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THE PROBLEM OF THOUSANDS OF *OTHER CHEMICAL PRODUCTION FACILITIES* UNDER THE CHEMICAL WEAPONS CONVENTION: ARE SOME MORE RELEVANT THAN OTHERS?

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More than eleven years after entry into force of the Chemical Weapons Convention (CWC), and with eight years of experience with inspections of *Other Chemical Production Facilities* (OCPFs),² the Member States and the Technical Secretariat (TS) still seem to be facing a dilemma: besides the CW-related sites, inspections have to be carried out at 28 Schedule 1 plants, 165 Schedule 2 plants, 434 Schedule 3 plants, as well as 4533 OCPFs.³ Given the limited number of inspections per year (about 200), it seems immediately obvious that there needs to be a selection mechanism ruling out those facilities which have lesser relevance to the CWC.

This paper argues that any attempt to find a selection mechanism based on additional items to declare will not only increase the burden on industry and the TS to generate, process and evaluate those additional data, but will also lead to a host of uncertainties about what needs to be declared on top of the uncertainties which already exist.

Why do we have OCPFs in the Convention?⁴

After decades of negotiations for a CWC at the Conference on Disarmament (CD) and its predecessor bodies, it has become clear that a Convention which does not involve the chemical industry will not be verifiable. As a consequence, many concepts have arisen as to how to define facilities - outside of CW-related facilities⁵ - that should be declared/inspected, and how they should be declared.

Early consensus could be reached that facilities producing and handling

- CW agents and related substances for legitimate purposes,
- precursors and
- chemicals which had been stockpiled/used as CW in the past

should be grouped into different categories of risk.⁶ This is how the Schedules 1 to 3 and the regimes for facilities related to these scheduled chemicals were established. But what about other facilities which could potentially produce CW or precursors or host a clandestine CW production? There were proposals based on processes (e.g. halogenation, alkylation), toxicity of chemicals, equipment installed, etc.,⁷ none of which could reasonably be put into treaty language and implemented.

The chemical industry, which in the early years of negotiations had largely been left out, became more and more involved after a ground-breaking *Government-Industry*

Conference Against Chemical Weapons was held in Canberra in 1989.⁸ Already then, it became apparent to the chemical industry that any attempt to rank facilities according to 'risk', 'capability' or 'convertibility' would lead to an enormous burden on declarations and a high degree of uncertainty because of the broad range of possible interpretations of predominantly qualitative factors. Thus, the chemical industry in 1990 and 1991 introduced statements on *Schedules*, *Confidential Business Information* and *Ad Hoc Checks*, as well as a *blue book* containing statements on Challenge Inspections, Verification, Low Concentrations and Non-Isolated Chemicals.⁹ As regards site selection, chemical industry in essence offered free access to all of their sites to inspections **anytime, anywhere, without right of refusal**.¹⁰

This concept today is basically Part IX of the Verification Annex (VA). '**Anywhere**' is the *list of all plant sites*.¹¹ '**Anytime**', and '**without right of refusal**' is reflected in the inspection procedures of the VA.

The usefulness of an OCPF list

The CWC, especially in its VA, gives clear provisions regarding the decreasing risk which it attributes to Schedule 1, Schedule 2, Schedule 3, and DOC/PSF chemicals and the facilities related to these chemicals. They are summarized in Table 1.¹² To attach the highest risk to OCPFs - as has been suggested - would turn the CWC upside down.

Why then devote so much attention to OCPFs, which obviously constitute the lowest risk? It has been argued that it does not make sense to repeatedly inspect a facility with a 10 litre vessel sporadically producing a few kilos of a Schedule 1 chemical, but the same has been argued for facilities producing up to hundreds of thousands of tons of e.g. urea, methanol or formaldehyde.

However, if all goes as expected, inspectors will never

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Table 1. Provisions in the Verification Annex for Article VI verification

	Schedule 1	Schedule 2	
Threshold for declaration	> 100g; <100g for protective purposes and SSSF	1 – 1000kg; production, processing, consumption	
Threshold for inspection	> 100g; <100g for protective purposes and SSSF	10 –10000kg; production, processing, consumption	
Precision of declaration	exact amount	exact amount	
Definitions in Annex on Chemicals	It poses (otherwise) <i>a high risk</i> ...	It poses <i>a significant risk</i> ...	
Inspection type	systematic verification, monitoring with on-site instruments	initial inspections; subsequent inspections depending on risk assessment	
Facility agreements	mandatory	mandatory, unless agreed	
Access to records	mandatory	shall be provided as appropriate	
Sampling & analysis	---	... shall be undertaken ...	
Inspection time	---	96h	
Inspection aims	... correctly declared...	... consistent ...	
Notification time	48h	48h	
Transfer	prior approval with restrictive provisions	only to States Parties (3 yrs. after Entry Into Force)	
Commencement of inspections	initial inspection within 180 days	initial inspections within 3 years	

	Schedule 3	DOCs	PSFs
Threshold for declaration	30t; only production	200t; only production	30t; only production
Threshold for inspection	230t; only production	200t; only production	200t; only production
Precision of declaration	approximate amount in ranges	approximate amount in ranges	approximate amount in ranges
Definitions in Annex on Chemicals	It poses (otherwise) <i>a risk</i> ...	---	---
Inspection type	weighted random selection, equitable geographic distribution	weighted random selection, equitable geographic distribution	weighted random selection, equitable geographic distribution
Facility agreements	none, unless requested	none, unless requested	none, unless requested
Access to records	may be provided, if agreed	may be provided, if agreed	may be provided, if agreed
Sampling & analysis	... may be undertaken...	... may be undertaken...	... may be undertaken...
Inspection time	24h	24h	24h
Inspection aims	... consistent consistent consistent ...
Notification time	120h	120h	120h
Transfer	to non States Parties only with end-user certificate	---	---
Commencement of inspections	---	only after 4th year of Entry Into Force	only after 4th year of Entry Into Force

find a substantial violation of the CWC during routine inspections under Art. VI. It may be boring or unsatisfying for inspectors to go to plant sites year after year and never find anything. But for the international community, that is a big success, and it shows that the CWC is functioning.

The routine verification regime under Art. VI is the non-proliferation pillar of the CWC, but its measures are of a confidence-building nature: only what is declared will be verified and anything which is not declared will not be verified. Therefore, from a would-be violator's point of view, it makes little sense to produce CW in a declared facility, because that would only increase the chance of detection. This leaves him with two options.

One option would be to produce at a site adjacent to or as a separate section of a declared one making use of common infrastructure, such as waste water, waste disposal, repair and maintenance, warehousing and logistics or utilities such as electrical power, steam, pressurized air. The other option would be a grass-root plant site or the conversion of a non-declared site.

For both 'options', the *list of all plant sites* is useful. Regarding the first option, it gives the Inspectorate access to every plant site producing organic chemicals. If the inspectors see that there are conditions at the plant site inconsistent with a legitimate chemical production, such as barbed wire, military presence and restricted access going beyond reasonable safety and security measures, this is an indication that there may be illicit activities going on. Also, if the inspectors see that a section of the plant site or an adjacent site should have been declared but was not, this gives them again a good indication that something may be wrong. You will not find that in the declarations. You will find that only when you go there.

Regarding the second option (grass root or conversion), the *list of all plant sites* is useful if there is information about a chemical production site which is not declared. Unless the States Party has just overlooked or forgotten to declare - which can easily be corrected - it should trigger the clarification measures of Art. IX and eventually a Challenge Inspection.

Both cases of an alleged violation scenario described above show that the *list of all plant sites* can help detect illicit activities by having the option to go to every plant site and see whether activities there are consistent with the declarations. Furthermore, the list serves to bring into focus undeclared chemical activities.

For both cases, a pre-selection based on declarations is not needed. This is also why declarations under Part IX of the VA reveal very little information on plants or chemicals.¹³

How to select 'more relevant' plant sites within VA, Part IX?

My basic assumption is that every facility in chemical industry or outside of it can be converted into a CW production facility under two and only two conditions: the political will to do so and the availability of financial and intellectual resources. Therefore, no plant site is inherently more relevant than another, even though from a purely chemical engineering and economic point of view some sites might be better suited than others.¹⁴ This dilemma was also realised by the drafters of the CWC.

The CWC suggests selecting plant sites randomly, with weighting factors based on an equitable geographical

distribution, information available to the Technical Secretariat and proposals by States Parties.¹⁵ Except for the proposals by States Parties,¹⁶ this is currently being done with a formula for equitable geographical distribution, and the so-called A-14 algorithm takes into account available information from declarations plus a previous inspection factor. This appears to be working fairly well, but it still leads to inspections at plant sites deemed to be of low relevance to the CWC.

Therefore, faced with the enormous discrepancy between over 4500 OCPFs and only about 200 inspections per year, a number of States Parties and the Technical Secretariat are trying to find ways to select "more relevant" plant sites. One attempt is to identify bulk chemicals, such as urea, formaldehyde or methanol by subheadings in declarations. But there are dozens of bulk chemicals; so any list would be arbitrary and incomplete. Another attempt is to identify batch vs. continuous and dedicated vs. multi-purpose operations. Besides the occasional difficulties to precisely define these categories (multi-purpose plants dedicated to one product only, production of homologues, combination of batch and continuous processes), these categories are only an indication of more flexibility. Most plant sites, especially those with several plants, will anyway have both categories. Declarations will become even more complex - and thus more likely to introduce additional errors - without improving the inspection aims. This can only add to the difficulties of correct declarations.¹⁷ Already now we have a failure rate of about 10% at OCPF inspections because of incorrect declarations.¹⁸

Many other declaration formats can be designed but they will all face the same dilemma. My conclusion is that any additional reporting requirements, be it subheadings or additional information about interpretable site characteristics or anything else, would only increase the burden on States Parties and the Technical Secretariat, increase complexity and thus confusion, and are a nightmare to keep updated due to the rapid changes in the chemical industry. They would thus lower the effectiveness of the overall verification regime and actually decrease confidence in its functioning.

The way ahead

So what can be done if there are no additional reporting requirements and we are still faced with more than 4500 OCPFs? One answer is to simply accept the situation as it is. The Inspectorate has already seen about 20% of all declared sites under Art. VI, including most sites with Scheduled Chemicals, and will see many more in the future. For confidence-building, this is not too bad.

Furthermore, in order to increase confidence in the worldwide functioning of the CWC verification regime, sites should be selected in such a way as to have the widest possible geographical distribution.

Finally, the Technical Secretariat may conduct inspections at OCPFs in a qualitative 'walk through, talk through' fashion. For example, one day with one or two inspectors, - rather than, as now two to three days with more inspectors - would be enough to gain insight into the operations of the plant site and detect unusual activities. A fully-fledged programme with pre- and post-inspection briefing, subteams, elaborate inspection report etc. may not be required. Combined with maybe sequential inspections, this should free up a lot of capacities within the Inspectorate.

The chemical industry has repeatedly offered to discuss how to further improve the inspection regime. This offer should be picked up by the Member States and the Technical Secretariat. Maybe during the course of these discussions, a few other issues regarding the chemical industry, that have remained open since the times of the Preparatory Commission, can also be resolved.

Final comments

The CWC is a very good treaty, and the chemical industry is fully supportive of all of its provisions. The States Parties and all other organs of the OPCW should focus their efforts on the most pressing issues, rather than increasing the complexity and burden on legitimate chemical industry facilities. There are several worthwhile activities to intensify. To name just a few:

- Timely destruction of existing stocks (Art. IV)
- National implementation in all Member States (Art. VII) and Universality
- Clarification of open and hidden allegations by Member States through Consultations and Challenge Inspections (Art. IX)
- Capacity building for Assistance and Protection (Art. X)

I fear that part of the effort to enhance verification (declaration and inspection) in legitimate chemical industry facilities comes as a result of frustration over the partly sluggish progress in tackling some of the pressing issues, and the reluctance to use the more challenging or confrontational mechanisms of the CWC. This could transform the largely confidence-building measures of Art. VI into a 'challenge-lite' regime, which in turn may make the chemical industry question why it needs to declare more about its facilities and be inspected more often or more intrusively without benefit to the goals and objectives of the CWC. However, the ongoing constructive and fruitful dialogue between the chemical industry on one hand and the Technical Secretariat and the National Authorities on the other hand has in the past, and will in the future, make the CWC work even better.

Notes

- ¹ Detlef Maennig is Chairman of the German Chemical Industry's (VCI) Working Group *International Control Issues*, member of the European Chemical Industry Council (CEFIC) *Trade and Production Control Issue Team* and of the *Scientific Advisory Board (SAB)* of the OPCW. He is an industrial chemist. This article is written in his personal capacity.
- ² The Verification Annex (VA) of the CWC, at Part IX paragraph 22, stipulates that inspections of OCPFs commence only at the beginning of the fourth year after entry into force of the Convention
- ³ Draft Report of the OPCW on the Implementation of the CWC: EC-53/3 C-13/CRP.1, 26 June 2008
- ⁴ Compare Robert Mathews, "Other Chemical Production Facilities – Inspections", presentation at the CWC 2nd Review Conference

Open Forum, 9 April 2008

- ⁵ Chemical Weapons Production Facilities (CWPFs), Chemical Weapons Storage Facilities (CWSFs), Chemical Weapons Destruction Facilities (CWDFs) and facilities associated with Old and Abandoned Chemical Weapons (OACWs)
- ⁶ CWC, Annex on Chemicals, Part A, "Guidelines for Schedules of Chemicals".
- ⁷ See, for example, CD/500, CD/1053, CD/1108 and CD/CW/WP.370.
- ⁸ "Government-Industry Conference Against Chemical Weapons", Final Record, Department of Foreign Affairs and Trade, Canberra, 18-22 September 1989
- ⁹ Detlef Maennig, "At the Conclusion of the Chemical Weapons Convention: Some Recent Issues Concerning the Chemical Industry", in Benoit Morel and Kyle Olson, editors, *Shadows & Substance – The Chemical Weapons Convention*. Ridgway Series in International Security Studies, Westview Press, Boulder 1993, pp 127-54 at pp 139 and 153.
- ¹⁰ With some caveats (qualitative checks, random selection, limits on duration and frequency, aggregate declarations) which were incorporated into the Convention text
- ¹¹ VA, Part IX, A.1. Exceptions are plant sites producing below 200 t of unscheduled discrete organic chemicals (DOC) or organic chemicals containing phosphorus, sulfur or fluorine (PSF). Also exempt are facilities producing exclusively explosives or hydrocarbons (VA, Part IX, A.2)
- ¹² This is not an exhaustive list. It should only serve to illustrate the point of the sliding scale of risk. There are more provisions in the VA, such as the content of declarations, access, etc.
- ¹³ DOCs: approximate number of plants and ranges for the plant site; PSFs: number of plants and ranges for each plant plus product group codes.
- ¹⁴ International Council of Chemical Associations (ICCA), position paper dated 5 December 2008, "ICCA Support for the CWC verification regime - OCPF plant sites", available online at www.icca-chem.org/downloads/position/Chem%20Mgt/2008_ICCA%20supportfortheCWCverificationregime.pdf.
- ¹⁵ VA, Part IX, paragraph 11
- ¹⁶ Consensus could not be reached so far as regards VA, Part IX, paragraphs 11(c) and 25.
- ¹⁷ This seems to have been foreseen already by the drafters of the CWC. In Part IX of the VA dealing with OCPFs, they included a special paragraph 7 "Assistance by the Technical Secretariat": *If a State Party, for administrative reasons, deems it necessary to ask for assistance in compiling its list of chemical production facilities pursuant to paragraph 1, it may request the Technical Secretariat to provide such assistance. Questions as to the completeness of the list shall then be resolved through consultations between the State Party and the Technical Secretariat.*
- ¹⁸ Information provided by Declarations Branch to National Authorities 28 November 2008

The Biological Weapons Convention Meeting of States Parties, December 2008

As reported in the *Bulletin* 80 (September 2008), the Meeting of Experts of the States Parties to the Biological and Toxin Weapons Convention (BWC) was held in Geneva under the Chairmanship of Ambassador Georgi Avramchev of the Former Yugoslavian Republic of Macedonia on 18 to 22 August 2008 to discuss, and promote common understanding and effective action on:

- (iii) National, regional and international measures to improve biosafety and biosecurity, including laboratory safety and security of pathogens and toxins.
- (iv) Oversight, education, awareness raising, and adoption and/or development of codes of conduct with the aim to prevent misuse in the context of advances in bio-science and bio-technology research with the potential of use for purposes prohibited by the Convention.

The Meeting of Experts produced a report (BWC/MSP/2008/MX/3 dated 8 September 2008) to which was attached as Annex I a paper prepared by the Chairman listing the considerations, lessons, perspectives, recommendations, conclusions, and proposals drawn from the presentations, statements, working papers and interventions on the topics under discussion at the Meeting. The report, as in the reports from MX/2005 and from MX/2007 in previous years, stated that 'It was the Chairman's view that the paper could assist delegations in their preparations for the Meeting of States Parties in December 2008 and in its consideration of how best to "discuss, and promote common understanding and effective action on" the topics in accordance with the decision of the Sixth Review Conference.' This and other official BWC documentation is available at <http://www.opbw.org> and at <http://www.unog.ch/bwc>. It should also be noted that, as at the Sixth Review Conference and at the Meeting of Experts, Richard Guthrie in association with the BioWeapons Prevention Project (BWPP) provided daily reports on the Meeting of States parties that were made available in hard copy to the delegations as well as electronically. The BWPP reports can be found at <http://www.bwpp.org/2008MSP/MSP2008Resources.html>.

This documentation provided the States Parties with an excellent starting point from which to develop language to meet the requirement of the mandate for the Meeting of State Parties in December 2008 to discuss, and promote common understandings and effective action.

Preparation for the Meeting of States Parties, 1 to 5 December 2008

The Final Report (BWC/MSP/2008/MX/3 dated 8 September 2008) of the Meeting of Experts comprised a report of 5 pages together with Annex I, a 41-page listing of the considerations, lessons, perspectives, recommendations, conclusions, and proposals drawn from the presentations, statements, working papers and interventions made by delegations on the topic under discussion at the Meeting, and Annex II, a 5-page

listing of the documents of the Meeting of Experts. Annex I with its 41 pages was virtually twice as long as the comparable Annex I from MX07 with its 21 pages; this reflected the very wide participation in MX08 in which all the available time was taken up with presentations and statements from both States Parties, international organizations and from guests of the meeting.

The Chairman, Ambassador Georgi Avramchev of the Former Yugoslavian Republic of Macedonia, wrote to the States Parties on 10 October 2008 to say that, as he foreshadowed at the close of the August Meeting of Experts, and as was done in previous years, he had consolidated these proposals and ideas, removing duplications and merging similar concepts, to produce a synthesis paper. This synthesis, which was attached to Ambassador Avramchev's letter, was intended as food for thought, to help guide the States Parties in their preparations for the Meeting of States Parties. It contained no new material, but simply reflected the ideas put forward at the Meeting of Experts in what he hoped was a reasonably coherent, concise and accessible way. It was not intended to exclude any proposal from consideration, and States Parties were of course welcome to make additional proposals at the Meeting of States Parties. The synthesis paper was a resource for States Parties to draw upon in their preparations, and he encouraged them to use it that way.

The Chairman's letter continued: *as to the operation of the Meeting of States Parties, I believe it is important that we take the opportunity to add value to the work done at the Meeting of Experts. The Meeting of Experts produced a wealth of material, from a wide array of participants including experts from States Parties, international organizations, scientific and professional associations, and academia. I believe there would be benefit in a more structured discussion on the proposals and ideas raised, and I will be preparing a programme of work to facilitate such discussion.*

On the outcome of the meeting, he said that *we should aim for a product that genuinely promotes common understanding and that will help States Parties, including those which are not able to participate in our meetings, to take effective action on our two topics. I am interested in hearing the views of delegations on how we can best achieve this, and I will be consulting widely in the coming weeks. Please do not hesitate to contact me through the ISU if you would like to discuss any aspect of the preparations for the meeting.*

To this letter was attached the 7-page synthesis document subsequently issued, prior to the Meeting of States Parties, as MSP/2008/L.1 dated 31 October 2008.

Ambassador Avramchev subsequently spoke to the group coordinators on 19 and 20 November 2008 saying that he was eager to ensure that the outcome of this year's work made a lasting contribution to efforts to take practical measures to strengthen the Convention and help to ensure

the safe and secure development of the peaceful applications of biological science and technology. He said that there would be clear benefits for all States Parties by agreeing a consensus report that clearly stated what is meant by biosafety and biosecurity in the context of the Convention; outlined the need for proportional measures, for carefully assessing risks and for balancing security concerns against the need to nurture research and ensure the peaceful development of biological science and technology; recognized that that individual and local circumstances need to be taken into account when addressing biosafety/biosecurity and education and awareness-raising; and encouraged the involvement of all relevant stakeholders, including government, the scientific community, commercial industry and academia.

In a useful innovation, he also then circulated an advance version of his report on universalization as well as an advance version of the report of the Implementation Support Unit.

In New York in the First Committee of the United Nations General Assembly, on 16 October 2008 Hungary introduced a draft resolution (A/C.1/63/L.11) on the BWC which in its operative paragraphs noted with satisfaction the number of States that have become Party to the Convention and reaffirmed the call upon all States not yet party to become so at an early date, welcomed the information and data provided to date and reiterated its call upon all States Parties to participate in the exchange of information and data agreed at the Third Review Conference, and, in the fifth and seventh operative paragraphs:

5. *Recalls the decisions reached at the Sixth Review Conference, and calls upon States parties to the Convention to participate in their implementation;*
7. *Requests the Secretary-General to continue to render the necessary assistance to the depositary Governments of the Convention and to provide such services as may be required for the implementation of the decisions and recommendations of the Review Conferences, including all assistance to the annual meetings of the States parties and the meetings of experts;*

A new sixth operative paragraph was included in 2008 which had not appeared in the comparable resolution in 2007:

6. *Urges States parties to continue to work closely with the Implementation Support Unit of the Conference on Disarmament Secretariat and Conference Support Branch of the Office for Disarmament Affairs in fulfilling its mandate, in accordance with the decision of the Sixth Review Conference;*

As in 2007 and unlike previous comparable resolutions, this one did not specifically address the topics to be considered at the Meeting of States Parties in 2008 or subsequently.

As expected, the First Committee adopted this draft resolution without a vote on 29 October 2008. It was subsequently approved by the General Assembly without a vote on 2 December 2008 as A/RES/63/88.

Other Preparations

On the weekend of 29-30 November 2008 before the Meeting of States Parties, there was a workshop in Geneva of the Pugwash Study Group on the Implementation of the Chemical and Biological Weapons Conventions entitled “*Moving towards the Seventh Review Conference.*” About 55 participants from 20 countries had a very useful and intense exchange of views which started by considering the intersessional

programme and then moved on to considering preparations for the Seventh Review Conference including the convergence of chemistry and biology, preparing for a successful outcome, improving the CBM regime as well as strengthening the effectiveness and improving the implementation of the Convention.

Meeting of States Parties, 1 to 5 December 2008: Opening Plenary Session

The Meeting of States Parties began on Monday 1 December 2008 in a plenary session when the Chairman, Ambassador Georgi Avramchev of the Former Yugoslavian Republic of Macedonia, welcomed the representatives from the States Parties. He then invited Mr Sergei Ordzhonikidze, Director-General of the United Nations Office at Geneva, to make a statement on behalf of the Secretary-General of the United Nations, Mr Ban Ki-moon. This statement started by noting that

You meet at the halfway point of the intersessional work programme, in advance of the next review conference in 2011. I am encouraged to know that the programme has been inclusive and productive, and that you have developed understandings on improving national implementation and regional cooperation. I urge you to maintain that spirit this week as you continue work on biosafety, biosecurity, oversight, education and awareness-raising, as well as next year, when you address capacity building in disease surveillance, detection, diagnosis and containment. These efforts are crucially important in strengthening barriers against biological weapons and bioterrorism, and in addressing other threats to public health, agriculture, economic development and the environment.

The statement went on to note that *Governments alone cannot confront the risks posed by biological weapons. That is why the intersessional programme has also involved international organizations such as the World Health Organization, the World Organization for Animal Health, Interpol, regional bodies, professional and scientific associations, academia and commercial industry.* He then noted that *This reflects your recognition that to manage the full spectrum of biological risks – from naturally occurring diseases, accidents and negligence to terrorism and the deliberate use of biological weapons – you need a cohesive, coordinated network of activities and resources. Such a network will help to ensure that biological science and technology can be safely and securely developed for the benefit of all.*

He concluded by looking ahead towards the Seventh Review Conference by saying:

I also urge you to begin thinking about additional steps that could be taken at the next review conference. You might consider how to increase membership, and how to further develop the implementation support unit. You might also explore the potential for further multilateral cooperation in the fields of verification, compliance and enforcement of the Convention.

The Chairman thanked Mr Ordzhonikidze for his statement and then moved on to business. In regard to the adoption of the Agenda (BWC/MSP/2008/1), he noted that this had been circulated in all languages. This was adopted. The

programme of work (BWC/MSP/2008/2), which had been developed from that attached to the Chairman's letter of 10 October 2008, had likewise been circulated and was adopted. He then noted that three papers had been issued. First, his synthesis document of 10 October 2008 had been issued in all languages (BWC/MSP/2008/L.1), an advance copy had been circulated of the report (BWC/MSP/2008/3) on the Implementation Support Unit (ISU) as well as his report on Universalization (BWC/MSP/2008/4). In addition, a background document had been issued by the ISU of developments in science and technology (BWC/MSP/2008/INF.1). He also noted that all Working Papers would be issued in their language of submission only. Moving on to rules of procedure, he proposed that, as previously, these meetings should operate under the Rules of Procedure of the Sixth Review Conference applied *mutatis mutandis*. However, he pointed out that formal accreditation would not be required for the annual meetings; registration would be sufficient. These Rules of Procedure were agreed.

In regard to participation, he said that one State neither party or signatory – Israel – had requested observer status and this was so decided. Five international organizations – the European Commission, the ICRC, Interpol, WHO and OIE – had also requested observer status and this was so decided. In regard to NGOs, the Chairman said that a number had requested the opportunity to address the meeting and he proposed to suspend the meeting on Monday afternoon at 4.30 pm to allow them to do so. This was so decided. He also noted that there would be a number of lunch-time events.

97 States Parties to the Convention participated in the Meeting of States Parties as follows: Albania, Algeria, Argentina, Armenia, Australia, Austria, Azerbaijan, Bangladesh, Belarus, Belgium, Benin, Bosnia and Herzegovina, Brazil, Bulgaria, Cambodia, Canada, Chile, China, Colombia, Costa Rica, Croatia, Cuba, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Ghana, Greece, Guatemala, Holy See, Honduras, Hungary, India, Indonesia, Iran (Islamic Republic of), Iraq, Ireland, Italy, Japan, Jordan, Kenya, Kuwait, Latvia, Lebanon, Libyan Arab Jamahiriyah, Lithuania, Malaysia, Malta, Mauritius, Mexico, Monaco, Mongolia, Morocco, Netherlands, New Zealand, Nigeria, Norway, Oman, Pakistan, Peru, Philippines, Poland, Portugal, Qatar, Republic of Korea, Republic of Moldova, Romania, Russian Federation, Saudi Arabia, Senegal, Serbia, Singapore, Slovakia, Slovenia, South Africa, Spain, Sri Lanka, Sudan, Sweden, Switzerland, Thailand, The former Yugoslav Republic of Macedonia, Tunisia, Turkey, Ukraine, United Arab Emirates, United Kingdom of Great Britain and Northern Ireland, United States of America, Uruguay, Viet Nam, Venezuela (Bolivarian Republic of), Yemen, and Zimbabwe. This was one more than at the Meeting of Experts, as 11 States Parties – Belarus, Bosnia and Herzegovina, Cambodia, Estonia, Latvia, Lebanon, Mauritius, Monaco, Mongolia, United Arab Emirates and Zimbabwe – participated at MSP 08 in December whilst 10 States Parties – Bahrain, Botswana, Brunei Darussalam, Ecuador, Kazakhstan, Kyrgyzstan, Lao People's Republic, Swaziland, Tajikistan and Zambia – who had participated at MX08 in August did not at MSP08 in December.

