding of the OPCW's activities at the working level. In principle, RBB should clarify lines of responsibility and therefore improve management in the OPCW, including the question of where policy making ends and its implementation begins. RBB might also highlight the difficulty of assessing important, but rather general, objectives that are hard to quantify such as the 'full and effective national implementation' of the CWC.<sup>42</sup> It will be important to note how the successes or failures of RBB are understood and acted on by the parties. RBB is the third major managerial change at the OPCW in recent years following the removal of the first Director-General in 2002<sup>43</sup> and the introduction of limitations of staff tenure in 2003.<sup>44</sup>

Finally, the CSP agreed an understanding of the term 'captive use', an important chemical industry implementation matter,<sup>45</sup> which has been unre-

<sup>39</sup> Zanders, Hart and Kuhlau (note 9), p. 684.

<sup>40</sup> OPCW, 'Decision, amendments to the financial regulations of the OPCW', OPCW document C-9/DEC.11, 2 Dec. 2004; and OPCW, 'Decision, the Working Capital Fund and late receipt of Article IV and V income', OPCW document C-9/DEC.12, 2 Dec. 2004.

<sup>41</sup> The UN's Programme Planning and Budget Division has defined RBB as 'formulating programmes and budgets that are driven by a number of desired results which are articulated at the outset of the budgetary process and against which actual performance is measured at the end of the biennium'. United Nations, *United Nations: Guide to Results-Based Budgeting* (UN: New York, 23 Oct. 1998), p. 7. Subsequent budgets are formulated partly on the basis of an assessment of the extent to which selected objectives and performance indicators have been fulfilled. In drafting an RBB the results sought are considered first, followed by the activities, resources and the costs necessary to achieve the results. Performance indicators are used to define how performance will be assessed.

<sup>42</sup> For examples of the objectives see OPCW, 'Medium-term plan for the period from 2005 to 2007', OPCW document C-9/5/1, 2 Dec. 2004.

<sup>43</sup> Hart, J., Kuhlau, F. and Simon, J., 'Chemical and biological weapon developments and arms control', *SIPRI Yearbook 2003: Armaments, Disarmament and International Security* (Oxford University Press, Oxford, 2003), pp. 651–52.

<sup>44</sup> See Guthrie *et al.* (note 14), pp. 668–69.

<sup>45</sup> The CSP decided: '(a) that the production of a Schedule 2 or Schedule 3 chemical is understood, for declaration purposes, to include intermediates, by-products, or waste products that are produced and consumed within a defined chemical manufacturing sequence, where such intermediates, by-products, or waste products are chemically stable and therefore exist for a sufficient time to make isolation from the manufacturing stream possible, but where, under normal or design operating conditions, isolation does not occur; and (b) to request States Parties to take the necessary measures to implement their obligations under Article VII, paragraph 1, of the Convention as soon as possible and in any event no later than 1 January 2005 in respect of Schedule 2 chemicals and 1 January 2006 in respect of Schedule 3 chemicals'. OPCW, 'Decision, understanding of the concept of "captive use" in connection with

solved since the final stages of the CWC negotiations in Geneva in the early 1990s. Captive use has been discussed by the parties in terms of the cost, scope and level of intrusiveness which they believe that the CWC should possess in order to be effective. The term has been defined as ‘the case of the production of a chemical [that appears on Schedule 2 or 3 of the CWC’s Annex on Chemicals] and its subsequent further conversion without isolation in the same reaction vessel/unit to form another product’.<sup>46</sup> Much of the discussion centred on whether 3-quinuclidinyl benzilate (BZ)—a hallucinogenic compound with potential for hostile use that is also produced as an intermediate in the production of chemicals for peaceful purposes—should be declared. Some parties have declared BZ because it is an intermediate chemical that could be isolated, while other parties have not declared it because the compound is not isolated.<sup>47</sup> (Hydrogen cyanide was the focus of similar discussion.) The agreed understanding of captive use does not require the parties to declare scheduled chemicals that are produced as a by-product where ‘under normal or design operating conditions, isolation does not occur’. The effect of the decision (including, for example, the extent to which BZ that is produced as a by-product is declared and inspected) will become clear as it is implemented. Disagreement may remain over what constitutes ‘normal or design operating conditions’. In addition, the parties are ‘requested’ to take the necessary national measures to implement the decision.

### **Destruction of chemical weapons**

The states that declared the possession of chemical weapons at the time the CWC entered into force for them are Albania, India, Libya, Russia, the USA and ‘another state party’, not identified at its request but widely understood to be South Korea. As of 31 January 2005, of 71 373 agent tonnes of declared chemical weapons, 10 698 agent tonnes had been verifiably destroyed; of 8 671 564 declared items, 2 151 777 munitions and containers had been destroyed;<sup>48</sup> and 12 states had declared past production of chemical weapons.<sup>49</sup>

*Albania’s* chemical weapon stockpile consists of approximately 16 tonnes of agent (reportedly sulphur mustard) filled in canisters, at least a part of which

declarations of production and consumption under Parts VII and VIII of the Verification Annex to the Chemical Weapons Convention’, OPCW document C-9/DEC.6, 30 Nov. 2004.

<sup>46</sup> Hart, J., Verification Research, Training and Information Centre (VERTIC), *Chemical Industry Inspections Under the Chemical Weapons Convention*, Verification Matters Research Report no. 1 (VERTIC: London, 2001).

<sup>47</sup> Hart, J., ‘The treatment of perfluorobutylene under the Chemical Weapons Convention’, *ASA Newsletter*, no. 88 (28 Feb. 2002), pp. 1, 20–23; and Hart (note 46), pp. 21–22. A related consideration is whether or how the use of temporary chemical storage tanks or ‘day tanks’ can or should be taken into account.

<sup>48</sup> OPCW, Response to a SIPRI request for information, Feb. 2005.

<sup>49</sup> As of 30 Sep. 2004, 64 CWPFs had been declared by 12 parties. As of the same date, 47 CWPFs had been destroyed or converted. The countries are Bosnia and Herzegovina, China, France, India, Iran, Japan, South Korea, Libya, Russia, Serbia and Montenegro, the UK and the USA. The CWC defines such a facility as any facility that produced chemical weapons at any time since 1 Jan. 1946. CWC, Article II, para. 8.

may have been imported during the 1980s.<sup>50</sup> In early 2003 Albania declared that it had discovered chemical weapons on its territory in November 2002. The CSP approved, in principle, a request by Albania to extend its intermediate deadline for completing the destruction of 1 per cent, 20 per cent and 45 per cent its Category 1 stocks (i.e., weapons containing chemicals listed in Schedule 1 of the CWC's Annex on Chemicals and their parts and components).<sup>51</sup> The Executive Council of the OPCW will determine the destruction deadlines. Albania is obliged to complete the destruction of its stockpile no later than 29 April 2007.<sup>52</sup> In its report to the '1540 Committee' Albania expressed its hope that this deadline would be met.<sup>53</sup>

Official public information on the type and quantity of *India's* chemical weapon stockpile is limited. In 2004 India met its deadline for destroying 45 per cent of its Category 1 stocks<sup>54</sup> and was reported to have completed destruction of 80 per cent of its total stocks.<sup>55</sup>

On 19 December 2003 *Libya* publicly renounced NBC weapons and longer-range missiles and associated programmes and in 2004 additional information became available on those programmes which Libya had pursued.<sup>56</sup> Libya declared *inter alia* approximately 2000 tonnes of precursors not listed in the CWC Annex on Chemicals which had been intended to be used for purposes prohibited by the CWC. Libya thus acknowledged the extent of the CWC's definition of chemical weapons which prohibits all toxic materials and their precursors except where intended for purposes not prohibited by the CWC, a concept also known as the 'general purpose criterion' (GPC).<sup>57</sup> In early 2004 Libya suspended the destruction of chemical weapon air bombs at the request of the OPCW in order to declare the weapons and allow the OPCW to verify their destruction. In March 2004 Libya completed the destruction of its air bombs. In December 2004 the OPCW approved Libya's request to convert two former sulphur mustard production facilities at Rabta into a pharma-

<sup>50</sup> At least some of the canisters reportedly have Chinese markings. 'U.S. to help destroy Albanian weapons', *Chemical & Engineering News*, vol. 82, no. 44 (1 Nov. 2004), p. 19. On Albania see chapter 16 in this volume.

<sup>51</sup> The CWC's 'order of destruction' provisions are provided in CWC, Part IV(A), Verification Annex, paras. 15–19.

<sup>52</sup> OPCW, 'Decision, Request by Albania for extensions of the intermediate deadlines for the destruction of its Category 1 chemical weapons stockpiles', OPCW document C-9/DEC.8, 30 Nov. 2004. The plural 'stockpiles' in the decision's title suggests that Albania has more than 1 storage facility.

<sup>53</sup> Albania's first report to the 1540 Committee is annexed to UN Security Council document S/AC.44/2004/(02)/38, 4 Nov. 2004. On the 1540 Committee see chapter 11 in this volume.

<sup>54</sup> 'UK statement under Agenda item IX', UK delegation statement to the Plenary during the Ninth CSP, The Hague, Netherlands, 28 Nov.–2 Dec. 2004.

<sup>55</sup> Spence, S., 'Progress in The Hague', *CBW Conventions Bulletin*, no 66 (Dec. 2004), p. 8.

<sup>56</sup> There is little, if any, evidence that Libya had an offensive biological weapon programme. On Libya's chemical and biological weapon holdings see chapter 14 in this volume.

<sup>57</sup> CWC, Article II, para. 1. The GPC is the key mechanism by which the CWC can take into account technological and scientific change and ensure that use of other toxic chemicals for chemical warfare purposes is also prohibited. It allows those implementing the CWC to better distinguish between 'offensive' (i.e., prohibited) and 'defensive' (i.e., permitted) chemical warfare programmes. Concern has periodically been expressed that the manner in which the CWC is being implemented is too narrowly focused partly because, since the convention's entry into force on 29 Apr. 1997, declarations and inspections have tended to focus on chemicals listed in the CWC's Annex on Chemicals.

ceutical production facility to produce drugs to treat HIV/AIDS, malaria and tuberculosis.<sup>58</sup> The decision is significant partly because it requires an amendment to the Verification Annex in order to relax the CWC requirement that conversion of any CWPF be completed no later than six years after the CWC enters into force.<sup>59</sup> Such a technical change, which will be enacted by the Executive Council at a later date, has been seen as desirable in order to avoid deterring states that may wish to convert former CWPFs to CWC-permitted purposes from joining the CWC. The CSP approved extensions for Libya to complete the destruction of 1 per cent, 20 per cent and 45 per cent of its Category 1 chemical weapons. The Executive Council will determine the destruction deadlines, but Libya is obliged in any case to complete the destruction of all chemical weapons no later than 29 April 2007.<sup>60</sup>

The declared *Russian* chemical weapon stockpile comprises approximately 40 000 agent tonnes and is stored at seven locations.<sup>61</sup> As of December 2004 Russia had destroyed approximately 2 per cent of its declared chemical weapons.<sup>62</sup> In 2004 destruction operations were carried out at Gorny only; these operations are scheduled to be completed by the end of 2005. Russia's National Authority, the Munitions Agency, was reorganized in 2004 in accordance with a 9 March 2004 Russian presidential decree. The decree folded the agency's functions into the Federal Agency on Industry which, in turn, is subordinate to the Ministry of Industry and Energy of the Russian Federation. Russia's National Authority is currently the Centre for Convention Problems and Programmes of Disarmament Directorate and is headed by Colonel-General Viktor Ivanovich Kholstov.<sup>63</sup>

The *United States'* stockpiled chemical weapons are stored at eight locations.<sup>64</sup> As of 28 December 2004, 33.34 per cent of these stored chemical

<sup>58</sup> OPCW, 'Decision, Request by the Libyan Arab Jamahiriya to use the chemical weapons production facilities Rabta Pharmaceutical Factory 1 and Rabta Pharmaceutical Factory 2 (Phase II) in Rabta, the Libyan Arab Jamahiriya for purposes not prohibited under the Chemical Weapons Convention', OPCW document C-9/DEC.9, 30 Nov. 2004.

<sup>59</sup> CWC, Part V, Verification Annex, para. 72; and CWC, Article XV (Amendments). In Jan. 2005 the Director-General notified all parties that the change had been approved and had entered into force. OPCW, 'Technical change to Chemical Weapons Convention enters into force: provisions for conversion of former chemical weapons production facilities reinforced', Press Release no. 01, 31 Jan. 2005.

<sup>60</sup> OPCW, 'Decision, Request by the Libyan Arab Jamahiriya for extensions of the intermediate deadlines for the destruction of its Category 1 chemical weapons stockpiles', OPCW document C-9/DEC.7, 30 Nov. 2004. On the CWC's 'order of destruction' provisions see CWC, Part IV(A), Verification Annex, paras. 15–19.

<sup>61</sup> See also chapter 16 in this volume, especially table 16.1.

<sup>62</sup> Litovkin, V., 'Russia set to meet chemical weapons destruction deadline', Russian Information Agency (RIA), *Novosti* (Moscow), 17 Nov. 2004. Under the CWC, Russia is obligated to destroy its chemical weapon stockpile no later than 29 Apr. 2012. Russia is still officially committed to meeting this deadline, but intermediate destruction dates provided by Russia's destruction plan have been periodically extended or called into question as a result of official and semi-official Russian Government statements.

<sup>63</sup> 'Struktura: Federal'nikh organov ispolnitel'noi vlasti (utverzhdena Ukazom Prezidenta Rossiiskoi Federatsii ot 9 Marta 2004, no. 314)' [Structure of the federal executive organs (confirmed by decree no. 314 of the President of the Russian Federation)], available on the *Rossiiskaya Gazeta* Internet site at URL <<http://www.rg.ru/rubricator/index.html>>. Kholstov is a deputy head of the Federal Agency on Industry.

<sup>64</sup> The US chemical weapon stockpiles are located at Aberdeen Proving Ground, Md.; Anniston Army Depot, Ala.; Lexington-Blue Grass Army Depot, Ky.; Newport Chemical Depot, Ind.; Pine Bluff

agents had been destroyed as had 42 per cent of US chemical munitions.<sup>65</sup> The US Army's Chemical Materials Agency (CMA) is responsible for overseeing the destruction of the stockpiled chemical weapons, and to achieve this, it is implementing 3 programmes: the Assembled Chemical Weapons Alternatives Program (ACWA), the Alternative Technology and Approaches Program (ATAP) and the Chemical Stockpile Disposal Program (CSDP). The ACWA is tasked to 'test and demonstrate' a minimum of 2 non-incineration-based destruction technologies to be used to destroy the stockpiles located at Pueblo, Colorado, and Richmond, Kentucky. The ATAP is responsible for investigating and developing non-incineration-based destruction technologies to be used to destroy the chemical weapons located at Newport, Indiana, and Edgewood, Maryland. The CSDP is responsible for destroying, using incineration-based technology, the chemical weapon stockpiles at Anniston, Alabama; Pine Bluff, Arkansas; Tooele, Utah; and Umatilla, Oregon. The US Army's Non-Stockpile Chemical Material Programme (NSCMP) is responsible for treating and disposing of materials associated with: (a) binary chemical weapons, (b) buried chemical warfare matériel, (c) former CWPFs, (d) miscellaneous chemical warfare matériel (i.e., unfilled munitions and devices and equipment specifically designed for use directly in connection with the employment of chemical munitions), and (e) recovered chemical warfare matériel (e.g., chemical agent identification sets).

In 2004 destruction operations were carried out at the Anniston, Edgewood and Tooele facilities. Destruction facilities at Newport, Pine Bluff and Umatilla were essentially completed in 2004, although construction of full-scale CWDFs at Blue Grass and Pueblo had not begun.

#### *Old and abandoned chemical weapons*

As of December 2004, three countries had declared that abandoned chemical weapons (ACW) were present on their territories, and 10 countries had declared that they possess old chemical weapons (OCW).<sup>66</sup>

In 2004 further information regarding *Japanese* chemical warfare activities during World War II was made public.<sup>67</sup> Additional World War II-era chem-

Arsenal, Ark.; Pueblo Chemical Depot, Colo.; Deseret Chemical Depot, Utah; and Umatilla Chemical Depot, Oreg.

<sup>65</sup> US Army Chemical Materials Agency, 'One third of the nation's chemical agent now safely destroyed', Press Release 04-14, 28 Dec. 2004. Types and quantities of the US chemical weapon stockpile are given in Zanders, J. P., Eckstein, S. and Hart, J., 'Chemical and biological weapon developments', *SIPRI Yearbook 1997: Armaments, Disarmament and International Security* (Oxford University Press: Oxford, 1997), pp. 449–51.