Five Signatory States participated – Burundi, Egypt, Haiti, Nepal, and the Syrian Arab Republic – one more than at MX08, as Burundi and Haiti participated at MSP08 whilst

Myanmar, which participated at MX08, did not at MSP08. One State neither Party nor Signatory, Israel, was granted observer status; two less than at MX08 when Cameroon and Mauritania participated. Five international organizations were granted observer status: the European Commission, the International Committee of the Red Cross, Interpol, the World Health Organization and the World Organization for Animal Health. This was two less than in August when the International Centre for Genetic Engineering and Biotechnology (ICGEB), the Organization for Economic Cooperation and Development (OECD) and the United Nations Educational, Scientific and Cultural Organization (UNESCO) participated and Interpol did not. 17 Non-Governmental Organizations were present. The Convention now has 163 States Parties and 13 Signatory States (see BWC/MSP/2008/INF.3 together with the accession of the Cook Islands announced by the UK on Friday 5 December 2008).

There were over 490 participants at the Meeting of States Parties of which 428 came from States Parties, including some 134 participants from capitals. This compared well with the participation at the Meeting of Experts in August 2008 when there were just over 500 participants of which 365 came from States Parties, including over 160 from capitals.

The Chairman then made his introductory remarks by noting that he wished to say *a few words about the substantive part of our work, and the outcome of this meeting*. He noted that *The Meeting of Experts showed that States Parties continue to approach our various challenges in a collaborative, collegial spirit, and the wealth of material presented at that meeting shows the impressive resources we can muster when we work in concert*. He went on to say that *We now have to distil the excellent work of the Meeting of Experts into a more concentrated product. We have a vast amount of pertinent, constructive material to work with: what we need now is refinement, structure and focus*.

He went on to say that *As Chairman, I am eager to ensure that the outcome of our work this year makes a lasting contribution to the efforts of States Parties – and other relevant actors – to take practical measures to strengthen the Convention and help ensure the safe and secure development of the peaceful applications of biological science and technology. Our mandate is clear: we are certainly not attempting to negotiate binding agreements. But I believe that we would make a significant and practical contribution to fulfilling the objectives of the Convention if we could develop a report which, for example:*

- *clearly states what we mean by biosafety and biosecurity in the context of the Convention;*
- *outlines the need for proportional measures, for carefully assessing risks, for balancing security concerns against the need for nurturing research and ensuring the peaceful development of biological science and technology;*
- *recognizes that “no one size fits all”, that individual and local circumstances must be taken into account when addressing biosafety/biosecurity and education and awareness-raising;*
- *encourages the involvement of all relevant stakeholders, including government, the scientific*

community, commercial industry and academia; and, perhaps most importantly,

- lists practical measures that States Parties can consider and draw upon when developing their own approaches to our topics.

These are just examples: there are of course many other themes and ideas that might usefully be included in our report. But I do urge you take advantage of the constructive atmosphere we have developed, to produce a report that will be a useful and practical resource for all those who share our goals of strengthening the Convention, improving biosafety and biosecurity capacities worldwide, raising awareness of biological risks, and reducing the threat posed to global security by biological weapons and bioterrorism.

He concluded by saying that he was looking forward to a productive and focused meeting, and to working with participants to deliver a useful, practical and concrete outcome. He encouraged all delegations to contribute freely to the debate, and he hoped that there would be a continuation of the very constructive and creative spirit States Parties had displayed at the Meeting of Experts.

General Debate, Monday 1 December 2008

The Chairman then moved on to open the **General Debate**.

Cuba spoke on behalf of the Group of the Non-Aligned Movement and other States by recalling that the XV Ministerial Conference of the Non Aligned Movement, held in Tehran, from 27 to 30 July 2008, at which the Ministers of the States Parties to the Biological and Toxin Weapons Convention (BWC):

- *Reaffirmed that the possibility of any use of bacteriological (biological) agents and toxins as weapons should be completely excluded, and the conviction that such use would be repugnant to the conscience of humankind.*
- *Recognised also the particular importance of strengthening the Convention through multilateral negotiations for a legally binding Protocol and universal adherence to the Convention. They reiterated their call to promote international cooperation for peaceful purposes, including scientific-technical exchange.*
- *Underlined further the importance to maintain close coordination among the NAM States Parties to the Convention and highlighted that the Convention on Biological and Toxin Weapons forms a whole and that, although it is possible to consider certain aspects separately, it is critical to deal with all of the issues interrelated to this Convention in a balanced and comprehensive manner.*

The statement went on to note:

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

In this regard, the Group remains deeply concerned about the potential use and/or threats of use of

biological agents and toxins as an instrument of war and terror. The Group feels that there is a greater necessity and urgency for the States Parties to the BWC to work towards strengthening and improving the effectiveness and implementation of this Convention so that together we can fully address this concern.

The statement continued to note that *While acknowledging the significance of Article X of the Convention, the Group also underlines the importance of paragraph 54 of the Final Document of the Sixth Review Conference of the States Parties of the BWC, in which they were encouraged to provide information on how Article X is been implemented.* In regard to the topics for this year's meetings, the statement made a number of points which included the following:

1. *Keeping in mind the provisions of the Convention and their strict implementation, the Group welcomes the discussions on biosafety and biosecurity concepts, in order to achieve the objectives of the Convention.*
2. *While biosafety is a well known and widely-accepted concept, the interpretation and meaning of biosecurity could diverge depending on whom and under which circumstances is used.*
3. *Biosafety, as is generally understood to mean, is the set of practices and technologies aimed at protecting people from the hazards of occupational exposures to pathogens and toxins.*
4. *One the other hand, biosecurity is generally understood to be related to the measures taken to guarantee the protection of the biological materials, technologies and information from loss, theft, misuse, diversion or intentional release.*
5. *We strongly believe that the relevant national authorities should have the responsibility in defining and implementing such concepts [biosafety and biosecurity], in accordance with relevant national laws, regulation and policies, consistent with the provisions of the Convention.*
6. *While some International Organizations, for instance the World Health Organization (WHO), deal with biosafety and biosecurity issues, the adoption of decisions and recommendations on this matter within the framework of the BWC belongs exclusively to the States Parties of the Convention.*
7. *Achieving necessary standards in the fields of biosafety and biosecurity requires and is facilitated by international cooperation and strengthening the implementation of Article X of the Convention.*
8. *The Group would like to emphasize that Codes of Conduct by themselves are not sufficient for preventing the potential use and/or threats of use of biological agents and toxins as an instrument of war and terror. The development and adoption of such Codes would be effective and useful, when complemented with the involvement and assistance of the national scientific community. However, it remains the prerogative of the States Parties to decide on the content, promulgation and adoption of the code in accordance with relevant national laws, regulations and policies, consistent with the provisions of the Convention.*
9. *Codes of Conduct should avoid any restrictions on exchange of scientific discoveries in the field of*

biology for prevention of disease and other peaceful purposes. Subjecting scientific research and the free flow of scientific information to undue restrictions may amount to violation of obligations undertaken under Article X of the BWC. Therefore, all necessary precautionary measures need to be **taken to avoid hampering the economic or technological development of States Parties to the Convention or international cooperation in the field of peaceful bacteriological (biological) activities**, while devising national codes of conduct.

The Statement concluded by looking forward to productive discussions next year on Article X, to which the Group attaches the highest priority.

[www.unog/bwc accessed on 18 December 2008 shows that Cuba submitted a CBM in 2008]

France spoke on behalf of the European Union and noted that the candidate countries Turkey, Croatia and the former Yugoslav Republic of Macedonia, the countries of the stabilisation and association process and potential candidates Albania, Bosnia and Herzegovina, Montenegro and Serbia, as well as Iceland, Ukraine, the Republic of Moldova, Armenia, Azerbaijan and Georgia aligned themselves with the statement. He started by recalling the Meeting of Experts in August 2008 and saying that *The diversity of the players, the number and quality of the presentations, and the poster session showed how these two areas of activity constitute significant axes for the concrete implementation of the Convention.* He went on to say that *The European Union wishes to reaffirm its commitment to this intersessional process, which helps to maintain a regular dialogue between the States Parties to the Convention, and to strive for constant improvement of national practices.*

He then said: *But this intersessional process should not simply allow us to exchange opinions, it should also enable us to take specific steps to improve compliance with the Convention by the States Parties, as we move towards the Review Conference in 2011. ...*

These annual meetings should therefore be occasions for discussion, but also occasion to take stock. These conferences should create the impetus to strengthen, where necessary, national implementation measures, including penal legislation. The European Union is convinced that this can be achieved by way of interaction between lawmakers and the private sector, with a view to promoting the national ownership of measures provided by the BTWC.

The European Union believes that these moves to strengthen national legislation should fully encompass the two topics on which we have focused our attention in 2008, particularly the measures concerning biosafety and biosecurity, and measures aimed at preventing the misuse of research results. The European Union also believes that the States Parties to the Convention should play a major role in supporting scientific, professional, industrial and other organisations in developing and implementing oversight, education and awareness-raising programmes to help preventing diversion of research developments.

He then went on to note that the European Union has adopted two joint actions in support of the BWC, in 2006 and 2008, and a joint action in support of the WHO. He said that

In the new joint action in support of the BTWC, the European Union wishes to

- *promote the universalization of the Convention;*
- *support the implementation of the Convention by providing legal assistance to States parties or States not yet Parties to the Convention, including by way of training programmes directed at the national authorities;*
- *promote the submission of confidence-building measures returns, especially by encouraging the designation of national points of contact;*
- *support the intersessional process of the Convention.*

The statement went on to say *You know how committed the EU is to the mechanism of transparency of the Convention. The confidence-building measures are a key instrument for creating transparency and mutual trust among the States party to the Convention. The European Union calls upon all States Parties to submit their confidence-building measures on a regular basis, and regrets that many States still remain outside this mechanism. Achieving universal participation in these confidence-building measures is a strong priority for the EU. This confidence is the basis on which the European Union wishes to deepen the discussions on the implementation of the Convention, as we move towards the 7th Review Conference of the BTWC in 2011.*

Looking ahead to the new year, the statement said *In 2009, we will focus on the topic of international assistance. As you know the European Union is very active in this field. Apart from the joint actions in support of the BTWC and the WHO, the European Union is establishing initiatives to assist third countries through technical visits, and also through the stability instrument.*

[www.unog/bwc accessed on 18 December 2008 shows that France submitted a CBM in 2008]

Canada on behalf of the JACKSNNZ group (Japan, Australia, Canada, Republic of Korea, Switzerland, Norway and New Zealand) said in regard to the Meeting of Experts in August 2008 that *This meeting witnessed increased participation in the work of the BTWC by almost every measure, not just in terms of numbers from capitals but also from a growing range of civil society actors as well as relevant International Organisations that are interested in our work. It is also no accident that the renewed vigour and interest shown by States Parties in the work of the BTWC coincides with the ISU's substantial contribution to our recent meetings and its support of the universalisation and national implementation efforts.* The statement went on to note that:

The ISU has also made significant contributions to the CBM mechanism. We believe that the timely submission and availability of CBMs to other States Parties is critical to the full implementation of the BTWC. In this regard, our countries submit annual CBMs which are on file with the Implementation Support Unit, both in hard copy and online. Some of the JACKSNNZ States have, as an additional measure of transparency, also posted their CBM returns on the public section of the ISU's website and on the Internet. We would urge all countries that are not yet doing so

to submit CBMs to the ISU on an annual basis and in a timely fashion.

The statement then reviewed the contributions made to the topics under consideration in 2008, and went on to add that *We recognise that the domestic implementation process can be both challenging and daunting, and we appreciate that some countries may lack the expertise or resources to develop and put into effect comprehensive national biosafety and biosecurity measures. In this regard, members of the JACKSNNZ are committed to international cooperation, and encourage all States Parties in a position to do so to provide assistance to other States Parties to strengthen capacity in biosafety and biosecurity.* The statement concluded by looking ahead towards the Seventh Review Conference in 2011:

Looking ahead, our group of seven countries believes our focus must remain firmly on maintaining the BTWC's current positive momentum up to – and through – the Seventh Review Conference in 2011. We are now half-way through this Intersessional Process and it seems to us an opportune moment to begin thinking about the strengths and weaknesses of the current Process. The JACKSNNZ would be open to discuss whether the BTWC would benefit from “more of the same” or whether the Convention, and our common and national security interests, would be better served if we put a renewed focus on how this Convention can evolve in the future. For instance, some JACKSNNZ member states suggested in 2006 that the Intersessional Process could be greatly enhanced if the Meetings of States Parties were in a position to take consensual decisions on the substantive points on our agenda.

[www.unog/bwc accessed on 18 December 2008 shows that Canada submitted a CBM in 2008]

China then spoke, saying that *Over the past years, the implementation of the Convention has been smooth and successful on the whole. The universality of the Convention has been improved, which brings the number of States Parties to 162. Both the quantity and quality of confidence-building measures (CBMs) submitted by States Parties have been improved. 64 States Parties have set up their national points of contact for implementation of the Convention. The Implementation Support Unit (ISU) has performed smoothly and has been well-received and supported by States Parties.* The statement went on to say that *Strengthening biosafety and biosecurity is the intrinsic requirement by the Convention, as well as the important obligation of States Parties on implementation of the Convention. It also constitutes one of effective means to prevent acquiring or using biological weapons related materials and technologies by terrorists and non-state actors.* The statement went on to say that at the Meeting of Experts a common reading emerged on what is meant by biosafety and biosecurity in the context of the Convention as follows:

- I. Biosafety refers to the principles, technologies and measures implemented to prevent accidental release of biological agents and toxins, and to protect people and the environment from the effects of such release.*
- II. Biosecurity refers to the protection and control*

measures implemented to prevent the unauthorized access, retention, misuse, transfer, theft or intentional release of biological agents and toxins.

The statement went on to propose effective measures that States Parties should take to enhance biosafety and biosecurity. These include:

IV. An oversight mechanism on life sciences should be established by combining government controls and scientists' self-discipline while avoiding undue restrictions on scientific research.

V. States Parties are encouraged to reinforce education and awareness raising activities in various ways including holding seminars and training courses, making use of publications and providing teaching materials.

VI. States Parties are encouraged to adopt Codes of Conduct according to their own national situations on a voluntary basis.

The statement concluded by welcoming the Chairman's synthesis paper and expressed hope that States Parties *could further promote consensus and propose some practical and feasible suggestions on the basis of those papers at this meeting.*

[www.unog/bwc accessed on 18 December 2008 shows that China submitted a CBM in 2008]

Turkey then spoke, saying that *The topics that we are dealing with this year are also indispensable for curbing proliferation at the biological front. As new developments in science and technology pose new challenges to the effective implementation of the Convention, ensuring safety and security of biological agents and toxins becomes all the more important.* The statement went on to say that *we welcome the streamlining of the procedure for the submission and distribution of the “Confidence Building Measures” (CBMs). We believe that this has already increased the level of participation by States Parties. We shall continue to provide our CBM reports and encourage others to do so.* The statement continued by noting that:

We share the broad understanding within the BWC community that further efforts have to be devoted to strengthening and improving the implementation of the Convention.

States Parties may wish to make use of the 2007-2010 inter-sessional period to consider new ideas in the next Review Conference for an implementation mechanism to enhance the effectiveness of the Convention.

[www.unog/bwc accessed on 18 December 2008 shows that Turkey submitted a CBM in 2008]

The United States then spoke, saying *We have come a long way since the 2003-2005 discussions. Experts from the World Health Organization and its regional offices, the World Animal Health Organization (OIE), the FAO, Interpol, the UN Secretary General's staff and the 1540 Committee, as well as members of regional bodies like the OAS, ASEAN, OAU, OSCE, and EU, regularly gather to discuss measures related to the BWC. Such discussions now are commonplace, something that we could not have*

imagined just a few short years ago. The statement went on to say that BWC-related issues have also been a catalyst for ministries to work together in new ways. This is certainly true for the United States. In the past our State Department disarmament specialists had little contact with their Health and Human Services counterparts. They now work hand-in-hand to improve security against infectious disease, whatever the cause. As U.S. experts travel to capitals to work together with their foreign counterparts, they have noticed that bilateral work provides the necessary rationale for the Foreign, Defense, Justice, Health, and Agriculture Ministries to meet on these issues for the first time. The U.S. believes that it is a sign of true progress that governments now send representatives from multiple ministries to BWC meetings.

In regard to the topics being considered at this Meeting of States Parties, the statement noted that *On the issues of biosafety and biosecurity, the emerging understanding seems to be that biosafety measures protect people, while biosecurity measures protect biological agents and toxins. In fact, biosafety and biosecurity measures are not wholly separate, but form a continuum. In the laboratory setting, the term "biorisk" is increasingly being used to cover both. Measures include not only capacity-building, but also such issues as training and oversight. It went on to say that In recognition of the dual-use potential of life sciences research, the U.S. Government established the National Science Advisory Board for Biosecurity to advise on strategies for the management of dual-use research. In their recommendations on the development of codes of conduct, the NSABB highlighted that individuals involved in any stage of life sciences research have an ethical obligation to avoid or minimize the risks and harms that could result from malevolent use of research outcomes. Given the current state of technology, we are promoting the training of life scientists - both trainees and researchers - on this critical issue. To this end, we plan to develop, in conjunction with other countries, an educational training module for university and other research institutions, as well as funders of research, to help insure all those in the life sciences are as well prepared as possible to carry out responsible science as the field explodes with new cutting-edge developments. BWC meetings have greatly encouraged us in thinking these multinational efforts are feasible and critically important to health and security globally. The statement continued to say that Lately, more focus has been placed on the need to raise awareness about the risks of misuse of the bio-sciences for biological weapons purposes and to educate researchers on dealing with these risks. The U.S. believes that such education should be a mandatory aspect of graduate education in the life sciences in the broader context of professional responsibility, and that this meeting should urge all States Parties to explore and undertake such efforts. We believe that all those graduating from higher education in fields associated with the life sciences should be familiar with the international prohibition against biological weapons. All those undertaking professional research should have received effective training or instruction related to preventing the misuse of their research. Governments should commit to initiating a dialogue with their national*

science academy about how this low level of awareness can swiftly be corrected. This would not replace these educational components at an earlier stage. We also believe in the value of oversight at a number of levels, through a variety of institutional control mechanisms, and among those engaged in the life sciences themselves.

The statement concluded by looking ahead to 2009, saying that *The momentum developed through the BWC Work Program should serve us well, particularly as we focus on disease surveillance and capacity-building in 2009.*

[www.unog/bwc accessed on 18 December 2008 shows that the United States submitted a CBM in 2008]

Germany then spoke, saying that *Being in complete agreement with the EU statement ..., I would like to highlight a few points of particular importance to us. The statement went on to say that at this Meeting, Germany and Austria will introduce an EU working paper describing the procedures implemented by the EU when dealing with ethical problems, including the dual-use problem, regarding EU-funded research. An additional German working paper will describe the efforts of industry in developing and implementing a code of conduct for companies in the field of synthetic biology. The statement concluded by saying that The different stages of development of public health systems, scientific institutions and biotech industry in the States Parties to the Convention require continuous efforts by those States Parties in a position to offer assistance to States that need support in implementing biosafety and biosecurity measures, improving oversight, education and raising awareness, and developing codes of conduct to prevent the misuse of life sciences. Germany stands ready to provide such assistance through the European Union's Joint Actions ... and looks forward with interest to the 2009 meetings with a view to enhancing international cooperation, assistance and exchange in the biological sciences and technology for peaceful purposes in the fields of disease surveillance, detection, diagnosis, and containment of infectious diseases.*

[www.unog/bwc accessed on 18 December 2008 shows that Germany submitted a CBM in 2008]

The **Russian Federation** then spoke, saying that they welcomed the Chairman's synthesis document as well as his statement to the First Committee of the United Nations General Assembly. The statement went on to say that *Synthetic biology ... may serve as an example of the dual use technology. Using genetic information, it allows to chemically synthesize traditional agents and create novel organisms with designer specifications. Experts believe that given the rapid development of capability offered by this technology, national oversight procedures and licensing of activities involving dangerous pathogens based on select agents list may soon become outdated and irrelevant. The statement went on to say that For us it is clear that the States Parties are best advised to avoid addressing issues of science and technology relevant to the BWC on an ad hoc basis or from time to time when opportunity avails itself. We are of the view that the time*

has come to tackle this complex and important task on a sound permanent footing. It continued to say that Given the growing significance of the BWC in the light of the rapid development of dual use science and technology, we deem it advisable to move towards practically considering the feasibility of setting up a permanent mechanism for monitoring and examination of scientific information relevant to the BWC.... Besides, it would be useful to give thought to establishing an Academic forum bringing together government, industry and academia for regular exchanges of views on these issues. Such bodies have a good record in the Chemical Weapons Convention.

The statement then looked forward towards the 7th Review Conference by saying *With the Seventh Review Conference to be held in 2011, the substantive preparations for it to be a success should start now. Real practical measures to strengthen the role of the BWC as a reliable barrier against the development, production and use of biological and toxin weapons are to be developed. We have no doubt in doing so one must make the full use of the valuable experience accumulated in the past by VEREX and the Ad Hoc Group. However, seven years have elapsed since the suspension of multilateral negotiations to develop a legally binding instrument of verification. All this time scientific knowledge has been rapidly advancing. If the future verification mechanism is to encompass all relevant S & T, then this work, vitally important for the success of the Convention, ought to be resumed at the earliest. The emerging favourable environment may encourage us as we make this new attempt.*

We are aware of the still circulating opinion that the BWC is inherently unverifiable, and the adoption of an ineffectual verification protocol will create a false sense of security without solving the problem of monitoring compliance. One may recall that the same objection had been raised in the past regarding the Chemical Weapons Convention, which, in the assessment of all its States parties, possessing powerful verification provisions successfully faces the challenges of the prohibition of chemical weapons. It is understandable that verification in multilateral arms control and disarmament may not fully guarantee compliance. However, it is difficult to deny that these verifiable treaties and conventions are the cornerstones of international security and ensure predictability, stability and strengthen confidence among participating nations. We are convinced that the BWC with verification is better off than without it. It is our firm belief that effective non-discriminatory verification mechanism is feasible and as such should be developed and adopted.

[www.unog/bwc accessed on 18 December 2008 shows that the Russian Federation submitted a CBM in 2008]

Indonesia then spoke, saying that the Meeting of Experts had provided useful inputs as well as identified several challenges on how to strengthen biosecurity and biosafety measures. The transboundary nature of biological agents requires a concerted global biosafety and biosecurity measures. However, different countries have different capabilities in its implementation. We believe that international cooperation is pertinent in improving biosafety and biosecurity measures of different countries,

which in turn will contribute to the global effort of combating the possible misuse of biological weapons. The statement went on to say that Indonesia views that international cooperation is an integral part in strengthening the implementation of the BWC as well as promoting common understanding on different issues related to the convention. ... We would like to reiterate our conviction that international cooperation is important in avoiding the misuse of biological agents as well as fighting infectious diseases, especially in developing countries.

[www.unog/bwc accessed on 18 December 2008 shows that Indonesia submitted a CBM in 2008]

The Republic of Korea then spoke, saying that *The Review Conference in November 2006 provided us with a solid basis to further pursue our endeavours to strengthen the Convention not only by adopting a final declaration for the first time in ten years with an article by article review of the Convention, but also by agreeing upon measures that would make the Convention more robust. The continuation of the intersessional process, the launch of the ISU (Implementation Support Unit), and the adoption of the universalization action plan are some of the main achievements worthy of recognition. In regard to the topics being considered at this Meeting of States Parties, the statement went on to say that there is now increasing recognition in the academic community in the Republic of Korea that their own self-regulation on conduct, in particular, in the context of research carries significant importance. Our government is expecting to see that active efforts from various sectors of the society will eventually facilitate the domestic debate on formulating Codes of Conduct in the near future. The statement concluded by noting that expressing my sincere wish that we will be able to build upon the momentum created at the 6th Review Conference towards further progress at the 7th Review Conference in 2011 by executing the planned intersessional work program successfully.*

[www.unog/bwc accessed on 18 December 2008 shows that the Republic of Korea submitted a CBM in 2008]

Iran then spoke, saying that *In our view, multilateralism and multilaterally agreed solutions, in accordance with the principles and purposes of the United Nations Charter, provide the only sustainable method of addressing disarmament and international security issues. Therefore, while the present setting for our deliberations and discussions may be useful in promoting common understanding on the BWC among States Parties, we strongly believe that this mechanism cannot be substitute to the multilateral negotiations on the Protocol for strengthening the Convention. In our view, the only sustainable and durable way of strengthening the Convention is through multilateral negotiations aimed at concluding a non-discriminatory legally binding instrument added to the Convention. The statement went on in considering universalization to say that after more than three decades since the entry into force of the Convention, its universality has yet to be realized and regrettably there are still a number of non-Parties who have not even signed the Convention.*

In this regard, it should be underlined that among these non-signatories, some with advanced biotechnology which are situated in volatile regions pose a serious threat to the international peace and security. The statement continued to say that We also call upon the States Parties to remain committed to their obligations not to transfer any equipment, materials (including biological agents and toxins), as well as scientific and technological information to non-Parties to the Convention. Introduction of disincentives for the non-Parties would facilitate the realization of the universality of the Convention. The statement concluded by saying as we are approaching next year meetings whose focus should be on Article X of the Convention, I would like to seize this opportunity to encourage States Parties to provide information on how Article X is being implemented as set for in paragraph 54 of the Final Document of the Sixth Review Conference.

[www.unog/bwc accessed on 18 December 2008 shows that Iran submitted a CBM in 2008]

India then spoke, saying that *India attaches the highest priority towards the further strengthening of the BTWC. We believe that only a multilaterally agreed mechanism for verification of compliance can provide the assurance of observance of compliance obligations by the States Parties and can act as a deterrence against non compliance. We also believe that the decision regarding strengthening of the BWC should be taken by the Review Conference based on the principle of consensus. The statement then went on to consider the topics being considered in 2008 and set out the approaches being taken by India in that respect. The statement concludes by noting that We have taken note of your synthesis paper reflecting a broad range of issues covered during the Meeting of Experts. We would like to stress that the primary responsibility for implementing the Convention rests with national authorities. However, we are open to exploring common international standards to facilitate cooperative and coordination among States Parties. Such standards should be practical and implementable by national authorities, with assistance, upon request, from States Parties in a position to provide such assistance. It is also important to ensure that such standards facilitate the strengthening of Article 10 of the Convention, to which India attaches the highest priority. We believe that evolving Code of Conduct cannot be a substitute for a legally binding measures to ensure the strict implementation and compliance with the provisions of the Convention.*

[www.unog/bwc accessed on 18 December 2008 shows that India has not submitted a CBM in 2008]

South Africa then spoke, saying that *South Africa would like to reiterate its position, that in the developing world, the establishment of bio-safety in terms of safe laboratory practices is the first priority. It is our view that bio-safety forms the basis of bio-security. Most measures taken to ensure the integrity of samples by laboratories, as well as the measures taken to protect laboratory personnel and members of the public who may live or work in the vicinity of the laboratory automatically have bio-security*

spin offs. We are convinced that bio-risk is posed firstly by naturally occurring disease, secondly by unintentional exposure of people to disease and only thirdly by obtaining pathogens illegally. This appears to have been proven by the fact that the vast majority, if not all of biological incidents that have taken place over the last 5 years were due to the unintentional exposure of people to biological pathogens, caused by problems related to bio-safety. The statement goes on to say that South Africa therefore calls for a concerted effort to be made first to improve bio-safety internationally and for our efforts to improve bio-security to be built on the basis of bio-safety. In regard to the second topic, the statement said that It is particularly important to make scientists aware of the dual-use nature of their work, and inform them of the ways in which they can anticipate and resolve ethical problems and risks.

[www.unog/bwc accessed on 18 December 2008 shows that South Africa has not submitted a CBM in 2008]

Pakistan the spoke, saying that *This year's themes – biosafety and biosecurity, and oversight, education, awareness raising and codes of conduct – are closely linked to each other. They can play an important role in preventing the misuse of life sciences and thus strengthening the Convention. Dealing with the safety and security of biological resources, as well as ensuring that all those involved in relevant activities are aware of the international, regional and national measures which regulate their activities and the principles that underpin them, will go a long way towards ensuring that we continue to enjoy the benefits of biotechnology while being shielded from its dangers. Addressing these issues will necessitate continued engagement with the scientific, medical, commercial and educational communities. We will have to develop a coordinated, interlinked approach to the prevention of the misuse of biological science and technology. The statement went on to set out the position of Pakistan in regard to the topics being considered as follows:*

- *Biosafety and biosecurity are not limited to physical security of laboratories, pathogens and toxins. They encompass risk awareness, measures to ensure that life sciences are committed to their benign use, and protection of know-how and technology against bioterrorism and biological warfare.*
- *A reliable biosafety-biosecurity system would have the elements of preparedness and response in the event of deliberate or accidental releases, and an effective disease surveillance mechanism at the national, regional and international levels.*
- *Biosafety and biosecurity overlap in the areas of food security, biodiversity and bioterrorism.*
- *For a reliable and resilient biosafety and biosecurity regime, all stakeholders should be involved.*
- *In the absence of international verification means, oversight at the national level has assumed added importance. But it should not be stringent.*
- *Pakistan favours a healthy combination of government/institutional controls and regulation by scientific establishments and scientists themselves.*
- *There is no universal template for Codes of Conduct.*
- *Each State Party needs to intensify its efforts to involve*

life scientists, policy makers and relevant international organizations to develop flexible but effective Codes of Conduct containing elements of ethics, education and training programmes.

The statement concluded by saying that *I would like to reiterate Pakistan's commitment to the verification of the BWC regime. We believe that multilaterally negotiated legally binding verification mechanisms are crucial for effective disarmament and arms control. This principle is applicable to the BWC as well. The inter-sessional work leading to the Review Conference in 2011 will enable us to tackle the issue of verification in a comprehensive manner.*

[www.unog/bwc accessed on 18 December 2008 shows that Pakistan has not submitted a CBM in 2008]

Chile then spoke, saying that *Our country has spoken out in favour of an action plan to facilitate new States' accessions. Chile has declared that it does not hold biological weapons and that it does not intend to develop them and we have joined regional initiatives to ratify the Convention and enforce the provisions therein. The statement went on to say The obligations set out in the Convention that brings us together today have the shortcoming of not having an effective verification mechanism and this has been the main shortcoming of the Treaty. The need for a biological weapons verification control mechanism is increasingly urgent, especially with the rise of cross-border organized crime and international terrorism in the multilateral agenda. The steps being taken by Chile to enforce the Convention were then outlined and the statement concluded by saying that I hope that this meeting will help us all together to move towards the approval of a modern, effective verification system that would perfect the Convention.*

[www.unog/bwc accessed on 18 December 2008 shows that Chile has submitted a CBM in 2008]

Australia then spoke, saying that *All of us here recognise that in the current, challenging international environment the Biological and Toxin Weapons Convention plays a crucial role. Rapid advances in life sciences and the availability of hazardous materials will continue to increase the threat of biological weapons either in the form of State programs or bioterrorism. The statement went on to say that It is through our work together here that we can achieve much to increase awareness of these risks, and build confidence that together we can, we are, working to raise the barriers to biological weapons proliferation and bioterrorism. We recognise the challenges of translating our discussions into national action, in our capitals, but consider that such action is essential if we are to address contemporary biological threats. Effective national implementation has been a focus of Australia's promotion of the Convention and its aims in the Asia-Pacific region and the outcomes and lessons learned through the BWC intersessional process have played an invaluable role in facilitating these regional activities. The statement concluded by noting that Effective national implementation is reinforced through improving transparency between states parties. The Convention's*

Confidence Building Measures declarations have shown the value of creating greater transparency between states. Australia's early and full reporting to the BWC is evidence of our commitment to sharing information on domestic biosafety and biosecurity implementation. We believe such politically binding declarations will assist all States Parties, and states seeking to become States Parties.

[www.unog/bwc accessed on 18 December 2008 shows that Australia has submitted a CBM in 2008]

Malaysia then spoke, saying that they commended the Chairman for his synthesis paper and went on to say that *The Synthesis paper is indeed a treasure trove of the findings of the Meeting of Experts – a valuable aid for States Parties in the advancement, strengthening of existing and development of new standards and frameworks that would reinforce national implementation of the Convention. The statement went on to say that Malaysia also continues to hold the principle that effective implementation of the Convention requires non-discriminatory and balanced approach to all provisions of the Convention. We fully subscribe to the NAM principled position which holds that the BWC forms a composite whole and that while it is possible to address related issues separately, it is necessary for all the inter-linked elements of the Convention to be dealt with in a balanced and comprehensive manner, whether they relate to regulation, compliance or promotion. The statement continued by saying that Malaysia recognizes the importance of States Parties undertaking serious and persistent efforts and concrete actions to strengthen national and international efforts and capabilities in the measures stipulated in the Convention. At the same time, we remain strongly of the view that there should be similar commitment and undertaking among all States Parties towards promoting and enhancing international cooperation.*

[www.unog/bwc accessed on 18 December 2008 shows that Malaysia has not submitted a CBM in 2008]

The Chairman then closed the morning session following an announcement by Richard Lennane that there would be a lunchtime event in Salle XXII, organized by VERTIC and BWPP.

General Debate: Afternoon Session, Monday 1 December 2008

The **United Arab Emirates** – which had ratified the Convention on 19 June 2008 – then spoke, reaffirming its respect for the Convention and its determination to uphold its international commitments for international peace and security with a view to achieving universality of the Convention, and our determination to take part in international efforts to eliminate this kind of weapon. We would also like to speak of the efforts we are undertaking to update our national legislation to bring it into line with our commitments regarding the use of biological material for peaceful purposes.

[www.unog/bwc accessed on 18 December 2008 shows that the United Arab Emirates has not submitted a CBM in 2008]

Libya then spoke, saying that *To ensure enforcement and universality of the Convention, the States Parties and the Secretariat of the Convention must assist developing countries to emerge from their crisis which is due to the spread of disease and epidemics and they must help those countries acquire the necessary experience and technical know-how to manage biological activities. We hope that these countries will enjoy the necessary support and will be able to attend the Expert Meetings and the States Parties' meetings to the Convention.* The statement went on to say that Libya has appointed a National Committee for Biosafety and Biological Ethics as a focal point and that they had joined the ICGEB. The statement continued by saying that *We encourage biologists to take a lead role in implementing the Convention. This is why my country has proposed a number of draft Codes of Conduct. First of all, we have proposed a Code of Conduct for the handling of very dangerous microorganisms and we have put forward a list of those microorganisms, some of which cause serious health problems, to humans, animals and plants. We have also proposed a Code of Conduct for implementing an early warning system for the spread of diseases. We are seeking to consolidate national laws with regard to dangerous microorganisms, as well as toxins, biological waste and other threats. We are putting forward a bill which will seek to limit the trade in genetically modified organisms. We are putting forward a bill setting out a Code of Conduct for doctors in Libya and also a bill for pharmacists, a Code of Conduct, and, in addition, a Code of Conduct for laboratory workers and the food industry.*

[www.unog/bwc accessed on 18 December 2008 shows that Libya has submitted a CBM in 2008]

Morocco then spoke, expressing concern about bioterrorism and saying that *The past has shown in the last few years in certain countries of the world that the international community must create networks in order to combat this type of terrorism. It also calls for greater attention in order to tighten up the surveillance of existing known terrorist groups and prevent them from accessing biological weapons. Prevention and combating any illicit utilization of bacteriological or epidemiological material is essential.* The statement went on to say that *The Kingdom of Morocco is convinced that biosafety and biosecurity are in fact two sides of the same coin. We are speaking about the protection of pathogens and toxins and preventing their use in areas which are forbidden by the Convention. At the same time, this should not be a pretext for stopping international cooperation for peaceful uses. Therefore we need a mechanism which would help developing countries to better apply the International Sanitary Regulations. It is also essential to have greater cooperation among the United Nations specialized agencies and international organizations active in this area.* The statement then outlined steps being taken by Morocco.

[www.unog/bwc accessed on 18 December 2008 shows that Morocco has submitted a CBM in 2008]

Nigeria then spoke, saying that *It is our view that regional cooperation is imperative in the implementation of the two topics slated for discussion at this meeting. My delegation believes that the effective implementation of biosafety and biosecurity regimes would go a long way in preventing the possible use of biological agents and technologies. We are equally of the belief that technical assistance and collaboration in the field of biosafety and biosecurity should be enhanced.* The statement went on to describe steps taken by Nigeria in regard to national implementation of the Convention.

[www.unog/bwc accessed on 18 December 2008 shows that Nigeria has submitted a CBM in 2008]

Algeria then spoke, saying that *Our country is in favour of discussion on these two topics and attaches great importance to the improvement of biosafety and biosecurity.* It then went on to describe steps being taken in Algeria. The statement continued by saying that *The document [statement] distributed by Non-Aligned countries is fully supported by us and is worthy of the attention of this Meeting. Our meeting continues after the decision by the Sixth Conference held in 2006 and the intersessional procedure decided by that Conference. It makes it possible for us – in fact it is a chance, it is an opportunity to consider what parts of the Convention have been already implemented. This is particularly important when considering the review now foreseen in 2011. However, the Convention is limited in scope because it does not have a verification mechanism. I would like here to express the hope that the result of this meeting could help States Parties to take the next step in multilateral negotiations and have a legally binding instrument, given the threat with which we are all concerned. Algeria is very keen on full and balanced implementation of all parts of the Convention. The idea is to have, in a stable and positive manner, eliminated the risks which are targeted by this Convention.*

[www.unog/bwc accessed on 18 December 2008 shows that Algeria has not submitted a CBM in 2008]

Brazil then spoke, saying that *I would like to emphasize the fundamental role played by national measures in the implementation of the Convention. Those measures are the ones that translate the States' obligations into practical, effective actions. Given the ample scope of the BWC and its widespread incidence on numerous areas, from research to industry, national measures are the essential path for implementation.* The statement went on to say that *We must be careful not to try to extend States obligations beyond those established by the Convention itself. For any obligation to become mandatory it requires to be legally elaborated. In this sense, several delegations here have mentioned their interest in a verification mechanism similar to the one which exists under the Chemical Weapons Convention. Are we prepared to negotiate such an extremely detailed and complex system? I thus reiterate the need for the development of effective national legislation, programs and other measures in order to best*

fulfill the obligations we all have under this Convention as it stands. The statement then went on to describe the various measures being taken by Brazil in regard to the topics being considered at this Meeting of Experts.

[www.unog/bwc accessed on 18 December 2008 shows that Brazil has not submitted a CBM in 2008]

NGO Informal Session

As this completed the list of States Parties wishing to make a statement on the first day of the Meeting of States Parties, the Chairman then suspended the afternoon session in order to reopen the meeting in informal session to enable NGOs to make short statements. Statements were made by the following nine NGOs:

- University of Bradford, Department of Peace Studies – Graham S. Pearson
- The INES Working Group on Biological and Toxin Weapons Control – Kathryn Nixdorff
- Pax Christi International – Trevor Griffiths
- VERTIC (Verification Research, Training and Information Centre) – Rocio Escauriaza
- London School of Economics of the University of London – Filippa Lentzos
- Research Group for Biological Arms Control, University of Hamburg – Iris Hunger
- BioWeapons Prevention Project – Kathryn McLaughlin
- Biosecurity Working Group of the InterAcademy Panel on International Issues – Jo Husbands
- Landau Network - Centro Volta and University of Bradford – James Revill

Side Events

There were a number of side events during the Meeting of States Parties – some at lunchtime and others from 0900 to 1000 am prior to the morning session. The side events were as follows:

Monday 1 December 2008: Lunchtime Seminar: VERTIC and the BWPP entitled '*National Implementation and Universalization*' with presentations from Scott Spence (VERTIC) on '*National Implementation Measures for the BWC*' and Kathryn McLaughlin (BWPP) on '*Universalization of the BWC*'.

Tuesday 2 December 2008: Morning Seminar 0900-1000: VERTIC presentation in French on '*National Implementation Measures for the BWC*' [this was the same presentation that had been given in English at lunchtime on Monday].

Tuesday 2 December 2008: Lunchtime Seminar: Geneva Forum entitled '*Preparing the Ground for the CBM Content Debate: What Information Builds Confidence?*'. Presentations were made by Richard Lenanne (Implementation Support Unit) providing an overview of the role of the ISU in relation to CBMs; Filippa Lentzos (LSE) addressing the quality of current CBM information; and Reto Wollenmann (Switzerland), speaking on behalf of Ambassador Jurg Streuli, who outlined a longer-term perspective on CBMs.

Wednesday 3 December 2008: Morning Seminar 0900-1000:

American Association for the Advancement of Science (AAAS), the Landau Network-Centro Volta (LNCV) and the University of Bradford Disarmament Research Centre (BDRC) entitled an '*International Panel on Biosecurity Education*'. Presentations were made by Giulio Mancini (LNCV) and James Revill (BDRC) entitled '*Project on Biosecurity Education in Europe*', Jennifer Sta.Ana (AAAS) on '*Professional and Graduate-Level Programs on Dual Research and Biosecurity in the US*', and Simon Whitby (BDRC) on '*Developing Biosecurity Education Materials*'.

Wednesday 3 December 2008: Lunchtime Seminar. United Nations Interregional Crime and Justice Research Institute (UNICRI). This seminar did not take place which was most unfortunate as events consequently had to be scheduled for the pre-morning session which was not as well attended.

Thursday 4 December 2008: Morning Seminar 0900-1000: Barry Kellman (DePaul University) presentation on '*Preventing Bioviolence*'.

Thursday 4 December 2008: Morning Seminar 0900-1000: VERTIC presentation in Spanish on '*National Implementation Measures for the BWC*' [this was the same presentation that had been given in English at lunchtime on Monday].

Thursday 4 December 2008: Lunchtime Seminar: United Nations Institute for Disarmament Research (UNIDIR) in association with the delegation of France entitled '*Universalization of Confidence-Building Measures in the Biological Weapons*'. Opening remarks were made by Christine Agboton Johnson (UNIDIR) and Sophie Moal-Makame (France). Presentations were given by Ngoc Phuong Huynh (ISU) on '*Successes and Challenges in Current CBMs*', Filippa Lentzos (BIOS Centre, London School of Economics) on '*Global Trends in the Content of Information Exchanged*', Angela Woodward (VERTIC) on '*Reaching a Tipping Point: Achieving the Universalization of the CBMs in the BWC*'. Elisande Nexon (Fondation pour la Recherche Stratégique) acted as a discussant.

General Debate: Morning Session, Tuesday 2 December 2008

The Chairman opened the session on Tuesday by inviting Lisa Garin-Michaud of the INTERPOL Bioterrorism Prevention Programme to make a statement describing the activities of the programme, which began in 2004 and is funded until 2011 by the Arthur P. Sloan Foundation. The presentation said that *For bioterrorism prevention, INTERPOL's goals have been (1) to raise awareness within the law enforcement community as to the bioterrorism threat; (2) to bring the public health and police communities closer together and (3) to provide the police community with the relevant training to help them identify potential bioterrorism risks before attacks occur.* It then went on to note that regional awareness-raising workshops had been conducted *in Africa, Southeast Asia, South America, Eastern Europe & Central Asia and in the Middle East. These workshops gathered a total of 361 delegates from 114 countries, including senior police officers and government representatives. They have helped us understand the issues that our*

Member Countries face in terms of resources and infrastructure issues and to develop tools and services for improved training. It went on to say that *We have created a Bioterrorism Resource Centre which we make available on our public website. The Resource Centre gives information on the activities undertaken by the INTERPOL Bioterrorism Prevention Programme and offers a comprehensive range of information and Web links to agencies and institutions dealing with bioterrorism issues in general. We are currently developing E-learning modules in order to extend our training reach to law enforcement and others around the world. We also developed a "Bioterrorism Incident Pre-Planning and Response Guide" which is available in our four official languages and is accessible on our public website. It contains general information on bioterrorism prevention and response and is currently being updated to include specific references to biosecurity issues and to bio-forensics' investigations. The development and revision of the guide have benefitted from the technical advice of experts from agencies such as the Australian Federal Police and the Australian New South Wales Police, the FBI, the US Centre for Disease Control and Prevention, Sandia National Laboratories, the United Kingdom Metropolitan Police and the World Health Organization.* It continued to describe the 'train the trainer' sessions and the table-top exercises that had been carried out by INTERPOL and concluded by looking ahead to future activities:

1. *As you may know, the UN Global Counter-Terrorism Strategy issued in 2006 invited the UN system to develop, together with its Member States, a single comprehensive database on biological incidents. That same strategy asked the UN to ensure that its database be complementary to the contemplated INTERPOL Biocrimes database. We are working with the United Nations Office of Disarmament Affairs to make sure that this happens.*
2. *INTERPOL will also develop a Bioterrorism Preparedness Curriculum which we will encourage national police academies to use in training their police. The curriculum will be translated into INTERPOL's four official languages.*
3. *INTERPOL also has ambitious plans of rotating more police officers through its Bioterrorism Prevention Unit, bringing their added expertise to the unit and then returning home with even greater expertise to share with their national colleagues in building their own programmes.*

A further statement was made by a State Party, **Kenya**, in which it was noted that *In the face of rapid advances in life sciences, this meeting's agenda, covering national, regional and international measures to improve Bio-safety and Bio-security are crucial in our efforts to ensure that biological agents are not misused.* The statement went on to describe the activities being undertaken by Kenya in relation to the topics being considered at this Meeting of States Parties.

[www.unog/bwc accessed on 18 December 2008 shows that Kenya has not submitted a CBM in 2008]

Working Session: Morning Session, Tuesday 2 December 2008

The meeting then went into closed session to consider Agenda item 6 *Consideration of national, regional and international measures to improve biosafety and biosecurity, including laboratory safety and security of pathogens and toxins.* The morning session had been scheduled in the adopted provisional programme to consider *Concepts and approaches* whilst the afternoon session was to consider *Building capacity and Risk management*. In the event, the afternoon session was cancelled as only one State Party, the United States, had asked to speak and this was held over until the Wednesday morning session.

Working Session: Morning Session, Wednesday 3 December 2008

The morning session began with the **Chairman** describing his participation in a meeting "*Sustaining Progress in the Life Sciences: Strategies for Managing Dual Use Research of Concern*" held in Bethesda, Maryland, USA on 5-7 November 2008. This was hosted by the US National Science Advisory Board for Biosecurity and co-sponsored by the US government and the WHO. The meeting examined strategies for managing the oversight of dual use life sciences and for fostering international awareness and engagement on this issue. The Chairman outlined *a few key concepts that were covered by the meeting that I think will assist us in our efforts today:*

- *To fully realize the benefits that scientific progress can offer, we must be sure that scientists are taking every reasonable measure to assess and mitigate any risks associated with their work.*
- *We can identify a range of different risks and threats - from the entirely natural, through the accidental or unforeseen to deliberate acts. To deal with different risks we also need a spectrum of management strategies, suited to the local context.*
- *We must also not forget the importance of perceived risk and the resulting need for strong risk communication.*
- *We must consider how existing frameworks can be employed to manage dual use research of concern - not only will this ensure the efficient use of resources, but will further awareness-raising efforts and mitigate negative perceptions of efforts to deal with dual-use issues.*
- *Our efforts on awareness raising, training and education can be developed further - at the meeting I heard calls to move to a broader dialogue - across scientific disciplines, at all levels of training and professional development, and beyond the scientific community.*
- *Discussion on codes of conduct and the development of a culture of responsibility seemed to endorse our efforts on these topics - both this year and in 2005. I did, however, recognise that we might still need to consider how to make this issue a higher priority amongst scientists, thereby improving buy-in.*
- *There were also calls for a richer, full life-cycle of review of science, one that covers legal, ethical, safety and security aspects from project design right the way through to the publication of results.*

- *On the issue of the publication of results, participants thought it important to ensure that there is a consistent approach in use across different publications. Existing efforts might need to be developed to define an appropriate review process, provide instructions to authors as well as to manuscript reviewers for the identification and management of risks.*
- *Finally, I left the meeting convinced we must continue our efforts to build a community that is both interested in, and an active partner for, efforts to balance the benefits of modern biology against its potential for hostile use.*

The **United States** then made a presentation on its Biosecurity Engagement Program (BEP) which had been held over from the Tuesday afternoon (this presentation is available on the unog.ch/bwc website).

The Chairman then suspended the formal meeting to enable two presentations to be made on synthetic biology by:

- Stephen Maurer, of the Goldman School of Public Policy, University of California, Berkeley entitled '*Grassroots Biosecurity Initiatives*'
- Markus Fischer of the Industry Association Synthetic Biology entitled '*Industry Association Synthetic Biology*' (IASB)

At about noon, the meeting moved into closed session to consider Agenda Item 7: *Consideration of oversight, education, awareness raising, and adoption and/or development of codes of conduct with the aim of preventing misuse in the context of advances in bio-science and bio-technology research with the potential of use for purposes prohibited by the Convention.*

Working Session: Thursday 4 December 2008

The morning session began with consideration of the next agenda items: Agenda Item 8 *Reports from the Chairman and States Parties on universalization activities* and Agenda Item 9 *Report of the Implementation Support Unit (including report on participation in the confidence-building measures)*. The Chairman's report on universalization (BWC/MSP/2008/4 dated 28 November 2008) notes that *The Convention currently has 162 States Parties, with 13 Signatories and 20 states having neither signed nor ratified. A total of 33 states are not party to the Convention. Of these, eight states are reported to be well advanced in the ratification process, and a further three are reported to have begun the process.* The eight States reported to be well advanced in the ratification process are Burundi, Cameroon, Comoros, Cook Islands, Kiribati, Mozambique, Myanmar, and Tuvalu whilst the three reported to have begun the process are Côte d'Ivoire, Namibia, and Nepal. This report of some ten pages provides much more detail than previous reports on universalization and will provide a useful baseline against which further progress can be reported in 2009 and subsequent years.

The Report of the ISU (BWC/MSP/2008/3 dated 28 November 2008) is a 23-page report set out in four sections dealing with each area of the ISU's mandate to: provide administrative support for the Convention; facilitate its

implementation; support the Confidence-Building Measures (CBMs); and assist the Chair and States Parties in their efforts to promote universalization. In regard to CBMs, the report records that *As of 1 November 2008, 60 states (37 per cent of States Parties) had submitted CBMs to cover the calendar year 2007, down slightly from the total of 65 last year. Of these, 27 submitted their CBM on or before the deadline of 15 April 2008. Four States Parties submitted CBMs for the first time: Azerbaijan, Bahrain, Indonesia and Kazakhstan. Thirteen States Parties which submitted CBMs in 2007 have not yet done so in 2008.* An analysis of the information provided in Annex II to the ISU report shows that the 13 States Parties which submitted CBMs in 2007 and which have not, as of 1 November 2008, submitted CBMs in 2008 are Austria, Bangladesh, Brazil, Brunei Darussalam, India, Jordan, Kyrgyzstan, Luxembourg, San Marino, Senegal, Serbia, South Africa and Tunisia.

The afternoon session moved on to consider the draft report of the meeting. A draft of the procedural paragraphs (BWC/MSP/2008/CRP.1) had been circulated to the Meeting of States Parties on Wednesday and a draft of the substantive paragraphs was circulated as a Chairman's paper at the start of the afternoon session. A further draft of these substantive paragraphs was circulated as a Chairman's paper at the end of the afternoon session.

Friday 5 December 2008

The meeting first met in a working session to further consider the draft report of the meeting. The Chairman circulated at 10.00am a further Chairman's paper containing language for paragraphs 9 and 10 of the draft report detailing the States Parties and Signatory States which had participated in the Meeting of States Parties.

Outcome of the Meeting of States Parties

During the Meeting of States Parties, 6 Working Papers were submitted: two on behalf of the European Union (WP.1 and WP.4), one on behalf of the NAM (WP.2) and one each by Germany (WP.3), Pakistan (WP.5) and Switzerland (WP.6). The EU working papers addressed *Dual-Use Awareness and Oversight under the Seventh Framework Programme of the European Community for Research, Technological Development and Demonstration Activities (2007-2013)* [WP.1] and the European initiatives for universalization of the Biological Weapons Convention *Les Initiatives de l'Union Européenne en Soutien a la Mise en Ouvre et a l'Universalisation de la Convention Sur l'Interdiction des Armes Biologiques (CIAB), Y Compris les Aspects de Bio-Sécurité et Bio-Sûreté* [WP.4]. The NAM working paper addressed *Capacity Building and Promotion of International Cooperation in the Field of Biosafety and Biosecurity* [WP.2], whilst the one by Germany addressed the *IASB Code of Conduct [Draft]* [WP.3], the one by Pakistan addressed *Perspective on Oversight, Codes of Conduct, Education and Awareness Raising* [WP.5] and that by Switzerland addressed *Preparing the Ground for the CBM Content Debate: What Information Builds Confidence?* [WP.6].

The concluding paragraphs of the Swiss working paper show how Switzerland is preparing the ground for the debate at the Seventh Review Conference in 2011:

15. While States Parties agreed on steps to improve the institutional, ISU-related context of the CBM submission mechanism at the 2006 Review Conference, the next Review Conference, in 2011, will give States Parties an opportunity to further revise the content and operation of the mechanism. Switzerland believes the preparatory process for such a debate should to take place on three levels:
16. First and foremost, it is important that States Parties have a common understanding of the challenges ahead. Discussions at the 2006 Review Conference showed how difficult it was to agree on solutions during an already packed agenda. In 2006 it was clear that there was no common understanding of what the challenges with the CBM mechanism were. Switzerland believes that providing key findings like the ones in the study described in this Working Paper as well as the ones from our 2007 study on CBMs (BWC/MSP/2007/MX/WP.10 and BWC/MSP/2008/MX/WP.5) is essential for preparing the debate to come.
17. Second, in order to prepare for 2011, it will be essential to involve a wide range of States Parties to generate the political will to approach the challenges of the CBM mechanism. It is therefore important to sound out the views and concerns that States Party may have as soon as possible. The study has been a useful way of including and interacting with States of different sizes and in different regions. Switzerland tried to find an uncontroversial way to talk about the content of the CBMs, and through this process prepare common ground for consensus solutions.
18. Lastly, Switzerland believes that national experts dealing with both the collation and analysis of CBMs must be included in the preparatory process from the very beginning. Their views are crucial to understanding the operational strengths and weaknesses of how the CBM mechanism functions today.
- Substantive Paragraphs in the Final Report**
- As already noted, the Chairman provided a first set of substantive paragraphs in his paper circulated at the start of the Thursday afternoon session. This comprised eleven paragraphs as follows:
19. Having considered national, regional and international measures to improve biosafety and biosecurity, and recognising the need to take into account respective national circumstances and legal and regulatory processes, States Parties noted their common understanding that in the context of the Convention, biosafety refers to principles, technologies, practices and measures implemented to prevent the accidental release of, or unintentional exposure to, biological agents and toxins, and biosecurity refers to the protection, control and accountability measures implemented to prevent the loss, theft, misuse, diversion or intentional release of biological agents and toxins and related resources as well as unauthorized access to, retention or transfer of such material.
20. Recognising that biosafety and biosecurity measures contribute to prohibiting and preventing the development, acquisition or use of biological and toxin weapons and are an important means of implementing the Convention, States Parties agreed on the value of:
- (i) National governments taking the leading role, including by nominating a lead agency (or focal point), specifying mandates for participating departments or agencies, ensuring effective enforcement and regular review of relevant measures, and integrating such concepts into relevant existing national and regional arrangements, such as legislative and regulatory frameworks, education or training programmes;
 - (ii) National authorities defining and implementing biosafety and biosecurity concepts in accordance with relevant national laws, regulations and policies, consistent with the provisions of the Convention and taking advantage of existing guidance and standards, such as those produced by the OECD, OIE and WHO;
 - (iii) National governments, supported by other relevant organisations as appropriate, using tools such as: accreditation, certification, audit or licensing for facilities, organizations or individuals; requirements for staff members to have appropriate training in biosafety and biosecurity; mechanisms to check qualifications, expertise and training of individuals; national criteria for relevant activities; and national lists of relevant agents, equipment and other resources.
 - (iv) Using risk assessments to avoid unduly restricting the pursuit of the biological sciences for peaceful purposes and to ensure that measures taken are adapted for local needs, and appropriate for the organisms being handled and the work being undertaken;
 - (v) Applying risk management strategies to ensure measures adopted are practical, sustainable, enforceable, cover the full life cycle of relevant resources, are readily understood and are developed in concert with stakeholders;
 - (vi) Building networks between scientific communities and academic institutions and increasing interaction with specialist national and regional associations and working groups, including through dedicated workshops, seminars, meetings and other events, modern information technologies, and risk communication strategies and tools;
 - (vii) The Implementation Support Unit, in accordance with its mandate, facilitating networking activities, maintaining lists of relevant contacts and acting as a clearing house for opportunities for international cooperation and assistance on biosafety and biosecurity.
21. States Parties recognised that achieving necessary standards in the field of biosafety and biosecurity requires and is facilitated by international cooperation and strengthening the implementation of Article X of the Convention. States Parties agreed on the value of

taking all possible measures at the national, regional and international levels to build capacity in the fields of biosafety and biosecurity as well as cooperative mechanisms to overcome obstacles to improving biosafety and biosecurity worldwide. States Parties noted that such measures would contribute to efforts to mitigate and prevent natural and accidental disease outbreaks and would also assist States in meeting their obligations under UNSCR 1540 and the World Health Organization's International Health Regulations.