<sup>66</sup> As of Nov. 2004, the countries that have declared ACW to the OPCW are China, Italy and Panama. The countries that have declared OCW to the OPCW are Australia, Belgium, Canada, France, Germany, Italy, Japan, Slovenia, the UK and the USA. ACWs are defined as those that were abandoned by a state after 1 Jan. 1925 on the territory of another state without the permission of the latter. CWC, Article II, para. 6.

<sup>67</sup> For background see Harris, S., *Factories of Death* (Routledge: London, 1994); Wallace, D. and Williams, P., *Unit 731* (Free Press: New York, 1989); Gold, H., *Unit 731 Testimony* (Yen Books: Tokyo, 1996); and Harris, S., 'The Japanese biological warfare programme: an overview', eds E. Geissler and J. E. van Courtland Moon, *Biological and Toxin Weapons: Research, Development and Use from the*

ical munitions that Japan left in China at the end of World War II were recovered, and in April 2004 China and Japan reportedly agreed to begin construction of a Japanese-funded \$2.8 billion CWDF in China.<sup>68</sup> While conducting research at an Australian state archive, a Japanese professor uncovered a 400-page report that contained the record of trials of Japanese prisoners carried out by the Australian military in Hong Kong in 1948. According to the document, a lieutenant and a lieutenant-colonel of the Japanese Imperial Army were sentenced to death for the 1944 killing of two prisoners of war—an Australian Air Force captain and a sergeant in the Dutch East Indies Air Force—by testing cyanide-filled bottles designed for use against tanks on them in order to determine whether the munitions were still usable.<sup>69</sup>

During a press conference in Panama City on 13 November 2004, US Secretary of Defense Donald H. Rumsfeld was asked whether the USA planned to ‘clean and decontaminate’ San José Island, an island in *Panama* that was used by the USA and a number of its allies for chemical munitions field testing during World War II. The unidentified questioner stated that there were at least 3000, 500-pound (227 kilograms) and 1000-pound (454 kg) ‘bombs with chemical warheads, mustard, gas, nerve gas’ on the island. In response, Rumsfeld stated: ‘I am advised that the status of it [the matter] is that the U.S., apparently, has assumed its obligation under the treaty [CWC] and that the matter is closed’.<sup>70</sup> Panama reportedly declined a US offer to pay to train Panamanians to deal with any chemical munitions recovered and to provide \$1.5 million to purchase equipment; as a result, the USA reportedly ‘considers that issue closed’.<sup>71</sup> Panama has declared to the OPCW that it has ACW on its territory. However, the nature and extent of any possible ACW and the identity of the abandoning state(s) has not been officially determined.<sup>72</sup>

On 21 June 2004 a number of World War I-era artillery shells, some of which were reportedly filled with chlorine, were uncovered in the village of Toporivka in the Chernovsti region of *Ukraine*.<sup>73</sup>

*Middle Ages to 1945*, SIPRI Chemical & Biological Warfare Studies no. 18 (Oxford University Press: Oxford, 1999), pp. 127–52.

<sup>68</sup> ‘Japan is to put up’, AFP (Hong Kong), 21 Aug. 2004, in ‘AFP cites Mainichi: Japan to build chemical weapons disposal facility in China’, Foreign Broadcast Information Service, *Daily Report—East Asia (FBIS-EAS)*, FBIS-EAS-2004-0821, 21 Aug. 2004.

<sup>69</sup> ‘Japan tested chemical weapon on Aussie POW: new evidence’, *Japan Times*, 27 July 2004, URL <<http://www.japantimes.co.jp/cgi-bin/getarticle.pl5?nn20040727a9.htm>>.

<sup>70</sup> US Department of State, ‘Rumsfeld praises Panama’s role in fighting narco-terrorism: U.S. defense secretary speaks at news conference in Panama’, *International Information Programs*, Nov. 2004, URL <<http://usinfo.state.gov/gi/Archive/2004/Nov/15-929837.html>>.

<sup>71</sup> Seven chemical munitions have reportedly been recovered. Robles, F., ‘Panama pushing U.S. to remove its old bombs’, *Miami Herald*, 1 Aug. 2004, URL <<http://www.miami.com/mld/miamiherald/news/world/americas/9292896.htm?1c>>. It is unclear whether the bombs contained chemical warfare agents. Under the CWC a chemical weapon can consist of unfilled munitions and devices that are specifically designed to cause death or other harm through the toxic properties of their chemical fill. CWC, Article II, para. 1.

<sup>72</sup> For background, see Hart, Kuhlau and Simon (note 43), p. 658; and Zanders, Hart and Kuhlau (note 9), p. 695.

<sup>73</sup> ‘Workers find poison gas shells at Ukraine construction site’, *Deutsche Presse-Agentur*, 21 June 2004. Munitions, mostly dating from World War II, are recovered every month in Ukraine. Daily reports on the recovery of old munitions is provided by the Ministry of Ukraine of Emergencies and Affairs of

## IV. Iraq

In 2004 the sole investigative effort in Iraq to uncover its past biological and chemical warfare activities was conducted by the US-led Iraq Survey Group (ISG) because the UN Monitoring, Verification and Inspection Commission (UNMOVIC) remained excluded from Iraq. However, UNMOVIC continued to publish reports and analysis.<sup>74</sup> By the end of 2004, the ISG teams had not discovered any chemical or biological weapons or programmes in Iraq and their inspection activities were essentially finished. While some questions about Iraq's chemical and biological weapon capabilities have been answered to some extent, some may never be resolved.<sup>75</sup> The 'non-discovery' of weapon stockpiles has led to official inquiries into the quality and use of the intelligence information provided before the 2003 invasion of Iraq.

### The Iraq Survey Group

The ISG, whose members came from Australia, the UK and the USA, began its work in June 2003. Its primary goal was to uncover and eliminate NBC weapons.<sup>76</sup> On 23 January 2004 the Director of the US Central Intelligence Agency (CIA), George Tenet, announced that Charles A. Duelfer would succeed David Kay as Special Advisor for Strategy regarding Iraqi Weapons of Mass Destruction Programs.<sup>77</sup> Kay's conclusion on leaving his post was that there were no stocks of NBC weapons in Iraq.<sup>78</sup> The ISG comprised approximately 1750 people 750 of whom worked in Iraq; most of the remaining staff worked in Qatar.<sup>79</sup> Owing to the intense violence in Iraq and the absence of new information, the ISG ended its work in Iraq in December 2004.<sup>80</sup>

Population Protection from Consequences of Chernobyl Catastrophe at URL <<http://www.mns.gov.ua/daily/showdailyarchive.php?day=22&month=12&year=2004&l=ru>>.

<sup>74</sup> UNMOVIC's 16th Quarterly Report is attached as an annex to UN Security Council document S/2004/160, 27 Feb. 2004; the 17th Quarterly report is attached to UN Security Council document S/2004/435, 28 May 2004; the 18th is attached to UN Security Council document S/2004/693, 27 Aug. 2004; and the 19th is attached to UN Security Council document S/2004/924, 26 Nov. 2004. They are available on the UNMOVIC Internet site at URL <<http://www.unmovic.org/>> and on the UN Internet site at URL <<http://documents.un.org/>>.

<sup>75</sup> The outstanding questions are essentially the same as in 2003. On outstanding questions regarding Iraq's chemical and biological weapons see Guthrie *et al.* (note 14); and UNMOVIC, 19th Quarterly Report, (note 74), para. 27.

<sup>76</sup> On the ISG see Guthrie *et al.* (note 14), pp. 686–88.

<sup>77</sup> Central Intelligence Agency (CIA), 'DCI announces Duelfer to succeed Kay as special advisor', Press Releases and Statements, 23 Jan. 2004, URL <[http://www.cia.gov/cia/public\\_affairs/press\\_release/2004/pr01232004.html](http://www.cia.gov/cia/public_affairs/press_release/2004/pr01232004.html)>.

<sup>78</sup> Kay Testimony, Hearing of the Senate Armed Services Committee 'Iraqi weapons of mass destruction programs', 28 Jan. 2004, URL <[www.ceip.org/files/projects/npp/pdf/Iraq/kaytestimony.pdf](http://www.ceip.org/files/projects/npp/pdf/Iraq/kaytestimony.pdf)>.

<sup>79</sup> Iraq Survey Group, 'Statement for the record', Brigadier General Joseph J. McMenamin, US Marine Corps Commander Iraq Survey Group, Oct. 2004, URL <[http://www.senate.gov/~armed\\_services/statemnt/2004/October/McMenamin\\_10-06-04.pdf](http://www.senate.gov/~armed_services/statemnt/2004/October/McMenamin_10-06-04.pdf)>.

<sup>80</sup> Linzer, D., 'Search for banned arms in Iraq ended last month: critical September report to be final word', *Washington Post*, 12 Jan. 2005, p. A01, URL <[http://www.washingtonpost.com/ac2/wp\\_dyn/A2129-2005Jan11](http://www.washingtonpost.com/ac2/wp_dyn/A2129-2005Jan11)>.

*Key findings*

The ISG produced a short report for the US Congress, which was presented by Duelfer on 30 March 2004.<sup>81</sup> Allegations later surfaced that the CIA and the British Secret Intelligence Service (MI6) had attempted to insert incorrect information into the report, which led to the resignation of a senior Australian member of the ISG, Rod Barton, on 22 March 2004.<sup>82</sup> Rumours circulated that another Australian and a Briton had also resigned from the ISG.

In October the ISG released a substantial unclassified report on its search for chemical and biological weapons.<sup>83</sup> An addendum is scheduled to be released in early 2005, and work continued on revision of the remaining documents and follow-up of any additional discoveries in Iraq.<sup>84</sup>

The report concluded that Iraq's ability to produce chemical and biological weapons had essentially been destroyed in 1991. The report focused on the former regime's *intent* or *capability* to produce new such weapons. However, according to UNMOVIC, the report did not consider the impact of ongoing monitoring and verification (OMV), which was designed to detect the intent to misuse dual-use equipment. The OMV had continued even after the lifting of sanctions.<sup>85</sup> The ISG did not discover any 'formal written' Iraqi strategy for the revival of WMD after the lifting of sanctions.<sup>86</sup>

The ISG estimated that Iraq had unilaterally destroyed the unaccounted for parts of its chemical weapon stockpile in 1991. The Kuwait War crippled the chemical warfare programme and the legitimate chemical industry suffered from sanctions. The ISG also claimed that Iraq had organized the chemical industry after the mid-1990s so as to allow it to preserve the scientific knowledge base needed to restart a chemical warfare programme, conduct a modest amount of dual-use research and partially recover from the decline of its production capability.<sup>87</sup> A small number of pre-1991 abandoned chemical mortar shells were uncovered in Iraq by the ISG and by coalition troops.<sup>88</sup> Analysis of their contents revealed that the chemical fill was decomposed to the extent that

<sup>81</sup> Testimony to the US Congress by Mr Charles Duelfer, Director of Central Intelligence Special Advisor for Strategy regarding Iraqi Weapons of Mass Destruction (WMD) Programs, 30 Mar. 2004, URL <[http://www.cia.gov/cia/public\\_affairs/speeches/2004/tenet\\_testimony\\_03302004.html](http://www.cia.gov/cia/public_affairs/speeches/2004/tenet_testimony_03302004.html)>.

<sup>82</sup> Mangold, T., 'Tomorrow John Scarlett starts his job as boss of MI6', *Mail on Sunday* (London), 1 Aug. 2004, p. 8.

<sup>83</sup> Central Intelligence Agency (CIA), 'Comprehensive Report of the Special Advisor to the DCI on Iraq's WMD', 30 Sep. 2004 (hereafter ISG Report). The report was published in 3 vols, available at URL <[http://www.odci.gov/cia/reports/iraq\\_wmd\\_2004/index.html](http://www.odci.gov/cia/reports/iraq_wmd_2004/index.html)>.

<sup>84</sup> The White House, 'Press briefing by Scott McClellan', 12 Jan. 2005, URL <<http://www.whitehouse.gov/news/releases/2005/01/20050112-7.html>>.

<sup>85</sup> Ember, L. R., 'Assessing Iraq's weapons: Report requested by the President discounts arms threat, undercuts rationale for war', *Chemical and Engineering News*, vol. 82, no. 43 (25 Oct. 2004), pp. 40–44; and UNMOVIC, 19th Quarterly Report, (note 74), Appendix, para. 6.

<sup>86</sup> ISG Report, (note 83), vol. I, 'Key findings', p. 30.

<sup>87</sup> ISG Report, (note 83), vol. III, 'Iraq's chemical warfare program', p. 1.

<sup>88</sup> Global Security, 'Possible Iraqi chemical weapons found—Denmark', 12 Jan 2004, URL <<http://www.globalsecurity.org/wmd/library/news/iraq/2004/01/iraq-040112-pla-daily03.htm>>; and BBC News, 'Nerve gas bomb' explodes in Iraq', 17 May 2004, URL <[http://news.bbc.co.uk/1/hi/world/middle\\_east/3722255.stm](http://news.bbc.co.uk/1/hi/world/middle_east/3722255.stm)>.

it presented little or no danger.<sup>89</sup> The ISG recovered 53 chemical munitions, which appear to be from pre-Gulf War stocks.<sup>90</sup> The ISG concluded that, because nerve agent produced earlier by Iraq had lacked stability, the intent had been to maintain a 'just-in-time' production capability. Regarding biological weapons, the report concluded that Iraq had destroyed its undeclared stocks and had probably destroyed its remaining bulk biological warfare agent in 1991–92.

The ISG report alleged that the Iraqi Intelligence Service programme possessed a series of chemical and biological laboratories. The scope and nature of the work conducted there has not been established. The laboratories were not declared and were never inspected by the UN Special Commission on Iraq (UNSCOM) or UNMOVIC.<sup>91</sup> It is unclear from the report whether the activity claimed by the ISG to have taken place at these laboratories was related to weapon programmes. It is therefore not certain that they should have been subject to monitoring by UNMOVIC.<sup>92</sup>

#### *Delivery systems and alleged mobile production capabilities*

Iraq was accused in 2002 assessments of possessing several unmanned air vehicle (UAV) programmes that were intended to deliver chemical and biological weapons.<sup>93</sup> However, UNMOVIC concluded that there is no evidence that Iraq developed drones, remotely piloted vehicles (RPVs) and UAVs of prohibited ranges or capable of delivering chemical or biological weapons. These systems were more likely intended for 'conventional military purposes such as air defence training, data collection and surveillance'.<sup>94</sup>

This assessment was not shared by the ISG, which claimed in October 2003 that Iraq had tested one of its declared UAVs to a range of 500 kilometre, which is 350 km beyond the permissible limit.<sup>95</sup> Duelfer also concluded that UAVs were tested and 'easily exceeded' the UN limit of 150 km and that a 'very robust' Iraqi programme for delivery systems, not reported to the UN, had been uncovered.<sup>96</sup> However, this original ISG assessment changed and the October 2004 ISG report concluded that the UAV programmes were intended

<sup>89</sup> Manley, R., 'The Butler report: where did Iraq's weapons go?', *Open Democracy*, 21 July 2004, URL <<http://www.opendemocracy.net/articles/ViewPopupArticle.jsp?id=-2&articleId=2015>>. Different chemical warfare agents decompose at different rates. Decomposition rates also vary with the original purity of the agent, presence of stabilizers and storage conditions. In general, agents such as sulphur mustard degrade at a slower rate than nerve agents. See also BBC News, 'No blister agent' in Iraq shells', 18 Jan. 2004, URL <[http://news.bbc.co.uk/2/hi/middle\\_east/3407853.stm](http://news.bbc.co.uk/2/hi/middle_east/3407853.stm)>.

<sup>90</sup> ISG Report (note 83), vol. III, 'Iraq's chemical warfare program', p. 97.

<sup>91</sup> ISG Report (note 83), vol. III, 'Biological warfare', pp. 1-2.

<sup>92</sup> UNMOVIC, 19th Quarterly Report, (note 74), Appendix, para. 31.

<sup>93</sup> See Guthrie *et al.* (note 14), p. 689.

<sup>94</sup> UNMOVIC, 18th Quarterly Report, (note 74), Appendix II, paras. 12-13.

<sup>95</sup> Central Intelligence Agency, 'Statement by David Kay on the interim progress report on the activities of the Iraq Survey Group (ISG) before the House Permanent Select Committee on Intelligence, the House Committee on Appropriations, Subcommittee on Defense, and the Senate Select Committee on Intelligence', 2 Oct. 2003, URL <[http://www.cia.gov/cia/public\\_affairs/speeches/2003/david\\_kay\\_10022003.html](http://www.cia.gov/cia/public_affairs/speeches/2003/david_kay_10022003.html)>.