22. States Parties encouraged those States Parties in a position to do so to provide assistance, upon request, to other States Parties to enact and improve national legislation to implement biosafety and biosecurity; to strengthen laboratory infrastructure, technology, security and management; to conduct courses and provide training; and to help incorporate biosafety and biosecurity in existing efforts to address emerging or re-emerging diseases. States Parties noted that relevant assistance is currently available bilaterally and regionally, as well as through international organisations, and encouraged those seeking assistance to make use of existing offers to the fullest extent possible.

23. Having considered the oversight of science, States Parties recognised the value of developing national frameworks to prohibit and prevent the possibility of biological agents or toxins being used as weapons, including measures to oversee relevant people, materials, knowledge and information, in the private and public sectors and throughout the scientific life cycle. Recognising the need to ensure that such measures are proportional to risk, do not cause unnecessary burdens, are practical and usable and do not unduly restrict permitted biological activities, States Parties agreed on the importance of involving stakeholder communities in all stages of the design and implementation of oversight frameworks. States Parties also noted the value of harmonizing, where possible and appropriate, national, regional and international oversight efforts.

24. States Parties recognized the importance of ensuring that those working in the biological sciences are aware of their obligations under the Convention and relevant national legislation and guidelines, have a clear understanding of the content, purpose and foreseeable social, environmental, health and security consequences of their activities, and take an active role in addressing the threats posed by biological weapons. States Parties noted that formal requirements for mandatory components, seminars, modules or courses in relevant scientific and engineering training programmes and continuing professional education could assist in raising awareness and in implementing the Convention.

25. States Parties agreed on the value of education and awareness programmes:

- (i) Explaining the risks associated with the malign use of the biological sciences and biotechnology;
- (ii) Covering the moral and ethical obligations incumbent on those using the biological sciences;
- (iii) Providing guidance on the types of activities which could be contrary to the aims of the Convention and relevant national and international laws and regulations;
- (iv) Being supported by accessible teaching materials, train-the-trainer programmes, seminars, workshops, publications, and audio-visual materials;
- (v) Targeting, as a priority, senior scientists with responsibility for oversight of research or for evaluation of projects or publications;
- (vi) Addressing, over the longer term, future generations of scientists with the aim of building a culture of responsibility; and
- (vii) Being integrated into existing efforts at the international, regional and national levels.

26. Having considered codes of conduct, States Parties agreed that such codes can complement national legislative, regulatory and oversight frameworks and help guide science so that it is not misused for prohibited purposes. States Parties recognised the need to further develop strategies to encourage stakeholders to voluntarily develop, adopt and promulgate codes of conduct in line with the common understandings reached by the 2005 Meeting of States Parties.

27. With respect to both topics of the Meeting, States Parties recognised the need for proportional measures, for carefully assessing risks, for balancing security concerns against the need for nurturing research and ensuring the peaceful development of biological science and technology, and for taking individual and local circumstances into account. States Parties recognised the important role that can be played by a range of stakeholders, including researchers and other professionals in the life sciences; editors and publishers of life science publications and websites; and organizations, institutions, government agencies, and private companies that conduct, license, fund, facilitate, inspect or evaluate life sciences research or education, and any other legal entity that is involved in the stockpiling, transport or use of biological agents, toxins or other resources relevant to the Convention.

27 bis. To build a sense of ownership among these stakeholders, States Parties noted the importance of balancing "top-down" government or institutional controls with "bottom-up" oversight by scientific establishments and scientists themselves. Having noted the rapidly evolving nature of the biological sciences, States Parties recognised the importance of regularly reviewing the relevance of scientific and technological developments and the necessity of strengthening ties with the scientific community. States Parties welcomed the important contributions made to their work by the

scientific community and academia, including national and international academies of science and professional associations, as well as industry-led initiatives to address recent developments in science and technology.

27. *ter.* The States Parties further considered that in pursuing the above understandings and actions, States Parties could, according to their respective circumstances and constitutional and legal processes, take into account the considerations, lessons, perspectives, recommendations, conclusions and proposals drawn from the presentations, statements, working papers and interventions made by delegations on the topic under discussion at the Meeting of Experts, as contained in Annex I of the Report of the Meeting of Experts (BWC/MSP/2008/MX/3), as well as the synthesis of these considerations, lessons, perspectives, recommendations, conclusions and proposals contained in BWC/MSP/2008/L. 1, which is attached to this report as Annex I. This annex was not agreed upon and consequently has no status.

A further draft of the substantive paragraphs was issued at the end of the afternoon session on Thursday 4 December 2008, which was contained various changes from the first draft. The changes are indicated in the version provided below:

19. Having considered national, regional and international measures to improve biosafety and biosecurity, and recognising the need to take into account respective national circumstances and legal and regulatory processes, States Parties noted their common understanding that in the context of the Convention, biosafety refers to principles, technologies, practices and measures implemented to prevent the accidental release of, or unintentional exposure to, biological agents and toxins, and biosecurity refers to the protection, control and accountability measures implemented to prevent the loss, theft, misuse, diversion or intentional release of biological agents and toxins and related resources as well as unauthorized access to, retention or transfer of such material.

20. Recognising that biosafety and biosecurity measures contribute to **preventing** ~~prohibiting~~ the development, acquisition or use of biological and toxin weapons and are an **appropriate** ~~important~~ means of implementing the Convention, States Parties agreed on the value of:

(i) **National authorities defining and implementing biosafety and biosecurity concepts in accordance with relevant national laws, regulations and policies, consistent with the provisions of the Convention and taking advantage of relevant guidance and standards, such as those produced by the FAO, OIE and WHO;** [previously subpara (iii)]

(ii) National governments taking the leading role, including by nominating a lead agency (or focal point), specifying mandates for participating

departments or agencies, ensuring effective enforcement and regular review of relevant measures, and integrating such ~~measures~~ **concepts** into relevant existing national and regional arrangements, such as legislative and regulatory frameworks, education or training programmes; [previously subpara (i)]

(iii) National governments, supported by other relevant organisations as appropriate, using tools such as: accreditation, certification, audit or licensing for facilities, organizations or individuals; requirements for staff members to have appropriate training in biosafety and biosecurity; mechanisms to check qualifications, expertise and training of individuals; national criteria for relevant activities; and national lists of relevant agents, equipment and other resources.

(iv) **Ensuring measures adopted are practical, sustainable, enforceable, are readily understood and are developed in concert with stakeholders, avoid unduly restricting the pursuit of the biological sciences for peaceful purposes, are adapted for local needs, and appropriate for the agents being handled and the work being undertaken, including through applying risk assessment and risk management strategies.** [combines previous subparagraphs (iv) and (v)]

(v) Building networks between scientific communities and academic institutions and increasing interaction with ~~professional specialist national and regional~~ associations and working groups at the national regional and international level, including through dedicated workshops, seminars, meetings and other events, modern information technologies, and risk communication strategies and tools;

(vi) The Implementation Support Unit, in accordance with its mandate, facilitating networking activities, maintaining lists of relevant contacts, and acting as a clearing house for opportunities for international cooperation and assistance on biosafety and biosecurity, **including through tools such as a database containing information on such opportunities for international cooperation and assistance.**

(vii) **International consultations and cooperation on biosafety and biosecurity at the bilateral, regional and international levels, in particular to overcome obstacles encountered by some States Parties such as inadequate resources and infrastructure, the lack of sufficient technical expertise, availability of appropriate equipment and limited financial resources.**

21. ~~Recalling that the Sixth Review Conference stressed the legal obligation to facilitate and have the right to participate in the fullest possible exchange of equipment, materials and scientific and technological information for the use of bacteriological (biological) agents and toxins for peaceful purposes, States Parties recognised that achieving necessary standards in the field of biosafety and biosecurity requires and is~~

~~facilitated by international cooperation and strengthening the implementation of Article X of the Convention. States Parties recognised agreed on the value of cooperation and assistance to build biosafety and biosecurity capacity, particularly in States Parties in need of assistance in the fields of disease surveillance, detection, diagnosis and combating of infectious diseases and related research. taking all possible measures at the national, regional and international levels to build capacity in the fields of biosafety and biosecurity as well as cooperative mechanisms to overcome obstacles to improving biosafety and biosecurity worldwide. States Parties noted that such measures would contribute to efforts to mitigate and prevent natural and accidental disease outbreaks and would also assist States in meeting their obligations under UNSCR 1540 and the World Health Organization's International Health Regulations.~~

22. States Parties encouraged those States Parties in a position to do so to provide assistance, upon request, to other States Parties to enact and improve national legislation to implement biosafety and biosecurity; to strengthen laboratory infrastructure, technology, security and management; to conduct courses and provide training; and to help incorporate biosafety and biosecurity in existing efforts to address emerging or re-emerging diseases. States Parties noted that **where** relevant assistance is currently available bilaterally and regionally, as well as through international organisations, ~~and encouraged~~ those seeking assistance **are encouraged** to make use of existing offers to the fullest extent possible.

23. Having considered the oversight of science, States Parties recognised the value of developing national frameworks to prohibit and prevent the possibility of biological agents or toxins being used as weapons, including measures to oversee relevant people, materials, knowledge and information, in the private and public sectors and throughout the scientific life cycle. Recognising the need to ensure that such measures are proportional to risk, do not cause unnecessary burdens, are practical and usable and do not unduly restrict permitted biological activities, States Parties agreed on the importance of involving stakeholder communities in all stages of the design and implementation of oversight frameworks. States Parties also noted the value of harmonizing, where possible and appropriate, national, regional and international oversight efforts.

24. States Parties recognized the importance of ensuring that those working in the biological sciences are aware of their obligations under the Convention and relevant national legislation and guidelines, have a clear understanding of the content, purpose and foreseeable social, environmental, health and security consequences of their activities, and **are encouraged to** take an active role in addressing the threats posed by **the potential misuse of biological agents and toxins as**

weapons. biological weapons. States Parties noted that formal requirements for mandatory components, seminars, modules or courses in relevant scientific and engineering training programmes and continuing professional education could assist in raising awareness and in implementing the Convention.

25. States Parties agreed on the value of education and awareness programmes:

- (i) Explaining the risks associated with the **potential misuse malign use** of the biological sciences and biotechnology;
- (ii) Covering the moral and ethical obligations incumbent on those using the biological sciences;
- (iii) Providing guidance on the types of activities which could be contrary to the aims of the Convention and relevant national and international laws and regulations;
- (iv) Being supported by accessible teaching materials, train-the-trainer programmes, seminars, workshops, publications, and audio-visual materials;
- ~~(v) Targeting, as a priority, senior scientists with responsibility for oversight of research or for evaluation of projects or publications;~~
- (v) Addressing **those with responsibility for oversight of research or for evaluation of projects or publications at a senior level, as well as ,over the longer term,** future generations of scientists, with the aim of building a culture of responsibility;
- (vi) Being integrated into existing efforts at the international, regional and national levels.

26. Having considered codes of conduct, States Parties agreed that such codes can complement national legislative, regulatory and oversight frameworks and help guide science so that it is not misused for prohibited purposes. States Parties recognised the need to further develop strategies to encourage stakeholders to voluntarily develop, adopt and promulgate codes of conduct in line with the common understandings reached by the 2005 Meeting of States Parties.

27. With respect to both topics of the Meeting, States Parties recognised the need for proportional measures, for carefully assessing risks, for balancing security concerns against the need **to avoid hindering for nurturing research and ensuring** the peaceful development of biological science and technology, and for taking individual and local circumstances into account. States Parties recognised the important role that can be played by a range of stakeholders, including researchers and other professionals in the life sciences; editors and publishers of life science publications and websites; and organizations, institutions, government agencies, and private companies that conduct, license, fund, facilitate, inspect or evaluate life sciences research or education, and any other legal entity that is involved in the stockpiling, transport or use of biological agents, toxins or other resources relevant to the Convention.

27 bis. To build a sense of ownership among these stakeholders, States Parties noted the importance of balancing “top-down” government or institutional controls with “bottom-up” oversight by scientific establishments and scientists themselves. Having noted the rapidly evolving nature of the biological sciences, States Parties recognised, **within the framework of oversight**, the importance of scientific and technological developments and the necessity of strengthening ties with the scientific community. States Parties welcomed the important contributions made to their work by the scientific community and academia, including national and international academies of science and professional associations, as well as industry-led initiatives to address recent developments in science and technology, **and encouraged greater cooperation between scientific bodies in various States Parties.**

27. ter. The States Parties further considered that in pursuing the above understandings and actions, States Parties could, according to their respective circumstances and constitutional and legal processes, take into account the considerations, lessons, perspectives, recommendations, conclusions and proposals drawn from the presentations, statements, working papers and interventions made by delegations on the topic under discussion at the Meeting of Experts, as contained in Annex I of the Report of the Meeting of Experts (BWC/MSP/2008/MX/3), as well as the synthesis of these considerations, lessons, perspectives, recommendations, conclusions and proposals contained in BWC/MSP/2008/L.1, which is attached to this report as Annex I. This annex was not agreed upon and consequently has no status.

The final version of the substantive paragraphs was adopted on the final morning, Friday 5 December 2008. This contains some changes from the second draft as indicated in the version provided below:

19. With respect to both topics of the Meeting, States Parties recognised the need for proportional measures, for carefully assessing risks, for balancing security concerns against the need to avoid hampering the peaceful development of biological science and technology, and for taking national and local circumstances into account. [Developed from the previous paragraph 27]

20. Having considered national, regional and international measures to improve biosafety and biosecurity, and recognising the need to take into account respective national circumstances and legal and regulatory processes, States Parties noted their common understanding that in the context of the Convention, biosafety refers to principles, technologies, practices and measures implemented to prevent the accidental release of, or unintentional exposure to, biological agents and toxins, and biosecurity refers to the protection, control and accountability measures implemented to prevent the loss, theft, misuse, diversion

or intentional release of biological agents and toxins and related resources as well as unauthorized access to, retention or transfer of such material.¹

¹ This constitutes and understanding and is not a definition of biosafety and biosecurity. It is not binding on States Parties.

21. Recognising that biosafety and biosecurity measures contribute to preventing the development, acquisition or use of biological and toxin weapons and are an appropriate means of implementing the Convention, States Parties agreed on the value of:

(i) National authorities defining and implementing biosafety and biosecurity concepts in accordance with relevant national laws, regulations and policies, consistent with the provisions of the Convention and taking advantage of relevant guidance and standards, such as those produced by the FAO, OIE and WHO;

(ii) National governments taking the leading role, including by nominating a lead agency (or focal point), specifying mandates for participating departments or agencies, ensuring effective enforcement and regular review of relevant measures, and integrating such measures into relevant existing arrangements **at the national, regional and international level**; ~~such as legislative and regulatory frameworks, education or training programmes;~~

(iii) National governments, supported by other relevant organisations as appropriate, using tools such as: accreditation, certification, audit or licensing for facilities, organizations or individuals; requirements for staff members to have appropriate training in biosafety and biosecurity; mechanisms to check qualifications, expertise and training of individuals; national criteria for relevant activities; and national lists of relevant agents, equipment and other resources.

(iv) Ensuring measures adopted are practical, sustainable, enforceable, are readily understood and are developed in concert with national stakeholders,² avoid unduly restricting the pursuit of the biological sciences for peaceful purposes, are adapted for local needs, and appropriate for the agents being handled and the work being undertaken, including through applying appropriate risk assessment and risk management strategies.

² In this report, the term “stakeholders” refers, as appropriate according to national circumstances, to relevant actors such as scientists, researchers and other professionals in the life sciences; editors and publishers of life science publications and websites; and organizations, institutions, government agencies, and private companies acting in life sciences research or education, and any other legal entity that is involved in the stockpiling, transport or use of biological agents, toxins or other resources relevant to the Convention.

(v) Building networks between scientific communities and academic institutions and increasing

interaction with professional associations and working groups at the national regional and international level, including through dedicated workshops, seminars, meetings and other events, **as well as using modern information technologies and appropriate risk communication strategies and tools;**

(vi) ~~International consultations and cooperation on biosafety and biosecurity at the bilateral, regional and international levels, in particular to overcome difficulties obstacles encountered by some States Parties where additional resources, improved infrastructure, additional technical expertise, appropriate equipment and increased financial resources are needed to build capacity. such as inadequate resources and infrastructure, the lack of sufficient technical expertise, availability of appropriate equipment and limited financial resources.~~ [previously subparagraph (vii)]

(vii) The Implementation Support Unit, in accordance with its mandate, facilitating networking activities, maintaining lists of relevant contacts, and acting as a clearing house for opportunities for international cooperation and assistance on biosafety and biosecurity, including through tools such as a database containing information on such opportunities for international cooperation and assistance.

22. States Parties noted that pursuing biosafety and biosecurity measures could also contribute to the fulfilment of their other respective international obligations and agreements, such as the revised International Health Regulations of the WHO, and relevant codes of the World Organisation for Animal Health (OIE). The States Parties recalled United Nations Security Council Resolution 1540 (2004) that places obligations on all states and is consistent with the provisions of the Convention.³

³ See BWC/CONF.VI/6, Part II, paragraph 17.

23. Recalling that the Sixth Review Conference stressed the legal obligation to facilitate and have the right to participate in the fullest possible exchange of equipment, materials and scientific and technological information for the use of bacteriological (biological) agents and toxins for peaceful purposes, States Parties recognised the value of cooperation and assistance to build biosafety and biosecurity capacity, particularly in States Parties in need of assistance in the fields of disease surveillance, detection, diagnosis and combating of infectious diseases and related research.

24. States Parties encouraged those States Parties in a position to do so to provide assistance, upon request, to other States Parties to enact and improve national legislation to implement biosafety and biosecurity; to strengthen laboratory infrastructure, technology, security and management; to conduct courses and provide training; and to help incorporate biosafety and biosecurity in existing efforts to address emerging or re-emerging diseases. States Parties noted that

where relevant assistance is currently available bilaterally and regionally, as well as through international organisations, those seeking assistance are encouraged, as appropriate, to make use of existing offers to the fullest extent possible.

25. Having considered the oversight of science, States Parties recognised the value of developing national frameworks to prohibit and prevent the possibility of biological agents or toxins being used as weapons, including measures to oversee relevant people, materials, knowledge and information, in the private and public sectors and throughout the scientific life cycle. Recognising the need to ensure that such measures are proportional to risk, do not cause unnecessary burdens, are practical and usable and do not unduly restrict permitted biological activities, States Parties agreed on the importance of involving **national stakeholders communities** in all stages of the design and implementation of oversight frameworks. States Parties also noted the value of harmonizing, where possible and appropriate, national, regional and international oversight efforts.

26. States Parties recognized the importance of ensuring that those working in the biological sciences are aware of their obligations under the Convention and relevant national legislation and guidelines, have a clear understanding of the content, purpose and foreseeable social, environmental, health and security consequences of their activities, and are encouraged to take an active role in addressing the threats posed by the potential misuse of biological agents and toxins as weapons, **including for bioterrorism**. States Parties noted that formal requirements for seminars, modules or courses, **including possible mandatory components**, in relevant scientific and engineering training programmes and continuing professional education could assist in raising awareness and in implementing the Convention.

27. States Parties agreed on the value of education and awareness programmes:

- (i) Explaining the risks associated with the potential misuse of the biological sciences and biotechnology;
- (ii) Covering the moral and ethical obligations incumbent on those using the biological sciences;
- (iii) Providing guidance on the types of activities which could be contrary to the aims of the Convention and relevant national ~~and international~~ laws and regulations **and international law**;
- (iv) Being supported by accessible teaching materials, train-the-trainer programmes, seminars, workshops, publications, and audio-visual materials;
- (v) Addressing leading scientists and those with responsibility for oversight of research or for evaluation of projects or publications at a senior level, as well as future generations of scientists, with the aim of building a culture of responsibility;
- (vi) Being integrated into existing efforts at the international, regional and national levels.

28. Having considered codes of conduct, States Parties agreed that such codes can complement national legislative, regulatory and oversight frameworks and help guide science so that it is not misused for prohibited purposes. States Parties recognised the need to further develop strategies to encourage **national stakeholders to voluntarily develop, adopt and promulgate codes of conduct in line with the common understandings reached by the 2005 Meeting of States Parties and taking into account discussions at the 2008 Meeting of Experts.**

29. ~~To build a sense of ownership among these stakeholders, States Parties noted the importance of balancing “top-down” government or institutional controls with “bottom-up” oversight by scientific establishments and scientists themselves. Having noted the rapidly evolving nature of the biological sciences, Within the framework of oversight, States Parties recognised the value of being informed about advances in bio-science and bio-technology research the importance of scientific and technological developments with the potential of use for purposes prohibited by the Convention and the necessity of strengthening ties with the scientific community. States Parties welcomed the important contributions made to their work by the scientific community and academia, including national and international academies of science and professional associations, as well as industry-led initiatives to address recent developments in science and technology, and encouraged greater cooperation between scientific bodies in various States Parties.~~

30. The States Parties further considered that in pursuing the above understandings and actions, States Parties could, according to their respective circumstances and constitutional and legal processes, take into account the considerations, lessons, perspectives, recommendations, conclusions and proposals drawn from the presentations, statements, working papers and interventions made by delegations on the topic under discussion at the Meeting of Experts, as contained in Annex I of the Report of the Meeting of Experts (BWC/MSP/2008/MX/3), as well as the synthesis of these considerations, lessons, perspectives, recommendations, conclusions and proposals contained in BWC/MSP/2008/L.1, which is attached to this report as Annex I. **This annex was not proposed for adoption as an outcome of the Meeting, and therefore was not discussed with that aim. Thus, the This annex was not agreed upon and consequently has no status.**

These substantive paragraphs are followed by a paragraph, unchanged from that in the draft procedural report (BWC/MSP/2008/CRP.1), encouraging States Parties to inform the Seventh Review Conference of the steps that they have taken

31. States Parties are encouraged to inform the Seventh Review Conference of, *inter alia*, any actions, measures or other steps that they may have taken on the basis of the discussions at the 2008 Meeting of

Experts and the outcome of the 2008 Meeting of States Parties, in order to facilitate the Seventh Review Conference’s consideration of the work and outcome of these meetings and its decision on any further action, in accordance with the decision of the Sixth Review Conference (BWC/CONF.VI/6, Part III, paragraph 7 (e)).

Adoption of Final Report

The Meeting of States Parties met for the final time on the morning of Friday 5 December 2008 and at that session agreed their final report, issued as BWC/MSP/2008/5. In addition to the substantive paragraphs as indicated above, the final report contained a paragraph on universalisation and another on the Implementation Support Unit:

32. The Meeting of States Parties reviewed progress towards obtaining universality for the Convention and considered the Report from the Chairman on Universalization Activities (BWC/MSP/2008/4), as well as reports from States Parties on their activities to promote universalization. The States Parties reaffirmed the particular importance of the ratification of the Convention by signatory states and accession to the Convention without delay by those which have not signed the Convention, contributing to the achievement of universal adherence to the Convention. In this context, the Meeting took note of the reports, and called on all States Parties to continue to promote universalization, and to support the universalization activities of the Chairman and the Implementation Support Unit, in accordance with the decision of the Sixth Review Conference.

33. The Meeting of States Parties also considered the Report of the Implementation Support Unit (BWC/MSP/2008/3), including the report on participation in the confidence-building measures (CBMs). The Meeting took note of the Report, and expressed its satisfaction with the work of the Implementation Support Unit. The Meeting noted with concern that participation in the confidence-building measures had fallen slightly since 2007, and encouraged all States Parties to make an annual CBM submission in accordance with the decisions of the respective Review Conferences, seeking assistance through the Implementation Support Unit where required. The Meeting called on States Parties to continue working closely with the Implementation Support Unit in fulfilling its mandate, in accordance with the decision of the Sixth Review Conference.

Final Session

Later in the morning of Friday 5 December 2008, the meeting met in plenary session when the UK announced the Cook Islands had completed their ratification of the Convention bringing the number of States Parties to 163. The meeting then went on to adopt the report of the Meeting of States Parties. The final item of business was to decide on the Chairman for the topic in 2009 and for the dates of the Meetings in 2009.

The Chairman for the 2009 meetings nominated by the Western Group is Ambassador Marius Grinius of Canada. The Meeting of Experts will be held on 24-28 August 2009 and the Meeting of States Parties on 7-11 December 2009. The topic for discussion in 2009 is:

With a view to enhancing international cooperation, assistance and exchange in biological sciences and technology for peaceful purposes, promoting capacity building in the fields of disease surveillance, detection, diagnosis, and containment of infectious diseases: (1) for States Parties in need of assistance, identifying requirements and requests for capacity enhancement; and (2) from States Parties in a position to do so, and international organizations, opportunities for providing assistance related to these fields'

Ambassador Grinius thanked the States Parties for endorsing the proposal of the Western Group that he should be Chairman of the meetings in 2009 and said that he would be consulting widely in the New Year with a view to developing a work programme for 2009.

The Chairman then closed the Meeting of States Parties by making some concluding remarks: *I think the work we have done this year has considerably advanced the implementation of the Convention, through promoting effective action on biosafety and biosecurity, and on oversight, education, awareness-raising and codes of conduct. The Meeting of Experts assembled a very impressive array of expertise from a wide range of national and international actors, and produced a wealth of highly relevant material. Then at this Meeting of States Parties, we have succeeded in refining and structuring that material into a package that clearly and concisely records our common understandings, and which will serve as a useful reference to all those – both governments and other actors – who have an interest in taking effective measures in areas related to our two topics.*

As States Parties, I believe we can be satisfied that we are taking the right steps to strengthen the Convention in these areas, in concert with a range of relevant partners. I have been impressed by the strength of common purpose exhibited throughout our work this year. Delegations from across the geographic and political spectrum have worked together in a positive and collegial atmosphere to focus on practical measures, and to strengthen partnerships with other relevant actors.

One highlight of our work this year has been the degree of involvement of the scientific community. As Chairman, I have been privileged to have had the opportunity to collaborate with scientific and professional organizations right from the start of my Chairmanship – when I participated in the 2nd International Forum on Biosecurity in Budapest in March – until the very end, when I will travel this weekend to Beijing to participate in a conference organized by the Chinese Academy of Sciences, and will report on our work here this week. In between, I participated in a range of scientific and academic conferences, in Wilton Park, in Bethesda, in Jakarta, in Como and here in Geneva. I have met a wide range of scientists and professionals from many countries, and I am delighted with the highly positive contribution

they have made to our work. I am also grateful for the support and helpful advice they have given me.