<sup>96</sup> Testimony to the US Congress by Mr Charles Duelfer (note 81).

for reconnaissance or electronic warfare; no evidence was found of intent to use UAVs as chemical or biological delivery systems.<sup>97</sup> The report claimed that there were numerous examples of disregard of UN sanctions and resolutions in an effort to improve missile and UAV capabilities.<sup>98</sup>

Unresolved questions regarding Iraq's missile programme remained in 2004. From 1999 until 2002 the Al Samoud-2 and Al Fatah missiles were the key components of Iraq's missile programme.<sup>99</sup> The ISG estimated that 36 Al Samoud-2 and as many as 34 Al Fatah missiles were unaccounted for.<sup>100</sup> At the time UNMOVIC withdrew from Iraq, it was still overseeing the destruction of proscribed Al Samoud-2 missiles and estimated that 25 such missiles remained to be destroyed. According to UNMOVIC, the status of the Al Fatah missiles remained uncertain. UNMOVIC had previously confirmed the existence of 37 complete Al Fatah missiles and 12 such missiles that were still in production.<sup>101</sup>

The ISG found no evidence that Iraq had retained Scud-variant missiles after 1991. It did find evidence of Iraqi interest in developing a long-range missile capability and uncovered plans for three long-range ballistic missiles with 400–1000 km ranges and plans for a 1000-km range cruise missile. However, none of these missiles had progressed to the stage of production.<sup>102</sup>

Alleged mobile biological weapon production units (trailers) constituted part of the coalition's 'evidence' of the presence of NBC weapons in Iraq,<sup>103</sup> but in 2004 the USA acknowledged that the claim was inaccurate.<sup>104</sup> The ISG reached the same conclusion after thorough examination of two trailers that had been found in 2003 and which were the subject of specific CIA allegations in 2003. The ISG stated that they were 'almost certainly' designed for the generation of hydrogen and were not part of a biological warfare programme.<sup>105</sup>

### **UNMOVIC: status and future**

UNMOVIC conducted inspections in Iraq relating to chemical and biological weapons, including at facilities and locations which US intelligence services claimed were used for storing such munitions, until the start of military action

<sup>97</sup> ISG Report (note 83), vol. II, 'Delivery systems', p. 42.

<sup>98</sup> ISG Report (note 83), vol. II, 'Delivery systems', p. 71.

<sup>99</sup> UNMOVIC, 19th Quarterly Report, (note 74), Appendix, para. 33.

<sup>100</sup> ISG Report (note 83), vol. II, 'Delivery systems', pp. 18–28, 95–106.

<sup>101</sup> UNMOVIC's 19th Quarterly Report (note 74), Appendix, para. 34.

<sup>102</sup> ISG Report (note 83), vol. II, 'Delivery systems', pp. 1–2.

<sup>103</sup> The alleged information was used in Feb. 2003 by US Secretary of State Colin L. Powell in his attempt to convince the UN Security Council that Iraq had stockpiles of chemical and biological weapons ready for deployment. US Department of State, 'Remarks to the United Nations Security Council', Statement by US Secretary of State Colin L. Powell, 5 Feb. 2003, URL <<http://www.state.gov/secretary/rm/2003/17300.htm>>.

<sup>104</sup> NBC Meet the Press, 'Powell: prewar intel on Iraq labs was 'inaccurate': some information said 'deliberately' misleading', 16 May 2004, URL <<http://www.msnbc.msn.com/id/4997766/>>. On analysis of UNMOVIC assessments see Guthrie *et al.* (note 14), pp. 688–89.

<sup>105</sup> ISG Report (note 83), vol. III, 'Biological warfare', pp. 3, 79.

in March 2003.<sup>106</sup> Although the UN inspectors have not been allowed back into Iraq their mandate is not terminated and UNMOVIC still exists.<sup>107</sup> The coalition has not requested UNMOVIC's services to resolve the remaining questions about Iraq's chemical and biological weapon capabilities and cooperation between the two has been non-existent. When the ISG report was published, UNMOVIC was not given access to the supporting documentation, interview testimony or details of the inspections conducted by the ISG.<sup>108</sup> Meanwhile, UNMOVIC has *inter alia* begun compiling a compendium to cover several aspects of its findings on Iraq's 'past proscribed' chemical and biological weapons and programmes from the 1960s until 2003.<sup>109</sup> Its staff has been reduced by one-fourth and currently comprises 51 employees.<sup>110</sup> UNMOVIC continues to be financed by revenues from the oil-for-food programme (OFFP)<sup>111</sup> and will have the means to continue to operate until a new UN Security Council resolution terminates its mandate.

UNSCOM and UNMOVIC were both mandated to carry out OMV in Iraq.<sup>112</sup> This mandate is still legally in place, although in practice UNMOVIC has conducted limited monitoring, which mainly involved known equipment and material that now cannot be located.<sup>113</sup> Using commercial satellite images UNMOVIC revealed a systematic looting of items subject to monitoring, which made it difficult to maintain an accurate assessment of Iraq's capabilities. Sites which were part of the main chemical weapon production establishment have been emptied and destroyed without tracking the materials, and sealed structures whose contents were not ascertained may have been breached.<sup>114</sup> Chemical production sites have been looted and destroyed, although biological production sites generally have been left untouched.<sup>115</sup>

The lack of participation by UN weapon inspectors in Iraq after March 2003 has been criticized because it complicates the examination of the role and importance of the constraints, such as inspections and sanctions, imposed on Iraq.<sup>116</sup> The apparent success and effectiveness of UNSCOM's and

<sup>106</sup> Halchin E., L., 'The Coalition Provisional Authority (CPA): origin, characteristics, and institutional authorities', *CRS Report for Congress*, 29 Apr. 2004, URL <[www.usembassy.at/en/download/pdf/iraq\\_cpa.pdf](http://www.usembassy.at/en/download/pdf/iraq_cpa.pdf)>.

<sup>107</sup> On UNMOVIC's mandate see Zanders, J. P. *et al.*, *Non-compliance with the Chemical Weapons Convention: Lessons from and for Iraq*, SIPRI Policy Paper no. 5, Oct. 2003, URL <[http://www.sipri.org/contents/publications/policy\\_papers.html](http://www.sipri.org/contents/publications/policy_papers.html)>.

<sup>108</sup> UNMOVIC 19th Quarterly Report (note 74), para. 3.

<sup>109</sup> UNMOVIC 16th Quarterly Report (note 74), para. 10.

<sup>110</sup> UNMOVIC 19th Quarterly Report (note 74), para. 20.

<sup>111</sup> On 21 Apr. 2004, the UN Security Council authorized an independent inquiry into allegations of corruption and fraud surrounding the OFFP through the passage of Resolution 1538. See the independent Inquiry Committee's official Internet site at URL <<http://www.iic-offfp.org/>>.

<sup>112</sup> The mandate is stipulated in United Nations Security Council Resolution 687, 3 Apr. 1991 and subsequently detailed in United Nations Security Council Resolution 715, 11 Oct. 1991.

<sup>113</sup> UNMOVIC official, interview with F. Kuhlau, 14 Dec. 2004.

<sup>114</sup> UNMOVIC 18th Quarterly Report (note 74), paras 10-11; and UNMOVIC 19th Quarterly Report (note 74), paras 6-12.

<sup>115</sup> UNMOVIC official (note 113).

<sup>116</sup> Cirincione, J. *et al.*, *WMD in Iraq: Evidence and Implications* (Carnegie Endowment for International Peace: Washington, DC, Jan. 2004), URL <<http://www.ceip.org/files/pdf/Iraq3FullText.pdf>>.

UNMOVIC's unique inspections in curtailing Iraq's biological and chemical weapon programmes prompted discussion of the establishment of a permanent inspection agency. Proposals were made in 2003 to transform UNMOVIC into a permanent UN arms inspectorate, and the Council of the European Union adopted an Action Plan under which 'unique verification and inspection competence' could be retained from UNMOVIC for future use.<sup>117</sup> The discussion continued in 2004. Expertise and institutional memory are important for future inspections specifically relating to biological weapons and missiles where specialized international organizations do not exist, and it has been suggested that UNMOVIC could form the basis for a permanent body operating under the UN Secretary-General.<sup>118</sup> Nuclear issues would generally be addressed by the IAEA and chemical issues by the OPCW.<sup>119</sup> As already noted in the biological context, however, there is influential opposition to this suggestion.<sup>120</sup>

### **Work programmes to redirect Iraqi weapon scientists and technicians**

A number of programmes have been initiated to offer civilian employment to Iraqi scientists, technicians and engineers who previously worked on NBC weapon and missile programmes. Such efforts have been conducted in parallel with a broader international attempt to reduce the threat posed by the proliferation of NBC materials and scientific know-how. In Iraq a limited number of nations focus on this issue. The Iraqi International Center for Science and Industry (IICSI), which was created in December 2003,<sup>121</sup> began operating in June 2004 under the supervision of the US Department of State and was scheduled to operate for two years with an annual budget of approximately \$2 million.<sup>122</sup> The Department of State has not requested additional funding for fiscal year 2005.<sup>123</sup> As of January 2005 the programme had engaged about

<sup>117</sup> Guthrie *et al.* (note 14), pp. 690-91.

<sup>118</sup> Carnegie Endowment for International Peace, 'The importance of inspections', Proliferation Brief, vol. 7, no. 11, adapted from remarks by Dr Hans Blix, chairman of the Weapons of Mass Destruction Commission, to the 2004 Carnegie International Non-Proliferation Conference, 21-22 June 2004, URL <<http://www.carnegieendowment.org/publications/index.cfm?fa=print&id=1591>>; Ifft, E., 'Iraq and the value of on-site inspections', *Arms Control Today*, Nov. 2004, URL <[http://www.armscontrol.org/act/2004\\_11/Ifft.asp?print](http://www.armscontrol.org/act/2004_11/Ifft.asp?print)>; and Findlay, T., 'Preserving UNMOVIC: the institutional possibilities', *Disarmament Diplomacy*, no. 76 (Mar./Apr. 2004), URL <<http://www.acronym.org.uk/dd/dd76/76tf.htm>>.

<sup>119</sup> Center for Arms Control and Non-Proliferation, 'Arms control experts call for permanent UN body for WMD investigations', 18 Oct. 2004, URL <<http://www.armscontrolcenter.org/archives/000895.php>>; and Ifft (note 118).

<sup>120</sup> See the section on biological weapon disarmament above.

<sup>121</sup> US Department of State, 'Redirection of Iraqi weapons of mass destruction (WMD) experts', Press Statement, 18 Dec. 2003 <URL <http://www.state.gov/r/pa/prs/ps/2003/27408.html>>.

<sup>122</sup> Stone, R., 'Coalition throws 11th-hour lifeline to Iraqi weaponers', *Science*, vol. 304, no. 5679 (25 June 2004), p. 1884.

<sup>123</sup> Roston, M., 'Redirection of WMD Scientists in Iraq and Libya: a status report', *RANSAC: Policy Update*, Apr. 2004, URL <<http://www.ransac.org/Publications/Reports%20and%20Publications/Policy%20Updates/index.asp>>.

120 scientists in various activities.<sup>124</sup> The Department of State reportedly plans to employ up to 500 Iraqis under the IICSI programme.<sup>125</sup>

On 19 June 2004 the Coalition Provisional Authority (CPA) created the Iraqi Nonproliferation Programs Foundation (INPF) with initial funding of \$37.5 million.<sup>126</sup> The programme will fund projects involving Iraqi scientists and technicians who participated in weapon-related activities to work on 'reconstruction projects'.<sup>127</sup> The CPA's 2004 budget included 90 billion new Iraqi dinar (NID) (c. \$60 million) allocated for 'WMD scientist retention' and 30 billion NID (c. \$20 million) per year for 2005 and 2006.<sup>128</sup> Another US Government-funded initiative was launched by the Arab Science and Technology Foundation and the Cooperative Monitoring Center at Sandia National Laboratories to identify, contact and engage members of the Iraqi science and technology community.<sup>129</sup>

Implementation of these programmes has been complicated by factors such as lack of funding but primarily by the continued and increasing violence in Iraq since the regime change. Some experts regard the efforts as insufficient to prevent 'brain drain' from occurring.<sup>130</sup> Iraqi scientists have expressed concern that they might be imprisoned or prosecuted after coming forward and that cooperating with the occupation forces puts them at risk of being killed by insurgents.<sup>131</sup> In addition, the whereabouts of many of the scientists and technicians remains unknown.<sup>132</sup>

## V. Intelligence issues

The public case for military action in Iraq was based to a large extent on intelligence assessments that it possessed chemical and biological weapons. After several months of fruitless inspections in Iraq the quality and use of the earlier intelligence information were deeply questioned.

The statement by former head of the ISG David Kay that 'we were almost all wrong' in believing Iraq had WMD<sup>133</sup> was reflected in the decisions to conduct official inquiries into the pre-war handling of intelligence in Australia,

<sup>124</sup> US Department of State, 'Daily press briefing', 12 Jan. 2005, URL <<http://www.state.gov/r/pa/prs/dpb/2005/40828.htm>>.

<sup>125</sup> Stockman, F., 'U.S. finds jobs in Iraq for nuclear scientists: goal is to thwart proliferation threat', *International Herald Tribune*, 16 July 2004, p. 5.

<sup>126</sup> Stone (note 122).

<sup>127</sup> Stone (note 122).

<sup>128</sup> Republic of Iraq, Minister of Finance and Minister of Planning, '2004 budget', Oct. 2003, p. 27, URL <<http://www.cpa-iraq.org/budget/NIDmergedfinal-11Oct.pdf>>. See the CPA Internet site at URL <<http://www.cpa-iraq.org/>>.

<sup>129</sup> Alnajjar, A. *et al.*, 'International initiative to engage Iraq's science and technology community: report on the priorities of the Iraqi Science and Technology Community', *Sandia Report*, May 2004.

<sup>130</sup> NTI Global Security Newswire 'US effort to redirect Iraqi scientists stalls', 4 Oct. 2004 URL <[http://www.nti.org/d\\_newswire/issues/2004\\_10\\_4.html#18639321](http://www.nti.org/d_newswire/issues/2004_10_4.html#18639321)>.

<sup>131</sup> Scarborough, R., 'Iraqi arms scientists killed before they can talk', *Washington Times*, 23 Aug. 2004

<sup>132</sup> Stockman (note 125).

<sup>133</sup> Kay Testimony (note 78).

the UK and the USA. The capabilities, limits and selection of intelligence information were frequently discussed, leading to calls for structural changes within intelligence organizations and of the means by which the results are distributed within government and beyond.<sup>134</sup>

### National inquiries into pre-war intelligence on Iraq

In *Australia*, the government established an inquiry, headed by Philip Flood, in response to the recommendations in a report by the Parliamentary Joint Committee investigating (and clearing) the government of exaggerating the threat posed by Iraq and WMD.<sup>135</sup>

In the *United Kingdom*, the report of the Hutton Inquiry into the death of Dr David Kelly was published on 28 January 2004 and drew controversy over its findings and the narrow interpretation of its remit.<sup>136</sup> This led to the announcement in the House of Commons<sup>137</sup> of the establishment of an inquiry to be led by Lord Butler to ‘investigate the intelligence coverage available in respect of WMD programmes in countries of concern and on the global trade of WMD’ and specifically to ‘investigate the accuracy of intelligence on Iraqi WMD up to March 2003’.<sup>138</sup>

In the *United States*, an independent inquiry into US intelligence capabilities was established by presidential executive order on 6 February 2004 with a broad remit to examine not only intelligence regarding Iraq but also NBC programmes in countries such as Iran, North Korea, Libya and Afghanistan under the Taliban. The report on its findings is expected by 31 March 2005.<sup>139</sup> On 12 February 2004 the terms of the formal review by the US Senate Select Committee on Intelligence (established in 2003)<sup>140</sup> into the existence of Iraq’s

<sup>134</sup> The White House Press, ‘Commission on the Intelligence Capabilities of the United States Regarding Weapons of Mass Destruction’, 6 Feb. 2004, URL <<http://www.whitehouse.gov/news/releases/2004/02/print/20040206-13.html>>; and Pullinger, S., ‘Lord Butler’s Report on UK intelligence’, *Disarmament Diplomacy*, no. 78 (July/Aug. 2004), URL <<http://www.acronym.org.uk/dd/dd78/78sp.htm>>; and Ember, L., ‘Intelligence overhaul: proposal would dismantle CIA, move some key Pentagon intelligence agencies’, *Chemical and Engineering News*, vol. 82, no. 35 (30 Aug. 2004), p. 5.