I am pleased too with the progress we have made with engagement with industry. Three important biotechnology and pharmaceutical companies participated in the Meeting of Experts, and this week we heard about the very promising practical measures for screening being undertaken by the Industry Association of Synthetic Biology (IASB). I encourage States Parties to continue to develop links with the scientific community and industry, to give due recognition and credit to their efforts to support the aims of the Convention, and to encourage them to build on and expand these efforts in cooperation with the States Parties.

The Meeting was then closed.

Reflections

The Meeting of States Parties with about 490 participants had almost as many as the over 500 at the Meeting of Experts in August 2008. There was participation by one more State Party. As the Chairman said in his concluding remarks *Delegations from across the geographic and political spectrum have worked together in a positive and collegial atmosphere to focus on practical measures, and to strengthen partnerships with other relevant actors.* The general climate at the Meeting of States Parties was again very positive and constructive and it was evident that the Meeting of States Parties had indeed achieved the aim set out by the Chairman in his opening remarks of achieving *refinement, structure and focus.* The outcome as recorded in the 12 substantive paragraphs in the Final Report was more focused and set out useful concepts relating to biosafety, biosecurity, oversight, education, awareness-raising and codes of conduct. It was, however, evident that the emphasis throughout was that the lead should be taken by national authorities and national governments in accordance with national circumstances with care being taken that there should be no 'one size fits all' event though it should be apparent that national standards can and should be harmonized to the extent possible internationally thereby maximising the benefits for peace and security for all States Parties. The substantive paragraphs included a useful clarification of the terms 'biosafety' and 'biosecurity', although constrained to within the context of the Convention – and provided with a footnote to the effect that *This constitutes an understanding and is not a definition of biosafety and biosecurity. It is not binding on States Parties.* This constraint and definition shows an unwillingness by some States Parties to maximize the benefits from working together with all those organizations concerned with biosafety and biosecurity.

It was also noteworthy that the importance of maintaining an awareness of developments in science and technology was clearly recognized in the Chairman's first draft: *Having noted the rapidly evolving nature of the biological sciences, States Parties recognised the importance of regularly reviewing the relevance of scientific and technological developments and the necessity of strengthening ties with the scientific community.* However, this unfortunately did not survive unchanged and emerged with the qualification 'within the framework of oversight' in the final wording: *Within*

the framework of oversight, States Parties recognised the value of being informed about advances in bio-science and bio-technology research with the potential of use for purposes prohibited by the Convention and the necessity of strengthening ties with the scientific community. This final wording also was less than it had been in the penultimate draft when the broader language States Parties recognized ... the importance of scientific and technological developments ... was weakened by unnecessarily introducing 'research' and also limiting such research to that 'with the potential of use for purposes prohibited by the Convention' to arrive at the final wording of States Parties recognised the value of being informed about advances in bio-science and bio-technology research with the potential of use for purposes prohibited by the Convention.

A very useful step forward was shown by a number of States Parties and by the message from the UN Secretary-General looking ahead to the Seventh Review Conference in 2011. On a number of occasions it was recognized that the States Parties were halfway through the intersessional process – and that it was timely to start thinking ahead to what might be considered at the Seventh Review Conference.

Of particular value are the steps being taken by Switzerland to focus attention now on how best the Confidence-Building Measures might be strengthened and made more effective at the Seventh Review Conference. As Switzerland correctly pointed out in their working paper (WP. 6): *First and foremost, it is important that States Parties have a common understanding of the challenges ahead. Discussions at the 2006 Review Conference showed how difficult it was to agree on solutions during an already packed agenda. In 2006 it was clear that there was no common understanding of what the challenges with the CBM mechanism were. Switzerland has clearly appreciated that, for progress to be made in improving the CBM mechanism, it is necessary now to prepare the groundwork for its consideration at the Seventh Review Conference. The seminar on CBMs held during the Meeting of States Parties with the support of the French Government shows that other States Parties are interested in achieving an improved CBM process at the Seventh Review Conference and it is to be hoped that such States Parties will take the opportunity at subsequent intersessional meetings to submit working papers on how they would like to see the CBM process improved.*

In addition, the Swiss working papers at both the Meeting of States Parties and at the Meeting of Experts in August provide an excellent **model** which should be followed by any State Party wishing to see substantive progress made at the Seventh Review Conference as new ideas put forward at the Review Conference itself are unlikely to find consensus.

It was also noted that several statements referred to the importance of strengthening the effectiveness and improving the implementation of the Convention. The statement delivered on behalf of the UN Secretary-General specifically encouraged States Parties to start thinking ahead now to the Seventh Review Conference and said:

I also urge you to begin thinking about additional steps that could be taken at the next review conference. You might consider how to increase membership, and how to further develop the implementation support unit. You might also explore the potential for further multilateral

cooperation in the fields of verification, compliance and enforcement of the Convention.

It is notable that some 9 States Parties (Cuba (on behalf of the NAM), Turkey, Russia, Iran, India, Pakistan, Chile, Algeria and Brazil, Iran, India, Morocco, Russia, Algeria and Pakistan) out of the 24 who made statements in the General Debate referred to the importance of a legally binding compliance mechanism. The statement made by Russia was of particular interest:

With the Seventh Review Conference to be held in 2011, the substantive preparations for it to be a success should start now. Real practical measures to strengthen the role of the BWC as a reliable barrier against the development, production and use of biological and toxin weapons are to be developed. We have no doubt in doing so one must make the full use of the valuable experience accumulated in the past by VEREX and the Ad Hoc Group. However, seven years have elapsed since the suspension of multilateral negotiations to develop a legally binding instrument of verification. All this time scientific knowledge has been rapidly advancing. If the future verification mechanism is to encompass all relevant S & T, then this work, vitally important for the success of the Convention, ought to be resumed at the earliest. The emerging favourable environment may encourage us as we make this new attempt.

We are aware of the still circulating opinion that the BWC is inherently unverifiable, and the adoption of an ineffectual verification protocol will create a false sense of security without solving the problem of monitoring compliance. One may recall that the same objection had been raised in the past regarding the Chemical Weapons Convention, which, in the assessment of all its States parties, possessing powerful verification provisions successfully faces the challenges of the prohibition of chemical weapons. It is understandable that verification in multilateral arms control and disarmament may not fully guarantee compliance. However, it is difficult to deny that these verifiable treaties and conventions are the cornerstones of international security and ensure predictability, stability and strengthen confidence among participating nations. We are convinced that the BWC with verification is better off than without it. It is our firm belief that effective non-discriminatory verification mechanism is feasible and as such should be developed and adopted.

The language was much more constructive than in previous statements which had appeared to suggest a resumption of the negotiations from where they had finished.

It is very much to be hoped that the States Parties which have expressed a view about the importance of effectively strengthening and improving the implementation of the Convention will follow the example of Switzerland and submit working papers to prepare the ground for the debate at the Seventh Review Conference. It is, however, not a topic that should only be considered by the States Parties which have

made recent statements. It should also be considered by those States Parties who have long demonstrated their support for strengthening and enhancing the Biological and Toxin Weapons Convention – such as the European Union, the JACKSNNZ group and the group of Latin American states. Ideally such a group of States Parties could develop a Working Paper for submission at the forthcoming intersessional meetings or alternatively this could be done by one or more individual States Parties – such as Australia, Canada, Japan, Norway, South Africa, Sweden or Switzerland. The sooner that such a Working Paper is put forward the better, as it will enable other States Parties to consider the concept and for ideas to be formulated and developed.

The www.unog.ch/bwc website created by the ISU is proving to be very useful. They are to be complimented for the material that is posted both prior to, during and after the Meetings – of particular value are the statements made by

States Parties in the order in which they are presented to the Meetings, together with the Chairman's remarks at the start, during and at the end of the Meetings.

Overall the Meeting of States Parties had a successful outcome that continued the momentum created by the successful outcome of the Sixth Review Conference, and it usefully started to look forward towards the Seventh Review Conference in 2011. It is to be hoped that States Parties will follow the example of Switzerland and submit working papers in 2009 setting out their ideas as to how the key issues to be considered at the Seventh Review Conference can best be addressed. This will help to ensure a successful outcome in 2011.

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

News Chronology

May - July 2008

What follows is taken from issue 81 of the Harvard Sussex Program CBW Chronicle, which provides a fuller coverage of events during the period under report here, and also identifies the sources of information used for each record. All such sources are held in the Sussex Harvard Information Bank, which is open to visitors by prior arrangement. For access to the Chronicle, or to the electronic CBW Events Database compiled from it, please apply to HSP Sussex.

May The US National Research Council Committee on Toxicologic and Radiologic Effects from Exposure to Depleted Uranium During and After Combat releases its report. The report reviews the toxicological, radiological, epidemiological, and toxicokinetic data on depleted uranium, and assesses the Capstone Report – released by the Environmental Protection Agency in 2004 – on toxicological and radiological risks to soldiers posed by exposure to depleted uranium. In addition, it considers health-hazard and environmental reports prepared by such bodies as the World Health Organization, the United Nations Environment Programme (regarding the post-conflict situation in the Balkans), the International Atomic Energy Agency, the Agency for Toxic Substances and Disease Registry, and the UK Royal Society. The report also identifies relevant data deficiencies and offers recommendations for future research.

3 May China and the USA are considering conducting joint anti-terrorism drills – possibly including chemical, biological and nuclear ones along the lines of the US-Thailand Cobra Gold annual multilateral war games in Southeast Asia – as part of bilateral military exchanges, so reports Kyodo news agency, quoting an unidentified “US military official”. The proposal for joint drills, which first surfaced during bi-lateral military discussions in Qingdao, China, on 25-26 February, is currently being pursued through diplomatic channels.

3 May In Arkansas, the Pine Bluff chemdemil facility commences the destruction of its stockpile of M23 VX nerve-agent landmines, which marks the beginning of the third of its four phases of chemdemil. The facility destroyed its stockpile of GB nerve-agent-filled rockets three years previously [see 19 May 07] and its stockpile of VX-filled rockets this year [see 29 Feb]. Following the destruction of the VX landmines there will be a changeover period before the destruction of

containers holding mustard gas commences.

Six weeks later, the facility completes the destruction of the landmines. According to the Chemical Materials Agency, the destruction by Pine Bluff of all its VX-filled munitions now means that the Army has safely destroyed approximately 85 per cent of the USA's VX agent stockpile, with only four of the seven remaining storage sites having VX left to be destroyed.

4 May In Abu Dhabi, former US senior adviser to the White House and Secretary of Energy David Heyman gives a lecture at the Emirates Centre for Strategic Studies and Research on the subject of ‘Managing Biological Risks: A Comprehensive, Interdisciplinary and International Approach’. Also speaking at the event is Gerald L Epstein, a senior fellow for science and security at the Centre for Strategic and International Studies.

5-16 May In Helsinki, Finland, a course on the enhancement of skills in analysing chemicals related to the CWC using liquid chromatography-mass spectrometry (LC-MS) takes place at the University of Helsinki [see also 19-30 Mar 07]. The course, which is organized by the Finnish Institute for Verification of the CWC (VERIFIN) with the support of OPCW, is intended for laboratories that are active or plan to become active in the analysis of chemicals related to the CWC and for those that participate or intend to participate in OPCW proficiency testing. On this occasion, the participants come from Bangladesh, Jamaica, Lesotho and the Philippines. The purpose of the course is to improve practical skills in analysing chemicals related to the CWC by focusing on the following elements: preparation of samples; the theory of LC and LC-MS; demonstrations of LC and LC-MS techniques; practical exercises; and quality assurance and maintenance of instruments.

6 May At UN headquarters, Chairman of the 1540 Committee Jorge Urbina, of Costa Rica, briefs the Security Council on the progress made by the Committee during the previous six months [see also 17 Dec 07]. He says that as of 27 April more than 150 of the 192 UN nations had provided information on their laws for preventing acts of WMD terrorism, as required by Security Council resolution 1540 [see 28 Apr 04, 27 Apr 06 and 25 Apr 08]. Of the nations that have completed the mandatory reports, 100 have filed follow-up information on one or more occasions.

6-8 May In Quito, Ecuador, the ninth [see 29-31 May 07] regional meeting of national authorities of Latin American CWC parties takes place. The meeting, which is jointly organized by the government of Ecuador and the OPCW, provides the opportunity for representatives of national authorities to discuss, with each other and with Secretariat personnel, the additional steps each party should take to implement its obligations under the Convention. Bilateral discussions with OPCW experts also take place regarding legal issues and matters relating to declarations, industry and international cooperation. In addition to the national authority of Ecuador, 21 participants from the following 17 CWC parties attend the meeting: Argentina, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominica, El Salvador, Guatemala, Honduras, Mexico, Paraguay, Peru, Spain and Trinidad and Tobago.

7 May In the UK House of Commons, a written question is addressed to the Foreign Secretary asking "whether the investigation conducted into the allegations that UK government officials and scientists had contact with or knowingly provided assistance to any South African chemical and biological weapons programme or persons involved in Project Coast considered the evidence to the Truth and Justice Commission that Wouter Basson used a house in the home counties of England to meet UK scientists and to circumvent the sanctions regime against South Africa". Responding to the question, Minister of State for the Foreign Office Kim Howells says: "The investigation into allegations that the Government was involved in providing information to personnel connected to South Africa's Chemical and Biological Weapons programme considered information from a variety of sources, including evidence given to the Truth and Reconciliation Commission. It was the policy of successive Governments from the mid 1970s to have no military cooperation with South Africa. There was no blanket ban on scientific contacts with South Africa during the apartheid period, though they were discouraged if they might contribute to the support or promotion of apartheid." In response to a follow-up question asked by the same questioner asking exactly when the investigations were held into the allegations of UK assistance to Project Coast or other South African chemical and biological weapons programme, Howells says: "UK investigations were initiated in 1998 and continued into 2001, following allegations made during hearings of the Truth and Reconciliation Commission that the Government was involved in providing information to personnel connected to South Africa's Project Coast. The investigations were thorough and included the relevant Government bodies. There was no evidence to suggest Government officials knowingly provided assistance to any South African Chemical and Biological Weapons programme." [See also 27 Feb]

7 May In Indiana, the Newport chemical facility has now destroyed 90 per cent of its stockpile of VX nerve agent, according to a press release by the Chemical Materials Agency [see also 8 Jan]. The facility's site project-manager Jeff Brubaker says: "We are predicting agent neutralization operations to be completed by summer's end." The destruction

of more than 1,000 tons of liquid warfare agent began two years previously [see 5 May 05]. The press release states that on completion, the facility is expected to spend 18 to 24 months decontaminating equipment and destroying facilities used in the operation.

11 May In Niger, the leader of the Tuareg rebels has accused the Niger Army of using "chemical weapons" against the Nigerians' Movement for Justice to the north of Agadez, according to Al-Jazeera television. In a statement, Aghaly Ag Alambo says that Niger received the weapons from, amongst others, China and Ukraine.

12 May In Oklahoma, a man is charged with possession or transfer of a chemical weapon after allegedly attempting to sell a 25-gallon container of sodium cyanide to an FBI informant. The Associated Press quotes an FBI affidavit as stating that Jeffrey Don Detrixhe, from Texas, said he would sell the cyanide for \$10,000 – together with a thermal imaging device and an AK-47 assault rifle – and that he had suggested hydrochloric acid could be used to convert the cyanide into gas. "I could kill a city with that... euthanize a whole village," Detrixhe was recorded as having said. The affidavit, written by FBI Special Agent John Whitworth, alleges that Detrixhe gave the informant 77 grams of sodium cyanide as a sample so that the buyer could determine whether to purchase the full quantity. For the sample, Detrixhe is said to have accepted \$450.

The next day, a district court orders that Detrixhe be extradited to Texas.

Three months later, Detrixhe pleads guilty to possession of 62 pounds of sodium cyanide. A press release by the Department of Justice states that Detrixhe acknowledged attempting to sell the cyanide and that "he had no peaceful, protective, military or law enforcement purpose for it". Detrixhe face a maximum penalty of life imprisonment and a \$250,000 fine when is sentenced on 12 November. [See also 4 May 04]

12-16 May In Beijing, there is a training course on assistance and protection for CWC parties from the Asia region at the Chemical Defence Institute. Participating in the event, which is jointly organized by the Chinese government and the OPCW, are 24 participants from 17 CWC parties. The course provides training to participants in planning and building a support team in civil protection, civil defence, and decontamination operations in contaminated areas, as well as in appropriate responses and countermeasures in the event of incidents involving chemical warfare agents. It also offers an overview of the type of assistance the OPCW, China and other CWC parties in Asia can provide.

12-16 May In Baku, Azerbaijan, there is a regional assistance and cooperation field exercise involving a coordinated response to a chemical attack. Participating in the exercise, which takes place under the Central Asian countries project that commenced in 2004, are 12 specialists from Kazakhstan, Uzbekistan and Kyrgyzstan, and 16 from Azerbaijan. The event includes presentations on the CWC and a series of table top exercises. The aim of the exercise is to improve cooperation among national response teams in the context of an emergency involving toxic chemicals. The OPCW assisted by providing certain equipment for the exercise.

13 May In Oregon, the Umatilla chemdemil facility has now destroyed one-third of its chemical-agent tonnage and 86 per cent of its total number of munitions, according to the Chemical Materials Agency.

Six weeks later, the facility completes the destruction of

its stockpile of 32,313 155mm artillery projectiles carrying VX nerve agent, having commenced the work three months previously [see 20 Mar]. Following a changeover period, the incineration of 8-inch VX projectiles will commence, followed by the elimination of VX-filled landmines.

14 May In Brussels, the Council of the European Union adopts a *Joint Action in Support of the Implementation of United Nations Security Council resolution 1540* [see 28 Apr 04] and in the Framework of the Implementation of the EU Strategy Against the Proliferation of Weapons of Mass Destruction [see 031212]. The purpose of the Joint Action, which is the second on this subject [see 12 Jun 06], is to further support projects under resolution 1540 by supporting and implementing “a series of thematic workshops in several targeted subregions”. The projects will take the form of six workshops aimed at enhancing the capacity of officials responsible for managing the export control process in the six sub-regions of Africa, Central America, Mercosur, the Middle East and Gulf Regions, Pacific Islands and South-East Asia. The workshops – which will be specifically tailored for border, customs and regulatory officials – will aim at “enhancing the capacity and skills of officials in targeted States who are responsible for managing the export control process”, and “putting officials of targeted States participating in the projects in a position to clearly identify gaps and needs [...] so that effective requests for assistance can be formulated”. The amount allocated for implementing the projects is set at EUR 475 000, to be funded from the general budget of the European Union.

14 May The Spanish Defence Ministry Official Gazette publishes a ministerial ruling that a member of its armed forces, who carried out NBC reconnaissance missions during their service as part of the humanitarian mission in Iraq in 2003, is being pensioned off “as a result of the post-traumatic stress disorder”. The Spanish daily ABC reports that this marks the first time that the government has recognized Gulf War Syndrome. ABC says that Sergeant F.C.S. – who was assigned to the NBC regiment in Valencia and who had served in Iraq for six months – returned from Iraq showing symptoms of stress which ultimately led to his resignation. After a report by a military medical board, it was established that he was not fit to continue with his job.

15 May In Mainz, Germany, the interior minister for the federal state of Rheinland-Pfalz announces in the state assembly that the twenty-year clean-up operation of a factory that made poison-gas shells during the First World War has now been completed. Karl Peter Bruch says the operation had cost EUR 55 million, 10 times as much as budgeted for 20 years ago. The Espagit factory in Hallschlag exploded in 1920 as a result of an accident. At the time an estimated 20,000 poison-gas shells were on the premises. The factory – which manufactured chemical weapons from chlorine, arsenic and phosgene – had no waste-treatment ponds and so disposed of its effluent onto nearby hillsides. The state government has paid engineers to recover the chemicals and old ammunition and to seal the ground with extra topsoil and wire-netting so as to prevent anyone digging up any shells that may have been missed.

19 May Morocco joins the US-led Proliferation Security Initiative – thereby becoming the ninetieth state to endorse the initiative – so reports US Department of State in a press release. [See also 27 Feb]

19 May From OPCW headquarters, the Technical Secretariat releases figures comparing the current status of

national implementation of the CWC under Article VII – with 183 States Parties – as against the status at the time of the adoption of the national implementation action plan on the final day of the eighth Conference of the States Parties [see 20-24 Oct 03] when the CWC had 155 States Parties. The figures are as follows: 176 (96 per cent) have now designated or established a national authority, compared with 126 (81 per cent) in October 2003; 126 (69 per cent) have provided Article VII(5) submissions to the OPCW, compared with 94 (61 per cent) in October 2003; 111 (61 per cent) had provided text of adopted measures, compared with 62 (40 per cent) in October 2003; and 59 (32 per cent) had provided confirmation regarding Article XI(2e) Review, compared with 39 (25 per cent) in October 2003; and 82 (45 per cent) of States Parties implemented legislation that “covers all key areas”, compared with 51 (33 per cent) in October 2003;. [Note: no explanation is given of what is meant by “all key areas”, but the indications are that the Secretariat still does not mean legislation that implements the general purpose criterion.]

19 May In Washington D.C., former Under-Secretary of State for Defense Douglas Feith says that “a serious WMD threat” justified the US-led invasion of Iraq even though it transpired that Iraq did not possess WMD as had at the time been claimed by the Bush administration. Speaking at a press conference to promote his memoirs *War and Decision*, Feith says: “Even based on what we have learned since, even though we didn’t find the WMD stockpiles that the CIA had said we would find in Iraq, what we did find [...] was a serious WMD threat in Iraq because Saddam had maintained programs for biological and chemical weapons.” He says the Bush administration did not intentionally mislead the public in making its case for war, although the incorrect claim that Iraq possessed WMD “was catastrophic to our credibility”. He adds: “It was an honest error, not a lie... Even if you correct for that error, what we found in Iraq was a serious WMD threat.”

19 May The US Congressional Research Service releases *The National Bio- and Agro-Defense Facility: Issues for Congress*. The report outlines current progress towards establishment of the National Bio- and Agro-Defense Facility; presents current and projected funding levels and timelines; and describes policy issues of potential interest to Congress, such as agency coordination, possession of viruses, construction timelines, disposition of the Plum Island Animal Disease Center, and community safety concerns.

20 May Guinea-Bissau deposits its instrument of ratification to the CWC with the UN Secretary-General. In thirty days, Guinea-Bissau will become the 184th [see 4 Dec 07] party to the Convention.

20-21 May In Washington D.C., the Institute of Medicine’s Forum on Microbial Threats hosts a workshop on *Microbial Evolution and co-Adaptation*. The workshop aims to explore existing knowledge and unanswered questions regarding host-microbe relationships. The following themes are discussed: the microbiome and co-evolution; microbial evolution and the emergence of virulence; mechanisms of resistance; and anticipation of future emerging infectious diseases. The workshop is held to honour the scientific and policy contributions made by Dr Joshua Lederberg to the life sciences, medicine, and public policy [see 2 Feb].

21 May In Amman, eight individuals are sentenced to life imprisonment for planning a chemical attack on the US Embassy, the prime minister’s office and the headquarters of Jordan’s intelligence service four years ago [see 13 Apr 04].

The prosecution had described the plan as a “sophisticated plot to set off a cloud of toxic chemicals that could have killed tens of thousands of people”. At their first trial the eight individuals were sentenced to death [see 15 Feb 06], however the sentences were overturned on appeal when it transpired that the prosecutor had been a target of the foiled plot [see 6 May 07]. The first trial involved 13 suspects from Jordan, Syria and Palestine. At the first trial, the court acquitted two defendants and gave short prison sentences to another two, while the alleged ringleader, Abu Musab al-Zarqawi, was later killed in a US air strike [see 7 Jun 06]. In the present trial, the defendants received life imprisonment as opposed to the death sentence owing to changes in the law relating to the illegal possession of weapons and explosives. According to the Associated Press, the defendants will appeal the verdicts.

21 May *The* (London) *Guardian* runs an interview with a former KGB agent linked to the poisoning of Russian dissident Alexander Litvinenko with radioactive polonium-210 [see 11 Nov 06]. The UK government alleges that Andrei Lugovoi slipped the polonium into Litvinenko’s tea during a meeting at a restaurant in London on 1 November 2006 [see 22 May 07]. In the interview, Lugovoi says: “I can’t remember whether I ordered tea... I remember drinking whisky or gin,” he says. “Litvinenko wasn’t a dissident. He wasn’t a writer. But I think he was definitely an agent of the English security services,” says Lugovoi. In a separate interview, Dmitry Kovtun, Lugovoi’s business partner who was present during the meeting with Litvinenko, says it was merely “by chance” that he and Lugovoi met Litvinenko in the Millennium hotel. He adds: “We sat down and waited for Andrei’s family to turn up. They’d gone to Madame Tussauds but they got lost on the way back. If they hadn’t got lost then Litvinenko wouldn’t have sat with us in the bar.” The UK has not accused Kovtun of murder; however, the German authorities have charged him with bringing polonium-210 into the country.

22 May In the US House of Representatives, testifying before the Energy and Commerce Subcommittee on Oversight and Investigations, Nancy Kingsbury, the Managing Director of Applied Research and Methods at the Government Accountability Office says that the Department of Homeland Security has no evidence to support its contention that it would be safe to move foot-and-mouth disease research to the US mainland and that it has relied on a flawed 2002 study by the Department of Agriculture to conclude the research could safely be moved to a planned, state-of-the-art facility near commercial livestock. In her testimony, Kingsbury says: “We found that DHS has not conducted or commissioned any study to determine whether FMD (foot-and-mouth disease) work can be done safely on the US mainland... This approach fails to recognize the distinction between what is technically feasible and what is possible, given the potential for human error. We found that the study was selective in what it considered. It did not assess the history of releases of FMD virus or other dangerous pathogens, either in the United States or elsewhere.” Kingsbury lists six incidents involving the internal releases of FMD virus at Plum Island between 1971 and 2004. “These incidents involved human error, lack of proper maintenance, equipment failure and deviation from standard operating procedures. Many were not a function of the age of the facility or the lack of technology and could happen in any facility today,” says Kingsbury.

24 May In Alabama, the Anniston chemdemil facility completes the destruction of its stockpile of artillery shells carrying VX nerve agent. Spokesman for the facility Michael Abrams says that about four-fifths of the facility’s VX

weapons and 48 per cent of its total chemical weapons stockpile have now been destroyed. The facility started chemical-weapon disposal in 2003 and began eliminating the VX munitions last year [see 8 Mar 07]. According to Abrams, it is now set to begin several weeks of preparations for destruction of VX-loaded land mines, which should take about one year.

26 May In the US Senate, testifying before the Homeland Security and Governmental Affairs Permanent Subcommittee on Investigations, Director of Homeland Security and Justice Issues, Government Accountability Office Richard M. Stana says that the Customs-Trade Partnership Against Terrorism (C-TPAT) lacks adequate oversight to ensure its efficacy with regard to, amongst other things, preventing terrorists from smuggling WMD into the USA via cargo containers. The C-TPAT was established by the Department of Homeland Security after 11 September 2001 to deter potential terrorist attacks via cargo passing through 326 of the nation’s airports, seaports and designated land borders. In his testimony, Stana relies on two previous reports by the GAO that examined selected aspects of both C-TPAT, i.e. *Cargo Security: Partnership Program Grants Importers Reduced Scrutiny with Limited Assurance of Improved Security*, dated 11 March 2005 [see also 26 May 05], and Container Security Initiative (CSI), i.e. *Container Security: A Flexible Staffing Model and Minimum Equipment Requirements Would Improve Overseas Targeting and Inspection Efforts*, dated 26 April 2005 [see also 26 May 05].

27 May In the USA, ABC News reports that the FBI has alerted 18,000 US law enforcement agencies to the possibility that al-Qaeda plans, in a new video, to call for attacks employing chemical, biological and nuclear weapons against the USA and other western countries. Speaking to ABC, FBI spokesman Richard Kolko says: “There have been several reports that al-Qaeda will release a new message calling for the use of weapons of mass destruction against civilians... Although there have been similar messages in the past, the FBI and [US Homeland Security Department] have no intelligence of any specific plot or indication of a threat to the US... The FBI and US intelligence community will review the message for any intelligence value.”