<sup>135</sup> Flood, P., ‘Report of the inquiry into Australian intelligence agencies’ (hereafter ‘Flood Report’), 20 July 2004, URL <[http://inquiry.dpmc.gov.au/docs/Intelligence\\_Report.pdf](http://inquiry.dpmc.gov.au/docs/Intelligence_Report.pdf)>; and Parliament of the Commonwealth of Australia, Parliamentary Joint Committee on ASIO, ASIS and DSD, ‘Intelligence on Iraq’s weapons of mass destruction’, Dec. 2004 (presented on 1 Mar. 2004), ch. 5, p. 97, URL <<http://www.aph.gov.au/house/committee/pjcaad/WMD/report.htm>>.

<sup>136</sup> ‘Investigation into the Circumstances Surrounding the Death of Dr David Kelly’, URL <<http://www.the-hutton-inquiry.org.uk>>. See also Guthrie *et al.* (note 14), pp. 679–80.

<sup>137</sup> *Hansard*, 3 Feb. 2004, c625-43.

<sup>138</sup> Report of a Committee of Privy Counsellors, ‘Review of Intelligence on Weapons of Mass Destruction’ (hereafter ‘Butler Report’), 14 July 2004, p. 1. See the official Internet site of the inquiry at URL <<http://www.butlerreview.org.uk/report/>>.

<sup>139</sup> The White House, ‘Commission on the Intelligence Capabilities of the United States Regarding Weapons of Mass Destruction’, 2 Feb. 2004, URL <<http://www.whitehouse.gov/news/releases/2004/02/20040206-10.html>>.

<sup>140</sup> United States Senate Select Committee on Intelligence, ‘As part of its ongoing oversight of the intelligence community, the Senate Select Committee on Intelligence will conduct a review of intelligence on Iraqi weapons of mass destruction’, 4 June 2003, URL <<http://intelligence.senate.gov/030604.htm>>.

NBC programmes were expanded to include among other things a probe into whether the US Government exaggerated intelligence information. The additional issues will be examined in two phases. The first report was released on 7 July 2004,<sup>141</sup> and the second report is expected in 2005. The official inquiry into the 11 September 2001 attacks in the USA also reported in 2004.<sup>142</sup>

### Weaknesses in pre-war intelligence estimates

A common theme of the inquiries detailed above was that pre-war assessments were inaccurate and unsupported by the available sources. The US Senate inquiry concluded that the information in Secretary of State Colin Powell's presentation of evidence to the UN Security Council was 'overstated, misleading or incorrect'.<sup>143</sup> It also considered most key judgements in the 2002 National Intelligence Estimate (NIE)<sup>144</sup> to be overstated or not supported by intelligence.<sup>145</sup>

While the Hutton Report had essentially cleared the British Government of 'sexing up' intelligence in relation to Iraq, the Butler Report criticized British intelligence and the government's failure to provide warnings about the thinness of the evidence. The intelligence material had great weaknesses, but these uncertainties were not noted, leading to the impression that the intelligence was firmer than it was.<sup>146</sup> The report also criticized the Joint Intelligence Committee's findings and concluded that the intelligence on Iraq's biological agent capabilities was 'seriously flawed'.<sup>147</sup> The sources of information were few and not sufficiently checked, and the 2002 dossier on Iraqi WMD<sup>148</sup> should not have included the assertion that Iraq was capable of using WMD within 45 minutes since the limitations to this claim were not made sufficiently clear.<sup>149</sup>

The Flood Report concluded that intelligence on Iraq's alleged weapon capabilities was 'thin, ambiguous and incomplete'.<sup>150</sup> Australia shared the intelligence failure on the key question of WMD stockpiles with its coalition partners, but the overall assessment of Iraqi WMD up to the time of combat

<sup>141</sup> US Senate Select Committee on Intelligence, 'Report on the US intelligence Community's Prewar Intelligence Assessments on Iraq', 7 July 2004, URL <<http://intelligence.senate.gov/iraqreport2.pdf>>.

<sup>142</sup> 'Final Report of the National Commission on terrorist attacks upon the United States: the 9/11 Commission report', 22 July 2004, URL <<http://www.9-11commission.gov/report/index.htm>>.

<sup>143</sup> US Senate Select Committee on Intelligence (note 141), p. 253, conclusion 72.

<sup>144</sup> US Central Intelligence Agency, *Iraq's Weapons of Mass Destruction Programs*, 4 Oct. 2002; and US Department of State (note 103).

<sup>145</sup> US Senate Select Committee on Intelligence (note 141), pp. 14–25.

<sup>146</sup> Butler Report (note 138), paras 464–65; and Reynolds, P., 'Devil in the detail', BBC News, 15 July 2004, URL <[http://news.bbc.co.uk/1/hi/uk\\_politics/3894403.stm](http://news.bbc.co.uk/1/hi/uk_politics/3894403.stm)>.

<sup>147</sup> Butler Report (note 138), para. 409.

<sup>148</sup> UK Government, *Iraq's Weapons of Mass Destruction: the Assessment of the British Government* (Stationery Office: London, 24 Sep. 2002). The strength and reliability of this dossier, and whether Dr David Kelly had been the source of comments to a journalist that the material in it had been 'sexed up' to justify the invasion of Iraq, were at the heart of the inquiry led by Lord Hutton (note 136).

<sup>149</sup> Butler Report (note 138), para. 511.

<sup>150</sup> Flood Report (note 135), p. 34.

operations was considered to have 'reflected reasonably the limited available information and used intelligence sources with appropriate caution'.<sup>151</sup> The Flood Report omitted to note that there was a lack of consensus in the Australian Government's analytical community over this assessment.<sup>152</sup>

The US Senate report claimed that 'the failure of the intelligence community to accurately analyse and describe the intelligence in the NIE was the result of a combination of systemic weaknesses, primarily in analytic trade craft, a lack of information sharing, poor management and inadequate intelligence collection'.<sup>153</sup> It claimed that management had failed to encourage analysts to challenge their assumptions and to consider alternative arguments.<sup>154</sup> The poor intelligence on Iraq was explained as a result of the structure of the intelligence organizations and their procedures and of collective mistakes—referred to both in the British and US reports as 'group think'—rather than as the responsibility of individuals. Ambiguous evidence was interpreted as indicative of NBC weapon stockpiles and programmes, while evidence that Iraq did not have such stockpiles and programmes was ignored or minimized.<sup>155</sup>

Government officials were accused of pressuring the intelligence community to produce intelligence to build a case for war, and the intelligence community was accused of generating inaccurate information. The US Senate committee did not find evidence that pressure or influence from officials was put on analysts to change their judgements.<sup>156</sup> Similarly, in Australia and the UK, the government-initiated inquiries concluded that the intelligence information was not considered to have been distorted in order to exaggerate the threat.<sup>157</sup> The political context in which the pre-war intelligence was gathered and analysed was not considered in the inquiry reports.

UNMOVIC Executive Chairman Hans Blix has noted that pre-war intelligence on Iraq lacked critical thinking and UNMOVIC reports were not taken as seriously as were worst-case scenario intelligence estimates.<sup>158</sup> Questions were raised as to why the negative results of UNMOVIC inspections that had been reported in early 2003 had not led to a re-evaluation of intelligence.<sup>159</sup>

<sup>151</sup> 'Introduction' and 'conclusion', Flood Report (note 135).

<sup>152</sup> This lack of consensus became clear when it was revealed during 2004 that a senior defence scientist had written to the Australian Prime Minister in Mar. 2003 stating there was no 'specific information, or even convincing circumstantial evidence that Iraq 'currently has a substantial usable CBW stockpile'. See Allard, T., 'Weapons expert's fight to warn PM', *Sydney Morning Herald*, 25 Sep. 2004, URL <<http://smh.com.au/articles/2004/09/24/1095961864769.html>> and 'Letter by R. J. Mathews to Prime Minister John Howard', *Sydney Morning Herald*, 27 Sep. 2004, URL <<http://smh.com.au/articles/2004/09/26/1096137098800.html>>.

<sup>153</sup> US Senate Select Committee on Intelligence (note 141), p. 15.

<sup>154</sup> US Senate Select Committee on Intelligence (note 141), pp. 14–25.

<sup>155</sup> Cirincione, J., 'Two terrifying reports: the US Senate and the 9/11 Commission on intelligence failures before September 11 and the Iraq war', *Disarmament Diplomacy*, no. 78 (July/Aug. 2004), URL <<http://www.acronym.org.uk/dd/dd78/78jc.htm>>.

<sup>156</sup> US Senate Select Committee on Intelligence (note 141), p. 284, para. 83.

<sup>157</sup> Flood Report (note 135), p. 176; and Butler Report (note 138), para. 449.

<sup>158</sup> Blix, H., *Disarming Iraq: The Search for Weapons of Mass Destruction* (Bloomsbury Publishing: London, 2004), pp. 260–64.

<sup>159</sup> Butler Report (note 138), paras 362–64.

Of all of the inquiries, that headed by Lord Butler was most involved in comparing the information gathered from national and multinational sources. The Butler report concluded:

We note that much of what was reliably known about Iraq's unconventional weapons programmes in the mid- and late-1990s was obtained through the reports of the UN Special Commission (UNSCOM) and of the International Atomic Energy Agency (IAEA). These international agencies now appear to have been more effective than was realised at the time in dismantling and inhibiting Iraq's prohibited weapons programmes. The value of such international organisations needs to be recognised and built on for the future, supported by the contribution of intelligence from national agencies.<sup>160</sup>

## VI. Other past and present activities and allegations

In 2004 a number of allegations were made about past and present activities in the field of chemical and biological warfare.

*Hungary's* Ministry of Defence reportedly acknowledged that Hungary possessed a chemical weapon stockpile during the cold war, and Hungary also reported that it had carried out field training exercises with chemical warfare agents in the 1960s and 1970s. Hungary reportedly maintains small quantities of chemical warfare agents—including lewisite, sulphur mustard and nerve agents—as part of a protective programme permitted by the CWC.<sup>161</sup>

It was alleged that *North Korea* had carried out experiments on humans with chemical warfare agents.<sup>162</sup> One set of allegations centred around a set of documents claimed to be evidence of North Korean experiment activities.<sup>163</sup>

Allegations were made in April 2004 that *Sudan* was storing 'WMD components' on behalf of *Syria*. The main allegation centred around press reports, citing Western intelligence sources, which were said to suggest that the government of President Omar Bashir was not informed of the shipments.<sup>164</sup> In September separate allegations were made by a German magazine suggesting that Syrian forces had tested chemical weapons in the Darfur region of Sudan.<sup>165</sup> These latter allegations were denied by Sudan.<sup>166</sup>

<sup>160</sup> Butler Report (note 138), para. 584.

<sup>161</sup> Haszán, Z., 'Hová lettek a magyar vegyi fegyverek?' [Where have the Hungarian chemical weapons disappeared to?], *Népszabadság*, 25 Sep. 2004, pp. 1–2, URL <<http://www.nol.hu/>>.

<sup>162</sup> See, e.g., 'I saw an entire family being killed. They were put in the gas chamber where they all suffocated. The last to die was the youngest son', *Daily Telegraph*, 1 Feb. 2004; and Demick, B., 'North Korea's use of chemical torture alleged', *Los Angeles Times*, 3 Mar. 2004.

<sup>163</sup> Kim So-young, 'N. Korea tested gases on prisoners', *Korea Herald*, 13 Feb. 2004, URL <<http://www.koreaherald.co.kr>>.

<sup>164</sup> 'Syria smuggles missiles, WMD to Sudan', Middle East Newslines, 9 Apr. 2004, URL <[http://www.menewslines.com/stories/2004/april/04\\_09\\_1.html](http://www.menewslines.com/stories/2004/april/04_09_1.html)>.

<sup>165</sup> Schuster, J., 'Syrien testet chemische waffen an Sudanern' [Syria tested chemical weapons in Sudan], *Die Welt*, 15 Sep. 2004, URL <<http://www.welt.de/data/2004/09/15/332689.html>>.

<sup>166</sup> United Nations, Letter dated 8 February 2005 from the Permanent Representatives of the Sudan to the United Nations addressed to the President of the Security Council, UN document S/2005/77, 10 Feb. 2005.

In *Ukraine*, presidential candidate Viktor Yushchenko fell seriously ill on 5 September 2004. Allegations were made that he had been poisoned, but it was not until the end of the year that this was confirmed. Dr Michael Zimpfer, director of Vienna's Rudolfinerhaus clinic, where Yushchenko was treated since falling ill, was quoted as saying: 'There is no doubt about the fact that Mr. Yushchenko's disease is caused by poisoning and that dioxin is one of the agents'. He added, 'We have identified the cause. We suspect involvement of a third party'.<sup>167</sup>

A reopened inquest in *the United Kingdom* into the death of 20-year-old airman Ronald Maddison on 6 May 1953 returned a verdict of 'unlawful killing'. Maddison had been a volunteer in a testing programme at the research establishment at Porton Down. He was exposed to 200 milligrams of sarin (GB) dropped onto cloth on his arm, felt unwell within minutes of the exposure and died within an hour. An initial inquest held in secret in 1953 recorded a verdict of 'misadventure'.<sup>168</sup>

*The United States* was alleged to have used toxic chemicals in its military action in Fallujah, Iraq, in November 2004.<sup>169</sup> While the allegations have not been confirmed, they highlight one of the difficult areas in implementing the CWC. If riot control agents are employed as a method of warfare, this activity is illegal under the terms of the convention. If the military action is considered to be a law enforcement activity in which the soldiers are acting in support, the use of riot control agents in certain circumstances would not be prohibited under the CWC.

## VII. Conclusions

The separate influences of UN Security Council Resolution 1540 and the OPCW Action Plans have highlighted the need for more effective national implementation of multilateral conventions. In modern conditions, the control of chemical and biological weapons cannot be left simply to international organizations. More effective national implementation can substantially strengthen all of the regimes, yet countries cannot solve the problem either without stronger global institutional capacities, not least to set the standards for national implementation. The national and international elements are complementary and are both essential.

The lack of a global institution in the biological field was felt in a number of ways in 2004. Efforts such as the OPCW Action Plans could not have had an equivalent in the biological arena because of the lack of an equivalent institution. In Libya there was international oversight of the dismantling of the country's programmes in the chemical and nuclear fields, but the equivalent

<sup>167</sup> As quoted in Zarakhovich, Y., 'The dirtiest trick', *Time*, 20 Dec. 2004.

<sup>168</sup> Evans, R., 'The past Porton can't hide', *The Guardian*, 6 May 2004; 'Nerve gas death was 'unlawful'', BBC News, 15 Nov. 2004; and Carrell, S., 'Porton Down veterans to sue MoD over gas tests', *Independent on Sunday*, 21 Nov. 2004.

<sup>169</sup> See, e.g., 'US troops reportedly gassing Fallujah', IslamOnline, 10 Nov. 2004, URL <<http://www.islamonline.org/English/News/2004-11/10/article05.shtml>>.

process for the smaller biological research effort was overseen only by the UK and the USA. By definition this could not bring the same confidence to the international community that inspection by a global organization would have.

The warnings being given by certain governments, supposedly based on intelligence, that recent years have brought a substantially increased threat of large-scale terrorist use of biological and chemical weapons are notably similar to the warnings being given by the same countries a few years ago about the threat posed by Iraqi chemical and biological weapons. Many of the intelligence service reforms prompted by the numerous official inquiries into the incorrect assessments of the Iraqi situation have yet to be implemented, and it is not clear from what is available on the public record whether similar mistakes are being repeated. Another factor is that field officers in law enforcement and intelligence agencies are currently under great pressure to report every little detail up through the chain of command—no officer wants to be later discovered to have had a small but vital piece of information that could have predicted any sort of terror attack. Intelligence assessment of non-state actors can be even more difficult than assessment of states.

If the threat of large-scale attack should prove to have been overstated, does this matter? After all, even if the threat is low, it is still there, and it is worth taking pains to protect modern societies against their many vulnerabilities to novel types of terror attack. The focus on a large-scale biological and chemical threat could, however, prove to be counterproductive. While small-scale use of hazardous materials is within the technical reach of small organizations, large-scale use such as that required to devastate a large part of a city would require greater resources than most groups possess, or might want to commit. Nevertheless, if such groups hear messages in the Western media based on intelligence information that terrorists are pursuing such methods and could use them easily, the incentive to explore them—at the very least—risks being reinforced.

The BTWC meetings in 2004 were just one forum at which the primary importance of good public health measures for reducing the impact of any use of biological weapons was recognized.<sup>170</sup> At one level bio-terrorism is just deliberate disease: and with fears of new 'natural' pandemics currently so high, posterity may have reason to rue policies that divert resources from diseases that would kill millions to the narrower and still imponderable risks of a bio-terror attack.

<sup>170</sup> Njuguna, J., 'The SARS epidemic: the control of infectious diseases and biological weapon threats', *SIPRI Yearbook 2004* (note 14).