27-28 May In Washington D.C., there is the third [see 31 May – 1 Jun 04 and 23 Jun 06] senior political-level meeting to mark the fifth anniversary of the Proliferation Security Initiative (PSI) [see 31 May 03]. In total, representatives of 88 states attend the meeting to assess the PSI and discuss new ideas for strengthening international cooperation to stop WMD proliferation-related trafficking. Included among the participants are officials from 21 non-participants, including China, India, and Pakistan. In his address to the meeting, the US President’s national security adviser, Stephen Hadley, says: “[The USA] will hold any state, terrorist group, or other nonstate actor or individual fully accountable for supporting or enabling terrorist efforts to obtain or use weapons of mass destruction, whether by facilitating, financing, or providing expertise or safe haven for such efforts.” At the end of the second day, the meeting adopts a declaration, which sets out the decisions reached at the meeting, including future commitments.

The next day, also in Washington D.C., there is a workshop to provide detailed information on the broad range of PSI activities for all states interested in learning more about the Initiative.

28-30 May In Johannesburg, South Africa, there is a regional workshop on the subject of biosecurity, which is jointly hosted by the Institute for Security Studies and the Center for International and Security Studies, Maryland. The purpose of

the workshop is to engage a broad range of government, scientific, academic, security and industry experts from Africa on the issue of dual-use biotechnology research with the aim of raising awareness among key stakeholders about the dual-use issue, and obtaining feedback on the proposals that have been developed for managing the most consequential areas of dual-use research.

29 May In Pakistan, Abdul Qadeer Khan withdraws the public confession he made four years previously that he masterminded an international nuclear smuggling network without the knowledge of the Pakistani government. Speaking to *The (London) Guardian*, Khan says: "It was not of my own free will. It was handed into my hand." He says that details of the smuggling ring were "my internal affair and my country's affair" and blames other nations' acquisition of uranium enrichment technology on Western suppliers. "They were supplying to us, they were supplying to them ... [to] anyone who could pay", he says.

Two weeks later, the Institute for Science and International Security releases a report by former United Nations nuclear arms inspector David Albright which states that a detailed, sophisticated warhead design was found on computers belonging to Swiss members of Khan's network who are now awaiting trial. Khan denies the report's claims.

29 May In Strasbourg, the Council of Europe Parliamentary Assembly (PACE) adopts a resolution urging the UK, USA and NATO to reveal the locations of chemical munitions dumped in the Baltic Sea after the Second World War so as to assess the risk they pose to the marine environment. The resolution states that although most experts agree the munitions would be safer left where they are, the forthcoming construction of the gas pipeline on the Baltic seabed [see 22 Feb] "may pose new and considerable dangers". A report presented to PACE says the Allies seized 300,000 tonnes of chemical munitions from Germany at the end of the war and dumped them in the Baltic Sea. The report adds that after the expiration of the 50-year period for which details of the dumping were to remain classified, the UK and the USA, which had taken possession of most of the stocks, decided in 1997 to keep details secret for a further 20 years. [See also 21 Dec 07]

29 May In Washington D.C., the Commission on the Prevention of Weapons of Mass Destruction Proliferation and Terrorism convenes for its first meeting. Congressional leaders had announced its membership a fortnight previously. The commission was created by Congress on the recommendation of the September 11 Commission [see 22 Jul 04] and has been mandated by Congress to establish a framework for studying efforts to protect the USA from a WMD attack. In a press release, Senator Bob Graham, the chairman of the nine-member commission, says: "We have a broad mandate... but the urgency of these issues requires us to work as quickly as possible so that the next administration and Congress have actionable recommendations at their fingertips." The group plans to release a final report in the autumn.

31 May In Ukraine, in an interview with *Ukrayinska Pravda*, Member of Parliament representing the pro-presidential Our Ukraine-People's Self-Defence Davyd Zhvaniya says that President Viktor Yushchenko was not poisoned four years ago [see 10 Sep 04].

Three days later, in an interview with the BBC Ukrainian Service, Zhvaniya says Yushchenko had a common food poisoning and that all the tests that indicated dioxin poisoning were "absolutely fake". He says: "It was a regular food

poisoning. The diagnosis was known on the very first day, every third person experience such poisonings. This was pancreatitis. The day he [Yushchenko] went to the doctors they all drew to the same conclusion. I was there... I was against sending Yushchenko to Austria since the suggested hospital had nothing to do with pancreatitis. It was a cardiology centre. I suggested to send the papers to some other hospital so that it could treat the patient with the understanding of the problem." Zhvaniya says that the official version about Yushchenko's poisoning came not from him but from those in Yushchenko's election campaign headquarters. "The statement was made by [Oleksandr] Zinchenko [then deputy speaker of parliament], which was approved by the HQ. First, they said it was a biological poisoning, later that it was chemical. Being one of the HQ leaders, I was against this, since I believed that we would become hostages to the situation if we make a statement about the poisoning. I told them that this would be a blow to us as we would scare the public which could behave inadequately. They did not listen to me. I asked Viktor Yushchenko not to confirm this... Because at that time no-one was talking about poisoning, but after Zinchenko's statement everyone was running around trying to cover their asses." Meanwhile, according to the Ukrainian *Korrespondent* it was reported that the Office of the Prosecutor-General has warned Zhvaniya against interfering with the investigation into how Yushchenko came to be poisoned.

Six weeks later, Serhiy Leshchenko, the journalist who wrote the article for *Ukrayinska Pravda*, is arrested and taken to the Office of the Prosecutor-General for questioning in connection with the ongoing investigation into the poisoning of Yushchenko.

2 June Australian Prime Minister Kevin Rudd, in a rebuke against his predecessor John Howard's decision to commit 2,000 Australian troops towards the US-led invasion of Iraq [see 20 Mar 03], says that Australia joined the war on faulty intelligence that had never fully been detailed to the public. In a speech to parliament, Rudd says: "Of most concern to this government was the manner in which the decision to go to war was made: the abuse of intelligence information, a failure to disclose to the Australian people the qualified nature of that intelligence... For example, (the public was not told of) the prewar warning that an attack on Iraq would increase the terrorist threat, not decrease it... The decision to go to war was taken without a full and proper assessment by the government of its consequences."

2-6 June In Kruševac, Serbia, there is a training course on strengthening national capacities to provide assistance and protection under Article X of the CWC. The course – which is jointly organized by the government of Serbia and the OPCW – concentrates on practical training for first responders responsible for assistance and protection against chemical weapons; reviews the assistance that OPCW and Serbia can offer under Article X; facilitates the exchange of information and experiences regarding implementation of Article X; and provides an opportunity for discussions among CWC parties on future cooperation and offers made by them under Article X.

3 June Russia has destroyed 10,500 metric tons, or 25 per cent, of its stockpile of chemical weapons, according to Head of the Federal Department for Safe Chemical Weapons Storage and Disposal Valery Kapashin. Speaking during a press conference, Kapashin says: "We have no doubts that after the two facilities are commissioned [at Maradykovsky and Leonidovka], we will fully honor our commitments under the third phase [of the chemical weapons disposal plan]."

Kapashin says that the construction of the Pochep chemdemil facility is proceeding on schedule. He says that the chemdemil programme is funded mainly from the Russian state budget and that foreign assistance is minimal. In this regard, he says: "Germany has provided EUR 140 million for the construction of [the Pochep] facility [...], while the cost of the facility is 20 billion... [W]e need to complete [phase 3 of the chemdemil program] by 31 December 2009. There is no doubt that Russia can fulfill its obligations, but regular financing is needed in order for that to happen." [See also 15 Nov 07 and 20 Mar]

3 June The US Department of Health and Human Services (HHS) announces that it will distribute nearly \$1.1 billion during the current fiscal year to assist health providers prepare for acts of terrorism or a crisis resulting from a naturally occurring event. In a press release, Health and Human Services Secretary Mike Leavitt says: "These funds will continue to enhance community readiness by increasing the capabilities of health departments, hospitals and health care delivery systems to respond to any public health emergency." More than \$704 million of the funding is being provided by the Centers for Disease Control and Prevention; \$398 million is being distributed under the HHS hospital preparedness programme.

3-5 June In Belgrade, the seventh [see 6-8 Jun 07] regional meeting of the national authorities of CWC parties in Eastern Europe takes place. The meeting is co-hosted by the government of Serbia and the OPCW. It provides the opportunity for representatives of national authorities to consider issues arising from the practical implementation of the CWC relating to the transfers provisions therein, as well as the role of national authorities in relation to customs authorities. Included in the schedules are visits to the Nuclear, Biological and Chemical Defence Personnel Advancement Center; Trayal (a company in Kruševac that manufactures protective equipment); and the National Poison Control Centre in Belgrade. Participants from the following twenty-four CWC parties attend the meeting: Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Georgia, Hungary, Kazakhstan, Latvia, Lithuania, the Former Yugoslav Republic of Macedonia, Moldova, Montenegro, Poland, Romania, Russia, Serbia, Slovakia, Slovenia, Ukraine and the USA.

5 June In Lilongwe, Malawi, a seminar on *Building Stakeholdership in Support of Malawi's Ratification of the Biological and Toxin Weapons Convention* is jointly organized by the BioWeapons Prevention Project and the Centre for Human Rights and Rehabilitation, Malawi, in co-operation with the Institute for Security Studies, South Africa.

5 June In Brussels, there is a European Corporate Security Association conference on bioterrorism counter-measures. The event – which is co-sponsored by the US-based company, Emergent BioSolutions Inc, that manufactures a vaccine for anthrax – is designed to increase awareness of the threat from biological terrorism among officials of European Union security authorities, diplomatic institutions, judicial institutions and corporate securities communities by discussing effective biodefence measures.

5 June In the US Senate, the Select Committee on Intelligence releases its *Report on Whether Public Statements Regarding Iraq by US Government Officials Were Substantiated by Intelligence Information*. The 170-page report, accuses President George Bush, Vice-President Dick Cheney and other top officials of repeatedly overstating the Iraqi threat

following 11 September 2001 and the Iraqi government's alleged links to al-Qaeda. The report says that on some important issues, most notably on what was believed to be Iraq's chemical, biological and nuclear weapons programmes, public statements by Bush, Cheney and other senior officials were generally "substantiated" by the best estimates at the time from US intelligence agencies. Nevertheless, it found that administration officials' statements usually did not reflect the intelligence agencies' uncertainties about the evidence or the disputes among them.

On the question of biological weapons, the report draws the following conclusions: "Statements in the major speeches analyzed, as well additional statements, regarding Iraq's possession of biological agent, weapons, production capability, and use of mobile biological laboratories were substantiated by intelligence information. Intelligence assessments from the late 1990s through early 2003 consistently stated that Iraq retained biological warfare agent and the capability to produce more. Assessments on the mobile facilities included the production capabilities of those labs, both in terms of type of agent and in amount. Prior to the October 2002 NIE [National Intelligence Estimate] [see 1 Oct 02 and 18 Jul 03], some intelligence assessments left open the question as to whether Iraq possessed biological weapons or that it was actively producing them, though other assessments did not present such uncertainties. Policymakers did not discuss intelligence gaps in Iraq's biological weapons programs, which were explicit in the October 2002 NIE."

As regards chemical weapons, it concludes thus: "Statements in the major speeches analyzed, as well additional statements, regarding Iraq's possession of chemical weapons were substantiated by intelligence information. Intelligence assessments, including the December 2000 ICA [Intelligence Community Assessment] stated that Iraq had retained up to 100 metric tons of its chemical weapons stockpile. The October 2002 NIE provided a range of 100 to 500 metric tons of chemical weapons... Statements by the President and Vice President prior to the October 2002 [NIE] regarding Iraq' chemical weapons production capability and activities did not reflect the intelligence community's uncertainties as to whether such production was ongoing. The intelligence community assessed that Saddam Hussein wanted to have chemical weapons production capability and that Iraq was seeking to hide such capability in its dual use chemical industry. Intelligence assessments, especially prior to the October 2002 NIE, clearly stated that analysts could not confirm that production was ongoing."

On the question of weapons of mass destruction more generally, it concludes: "Statements by the President, Vice President, Secretary of State and Secretary of Defense regarding Iraq's possession of weapons of mass destruction were generally substantiated by intelligence information, though many statements made regarding ongoing production prior to late 2002 reflected a higher level of certainty than the intelligence judgments themselves. Many senior policymaker statements in early and mid-2002 claimed that there was no doubt that the Iraqi government possessed or was producing weapons of mass destruction. While the intelligence community assessed at this time that the Iraqi regime possessed some chemical and biological munitions, most reports produced prior to fall 2002 cited intelligence gaps regarding production and expressed room for doubt about whether production was ongoing. Prior to late 2002, the intelligence community did not collectively assess with any certainty that Iraq was actively producing any weapons of mass destruction... The Secretary of Defense's statement that the Iraqi government operated underground WMD facilities that were not vulnerable to conventional airstrikes because they were underground and

deeply buried was not substantiated by available intelligence information. While many intelligence analysts suspected that the Iraqi government might be using underground facilities to conceal WMD activities, no active underground WMD facilities had been positively identified. Furthermore, none of the underground government facilities that had been identified were buried deeply enough to be safe from conventional airstrikes.”

On the question of unmanned aerial vehicles (UAVs), the report concludes: “Statements by the President, Secretary of Defense and Secretary of State that Iraq was developing [UAVs] that could be used to deliver chemical or biological weapons were generally substantiated by intelligence information, but did not convey the substantial disagreements or evolving views that existed in the intelligence community. The majority view of the October 2002 [NIE] judged that Iraq had a UAV program that was intended to deliver biological warfare agents. Air Force intelligence dissented from this view, and argued that the new UAV was probably being developed for reconnaissance. The majority view of the January 2003 NIE said that Iraq ‘may’ be modifying UAVs for chemical or biological weapons, and the Air Force, Army, Defense Intelligence Agency argued that the evidence for this was ‘not sufficiently compelling to indicate that the Iraqis have done so’... The President’s suggestion that the Iraqi government was considering using UAVs to attack the United States was substantiated by intelligence judgments available at the time, but these judgments were revised a few months later, in January 2003. The October 2002 [NIE] noted that an Iraqi procurement network had attempted to purchase commercial mapping software that included data on the United States, and said that this suggested that the Iraqi government was considering using UAVs to target the US. The January 2003 NIE revised this claim, and said only that the software *could* be used for this purpose. The Air Force, Army and Defense Intelligence Agency [DIA] dissented from this judgment as well, and argued that the purpose of the Iraqi request was to acquire a generic mapping capability.”

As to Iraq providing terrorist groups with training in using weapons of mass destruction, it concludes thus: “ Statements and implications by the President and Secretary of State suggesting that Iraq and al-Qa’ida had a partnership, or that Iraq had provided al-Qa’ida with weapons training, were not substantiated by the intelligence. Intelligence assessments, including multiple CIA reports and the November 2002 [NIE], dismissed the claim that Iraq and al-Qa’ida were operating partners. According to an undisputed INR [State Department Bureau of Intelligence and Research] footnote in the NIE, there was no intelligence information that supported the claim that Iraq would provide weapons of mass destruction to al-Qa’ida. The credibility of the principal intelligence source behind the claim that Iraq provided al-Qa’ida with biological and chemical weapons training was regularly questioned by the DIA, and later by the CIA. The Committee repeats its conclusion from a prior report that ‘assessments were inconsistent regarding the likelihood that Saddam Hussein provided chemical and biological weapons training to al-Qa’ida... Statements by the President and Vice President indicating that Saddam Hussein was prepared to give weapons of mass destruction to terrorist groups for attacks against the United States were contradicted by available intelligence information. The October [NIE] assessed that Saddam Hussein did not have nuclear weapons, and was unwilling to conduct terrorist attacks against the US using conventional, chemical or biological weapons at that time, in part because he feared that doing so would give the US a stronger case for war with Iraq. This judgment was echoed by both earlier and later intelligence community assessments. All of these assessments noted that gauging

Saddam’s intentions was quite difficult, and most suggested that he would be more likely to initiate hostilities if he felt that a US invasion was imminent.”

In a separate report, the committee provides new details about a series of secret meetings in Rome and Paris between US Department of Defense officials and Iranian dissidents in 2001 and 2003.

The two reports are the final parts of the committee’s ‘Phase 2 investigation’ of pre-war intelligence on Iraq and related issues. The first phase of the inquiry identified serious faults in the CIA’s analysis of the threat posed by Iraq [see 8 Sep 06].

6 June In Qiqihar, China, three people are killed and fifteen injured when phosgene is released after two workers at Guangyu scrapyard cut through two “wasted iron bottles”, so reports Xinhua news agency quoting an unidentified “official of the local government”. According to the local police, the bottles were found by a local resident, while digging his fields, and he subsequently sold them as scrap iron. They later found their way to the Gaungyu scrapyard. Xinhua does not confirm whether or not the bottles date back to when the Japanese Imperial Army abandoned its chemical weapons in northern China’s Heilongjiang Province at the end of the Second World War. [See also 4 Aug 03 and 24 May 04]

9 June At UN headquarters, Secretary-General Ban Ki-moon transmits to the Security Council the final report on UNMOVIC, which provides – in accordance with resolution 1762 [see 28 Jun 07] – a final account of the activities of the UNMOVIC since the previous report on the matter [see 070927] and the work accomplished to appropriately dispose of UNMOVIC archives and other property [see 21 Nov 07]. It also reports on the relevant spending by the United Nations of funds designated to complete the liquidation process of UNMOVIC. The report states: “Since the adoption of resolution 1762 [terminating with immediate effect the mandate of UNMOVIC], the principal focus of the radically reduced UNMOVIC staff has been on organizing and transferring the archives to the Archives and Records Management Section of the Office of Central Support Services of the Secretariat as the final repository of the UNMOVIC archives and also on disposing of the other property, which included both non-sensitive and sensitive equipment situated in four locations. The aim was to complete these activities by 29 February 2008... UNMOVIC work relating to the disposition of its archives containing paper documents and multimedia material has been completed. More than 1,200 boxes containing some 8,500 folders were transferred to the Archives and Records Management Section... Since the closure of UNMOVIC, the Section has begun the process of bringing the 1,000 linear feet of UNMOVIC hard copy records and archives into full compliance with its archival and recordkeeping standards, and of providing secure storage for them... The Archives and Records Management Section has also taken custody of UNMOVIC electronic records stored in their Tower Records and Information Management (TRIM) record-keeping system... In addition, the Archives and Records Management Section has taken in from UNMOVIC 400 gigabytes of Geographic Information System (GIS) data and an e-mail server... As suggested by the Council in the letter from the President of the Council to the Secretary-General [see 21 Nov 07], this information has been classified into two categories, namely, “strictly confidential”, to be kept sealed for a minimum period of 60 years, and “confidential”, to be sealed for a minimum period of 30 years... At 31 December 2007, non-expendable property, valued at historical cost, was worth approximately \$1.2 million. It included inspection-related equipment that

carried some kind of export restriction or end-user certificate. There were in addition many inert and non-hazardous artefacts, including remnants of proscribed items that United Nations inspectors had removed during inspections... At the time of [the] previous report [see 21 Nov 07], the staffing level of UNMOVIC stood at 15 Professionals and 6 support staff. Over the ensuing months, there were reductions in staff so that, at the end of February 2008, the staffing level stood at 12 Professionals and 4 support staff... All staff contracts terminated with effect from 29 February 2008, with the exception of three support staff members who would remain for three more months... [The previous report] [see 21 Nov 07] indicated that \$12 million represented the estimated expenditure to complete the liquidation process, including facility and security upgrades, archival supplies and human resources, separation and after-service care costs, rent, security costs and costs incurred in connection with the disposition of UNMOVIC property. While noting the transfer of \$25.1 million unencumbered funds reported in that report, the President of the Security Council asked that any unspent portion of the \$12 million be transferred to the Development Fund for Iraq without delay. As a result, \$878,285 was transferred to the Fund on 28 February 2008, and an additional amount of about \$2 million is potentially transferable and will be transferred to the Fund as soon as the final disposition of the various inventory items [...] is completed... The Special Commission and UNMOVIC put into practice many innovative verification and monitoring procedures. Through its training programme, UNMOVIC has established a roster of inspectors comprising over 350 experts in the biological, chemical and missile areas drawn from more than 50 countries... The international community could benefit if practical ways were found to preserve for appropriate future use the experience and expertise accumulated over the years of Special Commission and UNMOVIC operations.”

9-10 June In Sandhamn, Sweden, the tenth annual Swedish Symposium on Biomedicine, Ethics and Society takes place, this year the subject being *Dual Uses of Biomedicine: Whose responsibility?* The aim is to explore ethics, law and codes of conduct; moral obligations for life scientists; biosafety and biosecurity governance; and awareness raising activities in academia. There are four keynote lectures in the opening plenary session: by Ingegerd Kallings of the Swedish Institute for Infectious Disease Control on 'Biosafety and Biosecurity Governance in Life Science Research: Public Health Aspects – Explaining the Concepts and their Relation – Ethical Relevance'; by Frida Kuhlau of the Centre for Research Ethics and Bioethics, Uppsala University on 'Taking Due Care in Life Science: Moral Obligations in Dual Use Research'; by Margaret Somerville of the McGill Centre for Medicine, Ethics, and Law, Montreal on 'Preventing the Life Sciences from Becoming the Death Sciences: Ethics, Law and Codes of Conduct in Dual Use Research' and by Malcolm Dando of the University Bradford, UK, on 'Raising Awareness of the Dual-Use Dilemma in Academia: Experiences and reflections'. Thereafter, there are parallel sessions on 'challenges to monitoring and governance' and 'contextual approaches' that include presentations from the Indian Police Service, SIPRI, the Swedish Defence Research Agency, WHO and academics from American, British, Danish, Finnish and Israeli universities.

10 June In Bryansk, Russia, the foundation stone of the Pochev chemdemil facility is laid, so reports ITAR-TASS news agency, quoting an unidentified “spokesperson for the information centre for chemical disarmament”. Among

those attending the ceremony is Head of the Federal Department for Safe Chemical Weapons Storage and Disposal Valery Kapashin. Seven days previously, Kapashin said that the construction of the Pochev facility was proceeding on schedule [see 3 Jun].

10 June In Monterey, California, there is the fifth annual Monterey non-proliferation seminar, which is organized by the Naval Postgraduate School's Center for Contemporary Conflict, and sponsored by the Defense Threat Reduction Agency. Among those making presentations is Principal Deputy Assistant Secretary, International Security and Nonproliferation, Department of State Patricia A. McNerney on 'Global perspectives of the proliferation landscape: An assessment of tools and policy problems'.

11 June Russian President Dmitry Medvedev has signed a federal law on “ratification of agreement between the government of the Russian Federation and the government of the Italian Republic on cooperation in chemical weapons destruction in the Russian Federation”, so reports the Kremlin press services. Three weeks previously, the law was passed by the State Duma (lower house of parliament); followed nine days later with its ratification by the Federation Council (upper house of parliament). Under the agreement – which was signed in Rome five years ago [see 5 Nov 03] – Italy will provide Russia with more than \$560 million for chemdemil funding in accordance with the commitments set out under the G-8 Global Partnership [see 26-27 Jun 02]. More specifically, the funding will go towards the design, construction, equipment and services for the new chemdemil facility at Pochev, in the Bryansk region [see 10 Jun]. [See also 12 Jan 06 and 14 Jun 07]

11 June Ukrainian Foreign Minister Volodymyr Ohryzko says that Ukraine may appeal to “international institutions” against the construction by Russia of the Pochev chemdemil facility on the grounds that it is just 70 km from the inter-state border. At a press conference in Kiev, Ohryzko says: “We have already sent two memorandums [to Russia]. Unfortunately, we have received no reply. [Our] further steps are obvious. If mutual talks are unsuccessful, we will have an opportunity to appeal to international institutions.” He says that a number of international agreements require that a form of consent is required from a neighbouring state prior to such construction projects. Ohryzko's remarks follow those made a day earlier by Ukrainian Foreign Ministry spokesman Vasyl Kyrlych who said that the Ministry has proposed to Russia that a joint working group be set up to constantly monitor the work at the site and also to inspect the ecological situation near the facility. In response, the Russian Ministry of Foreign Affairs issues the following statement: “We would like to recall that back on 30 August 2004, in response to the query it had received, the Russian Foreign Ministry sent a note to the Ukrainian side, which contained an exhaustive explanations concerning the nature and purpose of the facility being erected near the town of Pochev in Bryansk Region. On 29 December 2005, again in response to a query from the Ukrainian Foreign Ministry, the Russian side sent another note on the measures being taken to ensure environmental safety at the facility in the town of Pochev... It should be stressed once again that all the works at Russian facilities connected with the storage of chemical weapons were conducted in strict compliance with Russian national legislation, with the observance of all existing generally accepted standards and rules, and in cooperation with competent and authorized international structures... The worries of the Ukrainian Foreign Ministry are therefore far-fetched.”

11 June The US House of Representatives effectively rejects a resolution to impeach President George Bush for making misleading statements about Iraqi WMD, which were ultimately used to justify the US-led invasion of Iraq [see 20 Mar 03]. Representative Dennis Kucinich had used the process of 'privileged resolution' to put 35 articles before the House and force the full House to address the matter within two days. The House voted 251-166 to send the articles to the Judiciary Committee, the effect of which will be that the full House will now avoid having to debate and vote on the matter.

Four weeks later, Kucinich makes a renewed attempt to impeach Bush by narrowing his 35 articles of impeachment down to one, charging Bush with deceiving Congress to obtain support for the war in Iraq, with a view to persuading the House Judiciary Committee to take up the matter. He says he is optimistic about his chances of bringing the revised article before the Committee.

12 June In the UK House of Commons, responding to a written question addressed to the Secretary of State for Health as to what contingency plans the Department of Health has to deal with a chemical and biological attack on the UK, and what stockpiles of vaccines there are to protect people against each chemical or biological agent, Minister of State for Public Health Dawn Primarolo says: "All national health service organisations, classed as Category 1 and 2 responders under the Civil Contingencies Act 2004, have contingency plans in place to meet their responsibilities to ensure the continued delivery of healthcare services when faced with a wide range of disruptive challenges, including incidents involving the use of chemical, biological, radiological and nuclear (CBRN) agents... The Department supports all health service organisations in their contingency planning through the provision of extensive specialist and generic guidance and a national programme of training and exercises designed to test plans and familiarise health service staff with their respective roles and responsibilities during an incident... The United Kingdom Health Departments have established an extensive stockpile of medical countermeasures and specialist equipment to be used to protect and treat the public in the event of a wide range of possible incidents or attacks. For obvious reasons of security, it would be inappropriate to specify what particular countermeasures are held and where they are located."

12 June In the US House of Representatives, the Appropriations Subcommittee on Disability Assistance and Memorial Affairs House holds a hearing on a bill that would give veterans who participated in "Project 112" between 1963 and 1973 health benefits and compensation for illnesses resulting from their service. The bill, which is co-sponsored by congressmen Mike Thompson and Denny Rehberg, would require the Department of Veterans Affairs (VA) to assume the toxicants used in the weapons tests caused injury to the veterans, thus making them eligible for medical benefits and/or compensation. The bill also instructs the Secretary of Veterans Affairs, within 180 days of enactment, to notify all veterans of potential exposure to the biological or chemical weapons used in Project 112 and Project SHAD. [See also 14 May 04]

One week later, the Associated Press reports having obtained figures from the hearing showing that VA has granted only six per cent of health claims filed by veterans of the tests. Of the 6,440 service members that the Department of Defense says took part in the tests, 4,438 have been notified of their participation; the remainder have either not been possible to locate or have died. As of May 2008, VA had

processed 641 of the claims filed by veterans: 39 of the claims were granted, 56 were pending and 546 were denied. In response, VA says that some of the SHAD/112 veterans who filed claims were already getting benefits for other service-connected conditions. "The service of most of these veterans ended more than 30 years ago, and their service medical records do not reflect treatment for currently claimed conditions," the statement says.

12-14 June In the UK, there is an invitation-only Wilton Park conference on *Biological Nonproliferation and International Health Security: Promoting Cooperation*. The conference has a focus on how global health security might be improved through international cooperation, with particular reference to the benefits and risks of dual-use biological science. In this regard, it considers work done under the Global Partnership [see 26-27 Jun 02] and the work programme of the BWC, including the topic improving biosafety and biosecurity. The conference also considers possible sources of funding for cooperative work in this area in addition to the Global Partnership, i.e. other national and international organisations, including the International Science Centres in Moscow and Kiev. It addresses cooperation with governments and institutes of states of the former Soviet Union. Presentations are given by Roy Anderson of Imperial College, London, former Chief Scientific Adviser at the UK Ministry of Defence; Tim Brooks of the UK Health Protection Agency; Georgi Avramchev, ambassador of the Former Yugoslav Republic of Macedonia and current chair of the BWC intersessional process; John Walker of the UK Foreign & Commonwealth Office; Ottorino Cosivi of the World Health Organisation; Kendra Chittenden of the US Department of State; Andy Weber of the US Department of Defense; Bruno Dupré of the European Commission Directorate for External Relations; Zuzana Sutiakova of the EU Council secretariat; Terry Taylor, president of the International Council for the Life Sciences; Anne Harrington, director of the Committee on International Security and ArmsControl of the US National Academy of Sciences; John Keddie of GlaxoSmithKline; Paul Logan of the UK Health and Safety Executive; Heather Sheeley of the UK Health Protection Agency; Leo Owsiacki of the International Science and Technology Center, Moscow; Jennifer Kleniewski of Foreign Affairs and International Trade Canada; Paata Imnadze of the National Center for Disease Control, Tbilisi; and Mark Smith, the Wilton Park Security and Defence programme director.

13 June In Germany, a man receives a suspended two-year prison sentence and a fine of EUR 20,000 after pleading guilty to assisting in the transfer of chemical weapons production equipment to Libya in the 1990s when Libya was subject to an arms embargo. According to Deutsche Welle, Berge Aris Balanian had previously sought refuge in Lebanon, but returned to Germany in 2006 after liaising with prosecutors. His two accomplices, Detlef Crusius and Udo Buczkowski, were imprisoned in 1997.

13 June In London, a postal worker is sentenced to four years imprisonment for targeting more than 150 organisations and individuals – including former Prime Minister Tony Blair and other leading government officials – using various means of intimidation, including sending envelopes containing white powder. Jefferson Azevedo, a Brazilian national, signed off his letters off with "RAHOWA", an acronym also known as 'Racial Holy War', a term that *The (London) Guardian* says is used by white supremacists. Azevedo carried out his actions between 2003 and 2007.

13 June The US Government Accountability Office (GAO) transmits to Congress *Emergency Preparedness: States are Planning for Medical Surge, but Could Benefit from Shared Guidance for Allocating Scarce Medical Resources*. The report states: "Following a mass casualty event that could involve thousands, or even tens of thousands, of injured or ill victims, health care systems would need the ability to 'surge,' that is, to adequately care for a large number of patients or patients with unusual medical needs... Based on a review of state emergency preparedness documents and interviews with 20 state emergency preparedness officials, GAO found that many states had made efforts related to three of the key components [increasing hospital capacity, identifying alternate care sites, and registering medical volunteers] of medical surge, but fewer have implemented the fourth [i.e. planning for altering established standards of care]... Though states have begun planning for medical surge in a mass casualty event, only 3 of the 20 states in our review have developed and adopted guidelines for using altered standards of care. [The Department of Health and Human Services] HHS has provided broad guidance that establishes a framework and principles for states to use when developing their specific guidelines for altered standards of care. However, because of the difficulty in addressing the related medical, ethical, and legal issues, many states are only beginning to develop such guidelines for use when there are not enough resources... To further assist states in determining how they will allocate scarce medical resources in a mass casualty event, we recommend that the Secretary of HHS ensure that the department serve as a clearinghouse for sharing among the states altered standards of care guidelines that have been developed by individual states or medical experts."

16 June In Brussels, the General Secretariat of the Council of the European Union adopts its latest [see 10 Dec 07] six-monthly progress report on the implementation of the EU strategy against the proliferation of WMD. The report summarizes events in the first half of 2008. It states: "The EU has actively continued to support the programme of activities to mark the 10th Anniversary of the CWC/OPCW... The Council adopted a Joint Action in support of the WHO in the area of bio-safety and bio-security in the context of BTWC [see 14 Apr 08]... The Council is to adopt by the first half of 2008 a second Joint Action in support of implementation of UNSCR 1540, focusing in particular on enhancing state officials' capacities in the field of export control... The implementation of Joint Actions in support of CWC and BTWC continued, with very satisfactory results in terms of additional ratifications and national implementation". In relation to the latter, the report states that "a new draft BTWC Joint Action is under discussion among Member States". As regards the Joint Action in Support of the BWC [see 27 Feb 06], which continued until the end of April 2008, it says: "The universalisation of the BTWC stagnated for some time, the last accession to the BTWC was recorded in 2003. Since the adoption of the EU Council Joint Action a good number of States ratified/acceded to the BTWC (Montenegro, Kazakhstan, Trinidad and Tobago, Gabon, Zambia, Madagascar) [see 7 Mar] or launched their ratification process. Most of the new States Parties to the BTWC participated in the EU regional seminars or have been demarched by the EU Presidency and maintained contact with the EU. The EU organised a fifth regional seminar to promote the ratification / accession to the BTWC among the States from the Middle East region on 16-17 April 2008." The report further states: "The Council Working Group on Global Disarmament and Arms Controls agreed to task the Office of the PR to explore the possibility of carrying out a fact-finding

mission to Ukraine, in order to assess the requests made by Ukraine in the area of physical protection of bio-laboratories. These requests were repeated also during the last CONOP/CODUN [General Affairs Council Working Group on Global Arms Control and Disarmament and the General Affairs Council Working Group on Non-Proliferation]. Troika with Ukraine. Contacts have been established with the Ukrainian administration to define the contents of such a mission... The EU has continued to work with the US for the implementation of the 2005 Joint EU-US programme of work for the Non-Proliferation of WMD. The [Office of the High Representative's Personal Representative on Non-Proliferation] has pursued contacts with US interlocutors *inter alia* through meetings with Staff members of the US Congress on 11 Jan. 2008 and in the framework of the Conop/Codun Troika meetings on 3 December 2007 and 11 April 2008... The EU has been continuing, according to its WMD Strategy, to mainstream non-proliferation of WMD into its contractual relations with third states. Successful negotiations have been concluded so far with almost 100 States around the world, while ensuring that respective WMD clauses were compatible with the spirit and the content of the WMD standard clause. The Office of the [Personal Representative] [...] has been actively involved in these negotiations."

16 June In Belgium, the General Secretariat of the Council of the European Union Council adopts an *Updated List of Priorities for the Implementation of the EU WMD Strategy*, which revises and updates the previous list that as endorsed by GAERC [EU General Affairs and External Relations Council] [...] [see 11 Dec 06].

As regards supporting the OPCW, the document states: "Currently 183 States are already Party to the CWC which is close to reaching universality. Further EU efforts should therefore concentrate in the area of national implementation. The idea of grants for national authorities and the organisation of technical skills seminars in EU laboratories are widely supported by EU Member States. The results of the Review Conference in 2008 [see 18 Apr] should be taken into account and new areas of cooperation defined in the light of the outcomes achieved through previous Joint Actions. The content of a future Joint Action should also allow the EU to gain further visibility. Budget estimate: ± 1.5 - 2 million EUR."

With regard to supporting the BWC, the document states: "The objective is to adopt and to implement a follow-up Joint Action in support of the BTWC. It should take into account the outcome of the BTWC Review Conference [see 8 Dec 07] as well as lessons learned from the first BTWC Joint Action. The scope of the Joint Action shall be extended in order to support intersessional work priorities and/or the objectives of EU Member States initiatives submitted for consideration of States Parties to the BTWC Review Conference. The Joint Action may have the following components: universalisation of the BTWC; national implementation; CBMs; support to intersessional process [...]. In the future, the EU may consider to support the efforts to update the UN Secretary- General's mechanism to investigate the alleged use of chemical or biological weapons. Budget estimate: X million EUR."

In relation to protecting bio-laboratories, it states: "In order to counter the risk of biological agents falling into hands of terrorist non-state actors, action should be taken in order to improve physical protection of laboratories. Ukraine has approached the EU requesting assistance and other countries are also likely to need support. This is all the more important since there is no international organisation for the implementation of the interdiction of biological weapons. The results of a fact finding mission in the area of bio-laboratories

security will allow the EU to define a possible first project in this area in Ukraine. States within the G8 Global Partnership should be consulted in order to define the scope and the relevance of such a project and to avoid duplication of efforts. Budget estimates: Project in Ukraine: ± 3 million EUR; Project in other countries: ± 4 million EUR.”

On the question of supporting UN Security Council resolutions 1540 [see 28 Apr 04], 1673 [see 27 Apr 06] and 1810 [see 25 Apr], it states: “In order to help address major problems related to national implementation of the Resolutions 1540, 1673 and 1810, the EU co-financed, through a first Joint Action adopted in 2006 [see 12 Jun 06], five regional seminars focusing on awareness raising and reporting obligations under UNSCR 1540... The outcome of these seminars clearly indicates that a follow-up technical assistance is necessary. Therefore, a new Joint Action in support of the Resolutions 1540 and 1673 should take into account the Work Programme of the 1540 Committee and its priorities as well as experience gained from regional seminars. In order to shift the focus from awareness raising and reporting obligations to more operative initiatives that will tackle the issues related to the actual establishment of an effective export control system as required by UNSCR 1540, a new series of projects could be financed through this new Joint Action... Budget estimate: ± 500.000 EUR.”

As regards supporting the activities of the World Health Organisation (WHO) in the area of biosafety and bio-security, the document states: “Building on the WHO Joint Action [...] [see 14 Apr], it may be necessary to envisage an appropriate follow-up Joint Action in 2009. The objective would be to continue and step up EU support of WHO activities in the area of bio-safety and bio-security, taking into account, i.e. the BTWC intersessional process in 2008. Budget estimate: ± 2,5 million EUR”

16-20 June In Madrid, there is an advanced course on preparing declarations under the CWC for personnel from Spanish-speaking national authorities. The course, which is jointly organized by the Spanish national authority and the OPCW, provides practical training to the participants, who are responsible for preparing declarations under Article VI of the CWC. It also includes table-top exercises using the Internet and other electronic tools to test procedures and to evaluate results. Participants from the following fifteen CWC parties attend the course: Argentina, Bolivia, Chile, Colombia, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Paraguay, Peru, Portugal, Spain, Uruguay and Venezuela.

17 June In Leonidovka, Russia, there is an official event marking the opening of the chemdemil facility there [see 18 Apr]. Six of Russia's seven chemdemil facilities have now been completed with the facility at Pochep awaiting completion. In his address, OPCW Director-General Rogelio Pflirter highlights the significance of the event as evidence of Russia's commitment to complete the destruction of its stockpile of chemical weapons by 2012. Meanwhile, Deputy-Director of the Federal Industry Agency, Head of the Russian Chemical Weapons Destruction Programme Victor Kholstov says the occasion reiterates the commitment of Russia to fulfil its obligations under the CWC. An OPCW press release states that the Leonidovka facility will “destroy 6,884.794 [metric tons] of GB (sarin), GD (soman), GD viscous and VX nerve agents, which constitutes about 17.7 per cent of Russia's declared chemical weapons stockpile”. [Note: this percentage figure implies that the total quantity of chemical weapons declared by Russia to the OPCW, hitherto understood to be 40,000 metric tons of agent, was actually about 38,900 agent-tonnes, assuming the Secretariat's arithmetic to be correct.] The press

release also notes that the Swiss government has contributed around \$3 million towards the construction of the facility. [See also 3 Jun]

17 June In the UK House of Commons, Member of Parliament Ian Gibson says that bees could be used to detect chemical weapons, but only if government funding is increased to stop the decline in their population. On the subject, Gibson says: “It is not generally known that bees can also sense chemicals. They can be trained to detect explosives, drugs and even chemical weapons. That is not generally known, but I know that the Pentagon has been working on this use of bees for some years now and the sight of bees swarming around white powder is quite a classic thing that happens in this country too. So there is hope that, in that area of detection, we may find another use for bees as research progresses.”

18 June In Moscow, in the office of the Prosecutor General, the committee that has been investigating the death of Anna Politkovskaya has charged three individuals with her murder, so reports *Russia Today*. Politkovskaya, a journalist for the *Novaya Gazeta* newspaper and an outspoken critic of President Putin, was shot in her apartment building in Moscow [see 7 Oct 06]. She had alleged that she had been prevented from covering the siege of a school at Beslan [see 1 Sep 04] as a result of having been poisoned *en route* from Moscow and had to be hospitalized. Deputy editor of *Novaya Gazeta* Sergey Sokolov says: “The investigation is finished in regards to only the three people in question [Sergey Khadzikhurbanov, Dzhabrail Makhmudov and Ibragim Makhmudov]. But as for other people involved – the ones who have been identified and those who are still to be identified, like the killer and the person who ordered the murder – they are set apart into a separate group. The investigation will be continued.”

18 June In Zimbabwe, Zanu-PF militia, who are loyal to President Mugabe, have used herbicides against opposition MDC supporters since the disputed election there on 29 March, so reports the Paris-based *Afrik.com*. According to the report, doctors say that to date at least twelve people have been targeted, including a nine-year old girl who had her buttocks sprayed with Tactic Cattle Spray and Paraquat. Another victim, Tonde Mondwiwa, had been left with the skin on his left leg peeling off and with his arms full of blisters. *Afrik.com* quotes unidentified “doctors” as saying “the cell death in Tonde's skin tissues are rapid, his chance of recovery are nil now”. Douglas Gwatidzo, the spokesman for the Zimbabwe Doctors for Human Rights, is quoted as saying that doctors are baffled by the gravity of the injuries and length of time they are taking to heal, despite the fact that some of the wounds were not burns.

18 June At the OECD in Paris, the secretariat of the Financial Action Task Force on Money Laundering (FATF) publishes a new report from its study of measures to combat the financing of WMD proliferation under UN Security Council resolution 1540 (2004). Included are case studies of techniques that have actually been used to transfer and export technology, goods, services or expertise that contribute to the proliferation of WMD. As regards chemical and biological weapons, they include an account of the illegal export of thiodiglycol by Alcolac [see 2 May 89].

18 June In the USA, the National Biodefense Science Board convenes for its second [see 17 Dec 07] meeting. The Board advises the Department of Health and Human Services on prevention, preparedness and response

initiatives for public health emergencies involving chemical, biological, radiological or nuclear agents, whether the release be naturally occurring, accidental, or deliberate.

18 June The *Los Angeles Times* runs an interview with the Iraqi defector codenamed 'Curveball', who claims he never said that Iraq possessed weapons of mass destruction. 'Curveball', whose identity was recently revealed as being Rafid Ahmed Alwan [see 4 Nov 07] says: "I'm not guilty... Believe me, I'm not guilty... Everything that's been written about me isn't true... I never said Iraq had weapons of mass destruction, never in my whole life... I challenge anyone in the world to get a piece of paper from me, anything with my signature, that proves I said there were weapons of mass destruction in Iraq... I'm not the source of these problems." Prior to the US-led invasion of Iraq, former US Secretary of State Colin Powell relied on Curveball's accounts when he presented evidence of Iraqi mobile biological weapons laboratories to the UN Security Council [see 5 Feb 03]. The US Select Committee on Intelligence later determined that Curveball, whose information had been passed to the CIA via German intelligence officials, had fabricated his accounts [see 8 Sep 06]. [See also 20 Mar]

19 June In Paris, there is a seminar on *Middle East Security and Weapons of Mass Destruction Non-Proliferation/Disarmament* hosted by the European Union Institute for Security Studies. Among those addressing the seminar is OPCW Director-General Rogelio Pfiirter, who discusses the subject of 'Confidence Building Measures: Benefiting from Previous Experiences'. The Institute was established by the European Union Council Joint Action of 20 July 2001 and inaugurated on 1 January 2002. It is an independent agency that functions under the European Union's Common Foreign and Security Policy.

20 June The London *Independent* reports that the UK has launched a new investigation into the murder in 1978 of Georgi Markov, who died after he was shot with a pellet containing ricin using a modified umbrella tip. Referring to the Bulgarian newspaper, *Dnevnik*, the *Independent* states that, one month previously, police officers from Scotland Yard travelled to Sofia to request archived information on Markov and sought interviews with forty people connected to the case. Among those was former Bulgarian secret police chief Vladimir Todorov, who was imprisoned for ten months in 1992 for destroying case documents. The trip followed earlier visits by UK investigators Bulgaria in March and April 2007. An unidentified spokesman for Scotland Yard is quoted as saying: "This inquiry remains open and has been a particularly complex investigation... We continue to work with the appropriate international authorities to investigate any new information that is passed or made available to police." Speaking to *Dnevnik*, Andrey Tsvetanov of the Bulgarian police investigating the case says: "We are fully cooperating with our colleagues and are having a 100 per cent exchange of information on both sides – something we lacked in the past. We can now talk about a real investigation and analysis of the case. I hope that our collaboration will help exhaust all case scenarios." According to the *Independent*, under Bulgarian law the statutory thirty-year limitation period will expire in September. [See also 3 Oct 06]

20 June In Dublin, during the trial of a man who allegedly accepted a contract to kill a man and his two sons in 2006 – which ultimately did not take place – the police announce that, after having been tipped off, they had found

small amounts of ricin in his prison cell in Limerick. Essam Eid, an Egyptian national, is alleged to have used a contact lens case to smuggle the substance into Ireland for use in the proposed murder. He is currently being tried at the Central Criminal Court together with Sharon Collins, an Irish citizen who is alleged to have hired his services. According to the Dublin *Independent*, earlier in the month, US citizen Teresa Engle testified to having made ricin with Eid while the two had lived in Las Vegas.

Three weeks later, Collins is found guilty of contracting to have her partner and his two sons, Robert and Niall Howard, killed with ricin; however, the jury fails to reach a verdict over co-defendant Essam Eid's alleged role as the contract killer, but finds him guilty of threatening Robert Howard and demanding a \$157,000 payoff. The judge orders that both defendants be detained until their scheduled sentencing in October.

20 June The US Department of Homeland Security (DHS) has designated more than 7,000 facilities, from chemical plants to colleges, as being "high-risk" sites for potential terrorist attacks and they will be required to take measures to secure their chemical stockpiles, so reports the Associated Press. Earlier this year, around 32,000 businesses with large chemical stores completed an online questionnaire [see 2 Nov 07]; DHS narrowed the sites to 7,000 deemed to have the highest risk of being targeted by terrorists and which will now be required to complete new security assessments to separate them into four risk categories. Those facilities placed in the highest-risk category would eventually receive annual federal checks to ensure they are enforcing federally mandated security measures. The assessments are expected to consider the physical security of each facility; the vulnerability of the site's computer systems; the ability of employees to compromise security; the threat a chemical release would pose to the local population; the volatility of the stored substances once they mix with water; and how easily materials could be stolen from the site.

20 June In the USA, the Science and Technology Directorate of the Department of Homeland Security issues a draft environmental-impact statement relating to the design, construction and operation of a \$450 million national bio and agro-defence facility (NBAF). The proposed facility – a joint effort with the Department of Agriculture – would establish a state-of-the-art high-security laboratory facility to study both foreign animal and zoonotic diseases. The 1,005-page statement assesses each of six proposed locations for the facility: Athens, Georgia; Manhattan, Kansas; Flora, Mississippi; Butner, North Carolina; San Antonio, Texas; and the Plum Island site, New York. The statement also analyses a no-action alternative, in which a new facility is not built. It concludes that the facility would pose a "negligible" safety and health threat to any of the six locations where it might be built and that the potential for material to escape from the laboratory "was none to low for all accident scenarios except an overpressure fire." There is a "moderate" chance at all six locations of such a fire, which would result from the accumulation of a flammable gas in an enclosed space. The report designates the comprehensive risk assessment for a material release at five of the sites as "moderate" owing to "the potential easy spread of a disease through livestock or wildlife" in the area. It says there was a threat of "low to none" on Plum Island in New York State given "the low likelihood of any disease getting off of the island". Roughly ten per cent of the new facility would be designated BSL-4, allowing the space to conduct research on the most dangerous diseases. The statement will now be made available for public review and comment for a period of sixty days. [See also 19 May]

21 June In Rome, there is the 25th International Workshop on Global Security. Among those addressing the workshop – which is organized by the Center for Strategic Decision Research – is OPCW Director-General Rogelio Pflirter, who discusses ‘Proliferation of Weapons of Mass Destruction – What are the Real Threats and How Should We Respond?’ The Center for Strategic Decision Research is a research institute in California, which organizes the workshop on an annual basis in major European cities.

23-24 June In South Korea, at Kunsan Air Base, there is an exercise on joint responses to chemical, biological and nuclear attacks for South Korean and US military personnel. The exercise focuses on decontaminating equipment, soldiers and the base’s primary supply road as well as carrying out reconnaissance using UAVs, including two helicopter-like UAVs fitted with biological agent detection and collection equipment, which have been provided by the South Korean army. Captain Park Ki-chul of the South Korean Army Chemical School Warfighting Experiment Center says the purpose of the exercise is to “verify the biological agent collecting system, [and] in case of wartime the [South Korean] 35th homeland reserve division is going to support [the] US Air Force”.

24 June In Bangkok, Thailand, there is an international training conference to promote chemical and biological safety and security. The purpose of the event – which is hosted by the government of Thailand with assistance from staff and technical trainers from the US Embassy in Bangkok – is to further the aim of ensuring that nonproliferation, safety and security measures are integral components of scientific research and economic applications in the biological and chemical fields. Among those attending is US Principal Deputy Assistant Secretary, International Security and Nonproliferation Patricia A. McNerney.

24-25 June In Sana’a, Yemen, there is a training course on national implementation of the CWC. The purpose of the course, which is organized by the Yemeni national authority and the OPCW, is to increase the capabilities of employees of customs authorities in dealing with chemical substances that could be used to make chemical weapons industry. In total, thirty participants attend the course.

24-27 June At OPCW headquarters, the Executive Council convenes under the chairmanship of Ambassador Oksana Tomová of Slovakia for its fifty-third [see 4-7 Mar] session.

Further to its consideration of this issue at previous sessions, the Council considers and approves amendments to the agreed detailed plan for verification of the destruction of chemical weapons at the US CWDFs in Newport and Pine Bluff, and for the Category 1 chemical weapons at the Russian chemdemil facilities in Maradykovsky and Leonidovka. It also considers and approves a decision on the amendments to the detailed plan for verification of the destruction of chemical weapons at a CWDF facility in India, which had been submitted separately to the Council.

Further to its consideration of this issue at previous sessions, the Council considers and approves the amendments to the facility agreement with the USA regarding on-site inspections at the Newport facility and with Russia regarding on-site inspections at the facilities in Maradykovsky and Leonidovka. The Council also considers and approves amendments – which were submitted separately to the Council – to the facility arrangement with Canada regarding on-site inspections at a single small-scale facility. In addition, the

Council considers and approves amendments, submitted separately to it, with regard to the facility agreement with Sweden for a Schedule 1 facility, and with India regarding on-site inspections at a CWDF. The Council also considers and approves a Note by Director-General Rogelio Pflirter on revisions to the specifications for three items of approved inspection equipment.

The Council considers and approves a decision on the guidelines regarding the declaration of import and export data for Schedule 2 and 3 chemicals.

The Council considers and approves a Note submitted by the Director-General containing lists of new validated data for inclusion in the OPCW Central Analytical Database.

The Council considers and concludes an agreement between the OPCW and Ecuador on the privileges and immunities of the OPCW.

The Council considers the *Draft Report of the OPCW on the Implementation of the Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction in 2007*, and forwards it to the Conference for consideration at its thirteenth session.

On riot control agents, the Draft Report states: “In 2007, the Secretariat received four initial declarations on riot control agents and eight declarations revising previously declared types of riot control agents. By the end of the year, 125 States Parties had declared such agents (mainly tear gases), of which 106 had declared CS/CB agents [(2-chlorophenyl)-methylene propanedinitrile], 64 had declared CN-type agents (2-chloro-1-phenyl-ethanone), 51 had declared other types of riot control agents [identified in an annex as “OC {(6E)-N-(4-hydroxy-3-methoxybenzyl)-8-methylon-6-enamide}, 20; CR {Dibenz(b,f)-1,4-oxazepine}, 11; DM {Diphenylaminochloroarsine (adamsite)}, 2; pepper spray, 3; PAVA, 3; MPA, 2; CND, 3; CNB, 1; CNC, 1; CNK, 1; capsaicin, 1; ethyl bromoacetate, 1; mixture of OC and CS, 1; mixture of capsaicin, dehydrocapsaicin, and nonivamid, 1”], and 16 States Parties declared the possession of riot control agents without providing any further details about their type.”

25 June In the UK House of Commons, the Innovation, Universities, Science and Skills Committee releases *Biosecurity in UK Research Laboratories*. The report “outlines a number of shortcomings in the way capacity for high containment research is provided and highlights where the Government should take action” following the leak of foot-and-mouth disease from the state-funded Pirbright laboratory at in 2007. The report says: “Primarily, we conclude that there is a striking lack of co-ordination between organisations who sponsor and run high containment laboratories. No one organisation or Minister has the remit to maintain a strategic overview of capacity and to co-ordinate these laboratories. There is significant potential for collaboration at a more formal level to assess what facilities are available and make best use of them, identifying any gaps. There is also room for more co-ordination and standardisation of the vetting and training of staff working in this area... We have identified shortcomings in the funding of high containment facilities, particularly for the significant cost of ongoing maintenance... A number of high containment laboratories have been neglected and the funding situation is uncertain. The Government must ensure that dependable funding is provided to maintain such facilities safely... The new regulatory framework to be introduced in the wake of the Pirbright outbreak is a positive step and should provide a framework in which those operating high containment facilities, given sufficient resources, should be able to continue their work to protect the UK from the threat of infectious disease.” The committee sets out a series of recommendations

that it suggests the government implement in order to improve security of the laboratories, including increasing security reviews of high-containment laboratory employees, and designating a single government minister to manage biosecurity efforts. The committee further urges the creation of a biosecurity committee that would issue a report every two years on the state of UK readiness to cope with an outbreak of infectious disease. [See also 22 Apr]

25 June In the UK, BBC News Online reports recently declassified files from the National Archives as showing that since 1971 scientists at Porton Down had been looking into new non-lethal weapons to “incapacitate” rioters in Northern Ireland, and that this effort was accelerated following Bloody Sunday in 1972. Amongst other things, the scientists looked into a new knockout gas, but rejected the idea on the grounds that it could rapidly render the subject unconscious with the risk of causing death. Instead, they worked on an “auto-inject dart”, fired from a gun, which contained either an emetic or an anaesthetic and which was based on the veterinary tranquilizer dart. Another drug turned out to be too dangerous. Files show the medical staff advised there to be “an unacceptably high risk of death” with the vomit-inducing apomorphine.

25 June In Washington D.C., the Center for Science, Technology and Security Policy of the American Association for the Advancement of Science holds a conference on *Select Agent Program Regulations and High-Containment Laboratories*. The aim of the conference is to discuss how advances in the life sciences could help combat emerging infectious diseases, or create or modify dangerous pathogens. Making presentations are Gigi Kwik Gronvall of the Center for Biosecurity of UPMC; David Relman of Stanford University and Nancy Connell of the University of Medicine and Dentistry of New Jersey.

25-26 June In London, the Royal United Services Institute for Defence and Security Studies holds its fourth annual conference in the series Science and Technology for Homeland Security and Resilience. Speakers from government and the private sector discuss the technological and policy advances that have been made for enhancing national security. The ways in which terrorists could use technology against nation states is also analysed, together with the ways in which such possibilities are being countered.

27 June In Washington D.C, the Department of Justice (DoJ) and former Army scientist Steven Hatfill file a court settlement under which the government will pay Hatfill and his attorneys \$2.825 million dollars and purchase for Hatfill an annual annuity of \$150,000 [see also 7 Mar]. Hatfill brought the case against the DoJ after federal law-enforcement officials – including the then Attorney-General, John Ashcroft – informed the media that he was a ‘person of interest’ with regard to the investigation into the anthrax letters attacks [see 15 Oct 01]. In a statement, DoJ spokesman Brian Roehrkas says: “By entering into this agreement, the United States does not admit to any violation of the Privacy Act and continues to deny all liability in connection with Dr Hatfill’s claims.” Regarding the ongoing investigation into the attacks, Roehrkas says: “This investigation remains among the department’s highest law enforcement priorities.”

27 June The US Government Accountability Office transmits to Congress *Homeland Security: First Responders’ Ability to Detect and Model Hazardous Releases in Urban*

Areas is Significantly Limited. The report assesses the limitations of CBRN detection equipment and urban plume modelling for first responders’ use. It states: “Current CBRN detection equipment has significant limitations for first responders’ use in an event involving the release of CBRN materials in an urban environment... [A]ccording to [the Department of Homeland Security] DHS, chemical detection equipment is generally inadequate to provide information on the presence of chemical warfare agents at less than lethal but still potentially harmful levels... [F]or biological detection equipment, the handheld assays first responders use do not provide accurate information because of this equipment’s high level of false positives. In addition, BioWatch, the nationwide environmental monitoring system, does not enable first responders to obtain immediate real-time information about the effects of biological pathogens released in the atmosphere... Despite several initiatives and investments DHS and other agencies have undertaken since 2001, first responders do not have effective tools to respond to events involving the release of CBRN materials in urban areas... While DHS indicated it has missions to develop, independently test, and certify [chemical and biological] detection equipment for first responders’ use, its testing and certification are limited to equipment DHS is developing and does not extend to equipment developed by commercial manufacturers... DHS has no control over what manufacturers can sell to first responders and cannot order first responders not to purchase a certain piece of equipment, unless purchased with federal funds. A formalized process needs to be established for the evaluation and validation of manufacturers’ claims regarding commercial biodetection equipment... While existing urban plume models have several limitations as a primary tool for tracking the release of CBRN materials in urban areas, the TOPOFF exercises [see 16-19 Oct 07] demonstrated the larger problem of confusion among first responders about the timing, value, and limitations of plume models and other analyses following a CBRN event. At best, models can give a close approximation and can help inform a decision maker on the probable plume. The TOPOFF exercises demonstrated that plume model results developed without the incorporation of field data are only estimates that should be used for guidance but are not an accurate rendition of the actual situation facing first responders... The major weakness of these models is that any real source release is nearly always more complicated than the simple scenarios studied in the field and wind tunnel experiments they are based on.” The report sets out four recommendations that DHS should adopt to address the deficiencies identified.

30 June The OPCW Laboratory publishes, in *Rapid Communications in Mass Spectrometry*, its synthesis and study of certain specific chemicals listed generically in the CWC schedules that have not, or barely, been characterized in the literature. The publication provides mass spectra and retention indices for a group of novel 2-alkyl-1,3,6,2-dioxathiaphosphocane-2-oxides, or cyclic “thiodiglycol alkyl-phosphonates”.

30 June The US Department of Defense releases its bi-annual report to Congress on the US chemdemil programme. The report states that “as of June 15, 2008, 54 per cent of the US stockpile has been destroyed”. It further states: “Destruction of the Colorado stockpile by December 2017 does appear possible, but the confidence of accomplishing this goal remains under study... Destruction of the Kentucky stockpile by December 2017 does not appear possible, but remains under study.” It gives the following three

options with regard to destroying the US stockpile of chemical weapons by a deadline of end 2017 [*note*: which would be nearly five years beyond the CWC deadline]: to do nothing and maintain the existing schedule, which would violate the end-2017 deadline by an estimated six years; relocate munitions from storage depots in Pueblo, Colorado and Blue Grass, Kentucky to sites where disposal operations are already under way; or to attempt to increase the pace of disposal preparations and operations in Colorado and Kentucky. The report sets out schedules and cost estimates for the chemdemil facilities at Tooele, Anniston, Umatilla, Blue Grass, Pine Bluff, Newport and Pueblo, which, however, do not yet reflect acceleration options currently under review. The report is submitted in accordance with the Department of Defense Appropriations Act 2008 and the National Defense Authorization Act 2008. [See also 12 Sep 07]

30 June In Algonquin, Illinois, a man is arrested and charged with possession of tetrodotoxin, also known as a pufferfish toxin, after meeting with an undercover federal agent from whom he received the toxin. Edward F. Bachner allegedly posed as a doctor when ordering the 98 milligrams of the toxin from a company in New Jersey. The *Chicago Tribune* quotes Robert Zucker, a professor of neuroscience at the University of California, as saying that the quantity would be “about enough to kill 98 people” through injection. If found guilty, Bachner could face up to ten years imprisonment.

The next day, a federal complaint is filed which states that Bachner had for some years used the Internet to find a hit man to see to the “permanent retirement” of an unidentified woman. According to the *Chicago Tribune*, the complaint alleges that Bachner suggested in one e-mail that payment for the murder would be an AK-47 assault rifle and \$8,000.

Four weeks later, Bachner pleads not guilty to ten charges against him contained in a federal indictment, which alleges that from November 2006 to June 2007 he made five purchases of the tetrodotoxin “for use as a weapon.” Bachner allegedly acquired 98 milligrams of tetrodotoxin by using the alias “Edmund Backer” and indicating he was a researcher. ABC News quotes court documents as stating that four milligrams of tetrodotoxin is considered to be a lethal dose.

1 July In Afghanistan, a contingent of 63 soldiers from the Czech chemical warfare unit based at Liberec, Bohemia, takes over the protection of the Dutch Camp Hadrian military base in the Uruzgan province. Spokeswoman for the unit Zdenka Kosvancova says that the strength of the unit will shortly be increased by a further contingent.

2 July From Chicago, the *Bulletin of the Atomic Scientists* publishes an editorial by Ralf Trapp on the need for an international agency to provide the necessary structure and institutional support for the implementation of the BWC. Dr Trapp, formerly of the OPCW Technical Secretariat, writes: “In my view, this agency should build on the current mandate of the ISU [Implementation Support Unit] [see 20 Aug 07] [...] and also include a mechanism to investigate allegations of breaches of the treaty. A new administration in Washington may offer an opportunity to revitalize efforts to set up such an international organization. It would be important to involve from the outset not only policy makers and security experts but also other stakeholders, including scientists and the industrial community, when defining realistic mandates and setting up effective institutional mechanisms.”

5 July The *British Medical Journal* publishes research by a team from King’s Centre for Military Health Research,

King’s College London, which concludes that multiple vaccinations given to personnel in the UK armed forces in preparation for deployment to Iraq are not associated with adverse health consequences when vaccinations are recorded objectively from medical records. They say that adverse health consequences associated with self reported multiple vaccinations could be explained by recall bias. The purpose of the research – undertaken by Dominic Murphy, research worker; Matthew Hotopf, professor of general hospital psychiatry; and Simon Wessely, professor of epidemiology and liaison psychiatry – was to assess the relation between the self-reported number of vaccinations received and health, and between numbers of vaccinations recorded from individuals’ medical records and health. A total of 4882 randomly selected military personnel deployed to Iraq since 2003 participated in the study and a subset of 378 whose vaccination records were accessed. The researchers found that the main complaints were psychological distress, fatigue, symptoms of post-traumatic stress disorder, health perception, and multiple physical symptoms. The team found that personnel who reported receiving two or more vaccinations on a single day were more likely to report these symptoms, but that such associations were no longer significant when the number of vaccinations recorded in individuals’ medical records was used as the independent variable. [See also 18 Mar]

5 July In Canada, researchers are designing an early warning and response system to prevent the circulation of biological or chemical weapon contaminants through building ventilation systems, so reports Canwest News Service. The system comprises a number of sensors and filters – placed in ducts used for air conditioning, heating and ventilation – that can detect agents in quantities of parts per billion. Janusz Kozinski, engineering dean of the University of Saskatchewan and one of the team of researchers, says the system’s components would operate like a “block in the human vein”.

6 July In Australia, Channel Nine’s ‘Sunday’ programme reports on a recently declassified 1962 letter from US defence secretary Robert McNamara to Australian officials asking that the US and Australian military conduct secret joint testing of several nerve agents, including sarin bombs over an area of rainforest lying more than 600 kilometres north of Cairns. The letter is quoted as stating: “The United States proposes to use the agents GB (sarin), a non-persistent nerve gas, and VX, a persistent nerve gas – both to be disseminated by aircraft delivered by bombs and tanks.” The proposed tests would have involved using around 200 “mainly Australian” soldiers to “determine persistency of chemical agents on jungle foliage and pick-up of such agents by personnel traversing area under simulated military operation”. The proposal was, however, rejected by the then Prime Minister Harold Holt in 1966. Speaking to Channel Nine, Holt’s former staffer Peter Bailey says that the nerve gas plan was considered by the Australian government and that ministers were concerned that rejecting it could damage Australia’s relationship with the USA.

The next day, Defence Minister Joel Fitzgibbon says: “[It is] difficult to believe any such request came forward, but if it did, surely it would have been rejected by the conservative government of the day out of hand... I have asked Defence for an urgent and full briefing on this matter.”

7 July Iran has purchased more than 215 endangered vervet monkeys from a Tanzanian dealer and sent them to a laboratory which is known for conducting experiments into biological weapons, so reports *The (London) Sunday Times*. The *Times* states that the monkeys may have been used for

research involving biological weapons, because the Razi Vaccine and Serum Research Institute in Karaj, 50 kilometres west of Tehran, has been accused of carrying out experiments by an Iranian opposition group. Tanzanian dealer Nazir Manji, who sells over 4,000 monkeys each year to laboratories all over the world is quoted as saying: "Iran is very secretive... They [the Iranian buyers] said it [the monkeys] was for our country, for vaccine... But I think they use it for something else. You know why? Because they don't go on kilos. Iran wants 1.5 kilos to 2.5 kilos, (but) 1.5kg for vaccine is not possible."

7 July In the UK, the BBC's *Newsnight* programme reports an unidentified senior British official as saying that British security officers believe the Russian government was behind the murder of the former KGB officer Alexander Litvinenko, who died shortly after ingesting the radioactive isotope polonium 210 [see 11 Nov 06]. "We very strongly believe the Litvinenko case to have had some state involvement. There are very strong indications," the official says. The officer adds that MI5 believed it had foiled a plot in June last year to kill Boris Berezovsky [see also 21 Sep 03], an outspoken critic of the former Russian president Vladimir Putin. [See also 21 May]

8 July In Hokkaido Toyako, Japan, the leaders of the eight industrialized nations – the UK, Canada, France, Germany, Italy, Japan, the USA, and Russia – convene for the annual [see 6-8 Jun 07] G8 Summit to discuss, amongst other things, the proliferation of WMD. A report issued at the end of the meeting states: "Having passed the turning point towards 2012, we reaffirm our commitment to the Global Partnership against the Proliferation of Weapons and Materials of Mass Destruction as set out in the 2002 Kananaskis G8 Summit documents [see 26-27 Jun 06]... We are determined in our commitment to accomplish priority projects under this initiative in Russia as well as in Ukraine... We also recognize that the GP must evolve further to address new, emerging risks worldwide if we are to prevent terrorists or those that harbour them from acquiring chemical, biological, radiological, nuclear weapons and/or missiles... International assistance in the construction of chemical weapons destruction facilities was recognized at Kananaskis as a key requirement to help Russia to eliminate its stockpiles of chemical weapons, pursuant to its obligations under the [CWC]. Substantial progress has been made in the chemical weapons destruction area since 2002 through Russia's own funding as well as with foreign assistance... Since 2002 more than 1400 research projects have been funded through the International Science and Technology Center (ISTC) in Russia and the Science and Technology Center in Ukraine (STCU) by Canada, the EU, Japan, the US and other countries. In particular, several donors are engaged in projects outside Russia concerning the response to biological threat. The parties seek to improve further the effectiveness of the two Centers... The US is working with Russia and Ukraine on the dismantlement of strategic weapons systems, and enhancing the security of weapons transportation and storage. Several Global Partnership members are implementing bio-security projects in Ukraine... For the destruction of chemical weapons Russia has its own national plan for the construction of five chemical weapon destruction facilities with a view to complying with its legally-binding deadline under the Chemical Weapons Convention... Cooperation and coordination under the GP will be focused on assisting Russia in the implementation of this national plan... Risks of the spread of weapons and materials of mass destruction exist worldwide. The Global Partnership will

address such risks through implementing projects according to the GP common principles. In addressing threat reduction and non-proliferation requirements, the projects will be specifically aimed to implement and realize the GP common principles worldwide. To this end other recipient states and donor states accepting the GP principles and guidelines could be included on a case-by-case basis in an expanded GP for the implementation of projects in line with GP goals. At the same time, the GP will continue to focus on the ongoing GP projects... At the same time, the GP will continue to provide assistance to ongoing GP projects in Russia noting that the areas of the chemical weapons destruction and the dismantlement of decommissioned nuclear submarines are priority areas for Russia."

8 July The United Arab Emirates deposits its instrument of accession to the BWC, thus becoming the 162nd [see 7 Mar] party to the Convention.

8 July Israeli security officials announce that two months previously the Shin Bet (Israel Security Agency) and the Israel Defense Force arrested four members of a Hamas cell that was plotting suicide attacks inside Israel with chemical explosives. The *Jerusalem Post* quotes the unidentified officials as saying that during interrogation, the four confessed to having built a laboratory in an apartment block in Nablus, where they experimented combining bombs with different chemical materials, such as sulphur and nitric acid.

8 July In Cannes, European Union interior ministers discuss a new report on increasing security measures to protect citizens from the threat of a biological or nuclear attack from terrorists by screening more freight arriving at ports and conducting background checks on transport workers. The 53-page classified report, entitled *Freedom, Security, Privacy: European Home Affairs in an Open World*, was compiled by the ministers of the interior of six EU states together with the European Commission, a body known as the Future Group. The *Irish Times*, which does not say how it came into possession of the report, quotes it as saying: "It is obvious that this risk confronts all states with an exceptional challenge as regards the prevention of an attack, immediate reaction to an attack as well as the ensuing civil protection and crisis management measures." The report is also said to enunciate a series of other counter-terrorism proposals – that could be enacted between 2010 and 2014 – including the creation of a network of anti-terrorism centres across the EU to share intelligence gathered by secret service agencies to tackle terrorism. It also assesses key trends in these areas, such as terrorists' increasing use of the internet which "has become a decisive vector for radicalisation". The *Irish Times* quotes an unidentified "senior EU official" as saying the report would lay the groundwork for the development of EU anti-terrorism policy up until 2014.

8 July At UN headquarters, Chairman of the 1540 Committee Jorge Urbina transmits to the President of the Security Council the report of the Committee on compliance with resolution 1540 [see 28 Apr 04]. Security Council resolution 1673 [see 27 Apr 06], which extended the mandate of the Committee for a further two years, required the Committee to submit, by 27 April 2008, the present report to the Security Council on compliance by States with resolution 1540. Security Council resolution 1810 [see 25 Apr 08], which extended the mandate of the Commission until 25 April 2011, extended the deadline for the submission of the present report until 31 July 2008. The report, including its eighteen annexes, runs to a total of

seventy pages. It identifies a number of specific measures that States have in place to implement resolution 1540, ranging from developing new institutional means to incorporate the obligations of resolution 1540 in national practices to adopting new legislation and enforcement measures, executing new policies and creating new assistance programmes directed towards implementation of the resolution. The report states: "Since the adoption of Security Council resolution 1540 in April 2004, the Committee established pursuant to that resolution has made considerable progress in promoting full implementation of the resolution through its intensive work programmes... In the present report the Committee expresses the belief that those activities substantially raised the awareness of the international community concerning the dangers associated with the potential nexus between the proliferation of weapons of mass destruction, their means of delivery and related materials, and non-State actors... The new reports submitted by a number of States since 2006 and the additional information received from other States, or otherwise identified from official governmental sources, have enabled the Committee to present a more complete picture of the measures already in place or planned in the near future. Thus, it has been possible to demonstrate a qualitative improvement in progress towards achieving full implementation of the resolution. Notwithstanding that progress, the Committee concludes that Member States need to do far more than they have already done to implement resolution 1540. Consequently, achieving the goals of the resolution requires further attention by the Security Council and more intensive action, particularly on capacity-building and sharing lessons learned. Among other recommendations, the Committee believes that, consistent with Security Council resolution 1810 (2008), it should strengthen its clearing-house role for channelling assistance to States in need; increase tailored dialogue with and among States to identify assistance needs and assistance projects to meet them; and promote awareness of, make better use of and consider options for developing existing financial mechanisms in order to build capacity to implement resolution 1540. To those ends, it should also work more closely with global and regional intergovernmental organizations and arrangements, within and outside the United Nations system, in fostering the sharing of experience, creating forums for discussion and developing innovative mechanisms to achieve implementation of the resolution." [See also 6 May]

8 July The US Department of Commerce, Bureau of Industry and Security, publishes a final rule to amend the Export Administration Regulations (EAR) to implement the understandings reached three months ago at the plenary meeting of the Australia Group [see 14-18 Apr]. The main purpose of the rule is to revise the description of highly pathogenic avian influenza on the Commerce Control List with new language that is based on the definition currently used by the World Organization for Animal Health.

9 July In Chile, a forensics expert says that former Chilean President Eduardo Frei Montalva died from a combination of toxins, including mustard gas, which was gradually administered to him in hospital whilst he was recovering from an operation in 1982. Making her comments in a statement before the Supreme Court, Carmen Cerda, the chief of the forensics team investigating the death of Frei Montalva case, does not speculate on who could have been behind the poisoning. Judge Alejandro Madrid, whom Chile's Supreme Court appointed to investigate Frei Montalva's death, says he has not issued a final ruling in the case and calls any conclusions "premature" [see also 23 Jul 07].

Meanwhile, Frei Montalva's son, Eduardo Frei Ruiz-Tagle – who was formerly president from 1994 – 2000 and is now a senator – says he has no doubt that his father had been assassinated and called for an investigation into the "intellectual authors" of the killing [see also 23 Jan 07]. During a parliamentary session, he says: "There were organisms like the Chilean army that dedicated themselves to producing chemicals, protochemicals and gases to eliminate people... Unfortunately, they were also used on President Frei."

9 July In the USA, the Department of Health and Human Services (HHS), Office of the Assistant Secretary for Preparedness and Response releases its annual report – for the period August 2006 through July 2007 – to Congress. The report sets out the progress HHS has made on implementing Project Bioshield [see 23 Oct 07] since the establishment of the Public Health Emergency Medical Countermeasures Enterprise [see 18 Apr 07] and in implementing the new authorities provided for in The Pandemic and All-Hazards Preparedness Act 2006. In this regard, the report sets out the uses of particular authorities granted to HHS under Project BioShield to support, facilitate and expedite the research, development, acquisition and availability of medical countermeasures to respond to the adverse effects of public health emergencies involving chemical, biological, radiological and nuclear threats; and puts these into the context of the overall HHS public health preparedness activities addressing both (a) emergencies initiated by human actions, whether intentionally by adversaries or accidentally, and (b) naturally occurring emergencies. The first annual report covered the period July 2004 through July 2006.

10 July South Korea completes the destruction of its stockpile of chemical weapons.

Three months later, in a statement to the First Committee of the United Nations General Assembly, OPCW Director-General Rogelio Pflirter says: "The Secretariat, having confirmed the declaration by this State Party that it had fulfilled its obligations, has consequently ceased its systematic verification there of destruction activities. I have wholeheartedly congratulated this second OPCW Member for its achievement and for the unwavering commitment it has shown in reaching this important goal."

10 July In Kogon, a town in the southwestern Buxoro Region of Uzbekistan, much damage is caused by explosions at an arms depot. Affected residents are later described as suffering from "weakness, nausea, disorientation, heavy loss of hair and other symptoms [...] reminiscent of a mass poisoning with chemical or radioactive substances". Six weeks later, during which time the town had reportedly been "flooded with law enforcement officers", rumours are said still to be rife that chemical weapons had exploded.

10 July At OPCW headquarters, the Open-Ended Working Group on Terrorism convenes for a meeting. The Executive Council established the Group during its 27th session, with a view its examining the OPCW's contribution to global anti-terrorism efforts.

10 July The US Army has developed a new artillery shell that could be in violation of the CWC, so reports *The* (London) *Guardian*. The XM1063 – a "non-lethal personal suppression projectile" with a range of 28 kilometres when fired from a 155mm howitzer – is designed to release 152 smaller projectiles, each of which would disperse a chemical as it parachutes down. The material is intended to "suppress"

individuals without causing injury and to bring vehicles to a halt within a 100-metre area. A presentation by the makers, General Dynamics, says the XM1063 will “suppress, disperse or engage personnel” and “deny personnel access to, use of, or movement through a particular area, point or facility”. According to the *Guardian*, the type of agent involved remains a tightly held secret though it is probably not a known riot-control agent such as CS or pepper spray because of the period for which the target would have to remain incapacitated. The Pentagon is reported to have finished testing the XM1063 in 2007, and could begin production next year. The programme manager will determine when and if manufacturing of the weapon would begin, according to the Army Armament Research, Development and Engineering Center. The *Guardian* concludes that the possibilities as to what the XM1063 might be can be narrowed down to “anti-traction agents [...], a malodorant or some novel chemical agents”.

12 July Russia releases *The Foreign Policy Concept of the Russian Federation*, which amongst other things, states: “[The Russian Federation] reaffirms its unflinching policy of developing multilateral foundations of non-proliferation of nuclear weapons, other weapons of mass destruction and means of their delivery; stands for compliance with the Nonproliferation Treaty, the [BWC], as well as the [CWC]; is actively engaged in international endeavours to control traffic of dual use materials and technologies...”

13 July Iran has yet “to perfect putting a warhead on the Shahab, but they’re working toward full-capability, including nuclear, biological, and chemical”, so reports Canada Free Press, quoting the former deputy commanding general of US Pacific Armed Forces and current co-chairman of the Iran Policy Committee, Major General Paul E. Vallely. Also quoted is Jill Dekker, described as a bio-warfare expert and consultant to NATO: “Both Iran and Syria possess highly advanced chemical and biological weapons programs... However, both chem and bio have been almost ignored or eclipsed by the focus on nuclear weapons.”

13 July In Paris, leaders of 43 nations from Europe, North Africa and the Middle East sign an agreement that aims to remove all weapons of mass destruction from the Middle East. The agreement, signed by the leaders of Israel and Syria as well as a Palestinian representative, calls for the signatories to “pursue a mutually and effectively verifiable Middle East Zone free of weapons of mass destruction.” It calls for the countries to “consider practical steps to prevent the proliferation” of chemical, biological, and nuclear weapons and their means of delivery. The nations are meeting for the first time as a Union for the Mediterranean, an idea conceived by French President Nicolas Sarkozy

14 July In Turkey, following an investigation lasting more than a year, prosecutors file an indictment against the Ergenekon group which, amongst other things, alleges that it attempted to develop chemical and biological warfare. The allegation is contained in a 2,455-page confidential indictment, excerpts of which have been leaked to the press. According to the *Southeast European Times*, the indictment levels numerous charges against 84 suspects, while an additional indictment to follow will charge an additional 20 suspects detained early this month. The alleged leaders of the group are retired four-star generals Hursit Tolon and Sener Eruygur. Chief Prosecutor Aykut Cengiz Engin says the defendants face charges of “inciting others” to commit several assaults, including last year’s Council of State shooting and a

hand-grenade attack on the headquarters of the daily Cumhuriyet in Istanbul. Turkey’s secular opposition claims the government-backed case is a response to the ongoing case against the Justice and Development Party (AKP) at the Constitutional Court, which relates to charges that the AKP has undermined the country’s secular system.

14 July In Richmond, Virginia, the fourth Circuit Court of Appeals upholds a lower court’s decision [see 11 Jan 07], ruling that Steven J Hatfill is a “limited public figure” with regard to news reports written about him, including the article written by Nicholas Kristof for *The New York Times* linking Hatfill with the anthrax letters [see 15 Oct 01]. By 3-0, it rules that for Hatfill to have pursued his claim for defamation he would have had to show that in August 2002 the *Times* had published Kristof’s editorials with “actual malice”. This he had failed to do. It affirms that neither Kristof nor the *Times* had reason to doubt the truth of the editorials, which stated that Hatfill was the main suspect behind the attacks. Hatfill’s lawyer Mark A Grannis says Hatfill will appeal the decision on the grounds that the court interpreted the term “public figure” too broadly. “If Steven Hatfill was a public figure when Kristof wrote about him, then so are we all,” says Grannis.

14-15 July In Bangladesh, there is a national awareness workshop on declarations under the CWC and the technical aspects of OPCW inspections. It is the third workshop to be conducted by the Bangladeshi national authority with a grant given to it by the European Union. Its purpose is to increase awareness among stakeholders regarding aspects related to making annual declarations and receiving OPCW inspections. Attending are 26 participants – from the Bangladesh Chemical Industries Corporation, Bangladesh Association of Pharmaceutical Industries and Bangladesh Armed Forces – who are involved with the implementation of the CWC.

15 July In Iraq, a committee established to investigate allegations regarding incursions made by Turkish troops into territory under the control of the Kurdistan regional government has issued a report which includes a statement to the effect that in addition to cluster bombs, Turkish troops have also used chemical and laser weapons on the territory, so reports the Iraqi-Kurdish fortnightly magazine *Levin*. Nine days previously, in an interview with the Iraqi-Kurdish weekly *Awene*, head of the Kurdistan National Congress Zuber Aydar said: “[I]n Garmiyān, once again chemical weapons were used against the Kurds. Of course, chemical weapons are still in the possession of our enemies, which they use against us... Our message is that countries should not give chemical and banned weapons to Turkey...” [See also 30 Aug 07]

15 July In the UK, there is an emergency preparedness and response exercise involving the simulated release of sarin nerve agent in a coach travelling on a motorway. Participating in *Exercise Orpheus II* are around 200 personnel from Oxfordshire’s emergency services and staff from John Radcliffe hospital, Oxford.

15-16 July In France, a seminar on *The European Union and the Fight against the Proliferation of Weapons of Mass Destruction and their Delivery Systems - Are there New Ways of Strengthening European Action?* is organized by the French Presidency of the European Union. The seminar aims at bringing together representatives of EU member states and European institutions in order to identify and define the new challenges posed by this threat, to evaluate the potential of

European instruments to respond to them, and to identify ways of improving these instruments. Directions for action by the European Union are to be discussed, with a focus on new methods of preventing proliferation and on the fight against its funding.

15-24 July In Bishkek, Kyrgyzstan, a series of exercises take place using computer simulations, which involve military personnel responding to a crisis connected with livestock contracting a disease and terrorists attacking a dairy in the town of Osh. Exercise 'Regional Cooperation-2008', which involves servicemen from Kyrgyzstan, Afghanistan, Kazakhstan and Pakistan, includes simultaneous terrorist attacks in Bishkek, in which extremists attack vital facilities. The scenario involves terrorists contaminating water at water installations, using mustard gas on public transport, and blowing up a chemical plant. The Kyrgyz Ministry of Defence says that the exercises have been organized in accordance with a plan of bilateral cooperation between the Kyrgyz armed forces and the US Central Command.

17 July The Chinese Public Security Ministry releases a manual that sets out procedures for spotting and responding to 39 scenarios of terrorist attacks during the forthcoming Olympic Games in Beijing, including attacks using chemical, biological and nuclear weapons. According to Xinhua news agency, the manual was compiled by counterterrorism experts at the request of Chinese police officials. In a statement, the Ministry says: "The book is practical. If correctly following its instruction, citizens are very much likely to escape and even stop a terrorist attack."

21 July Syria is currently in possession of WMD transferred to it by Iraq under agreements – going back as far as the late 1980s – that provided for assistance by each state if either was threatened by an enemy nation, according to the former southern regional commander of the Fedayeen militia in the late 1980s and Saddam Hussein's personal friend. In an interview with WorldThreats.com, Ali Ibrahim al-Tikriti, who defected from Iraq shortly before the 1991 Gulf War, says: "Saddam knew that the United States were eventually going to come for his weapons and the United States wasn't going to just let this go like they did in the original Gulf War. He knew that he had lied for this many years and wanted to maintain legitimacy with the pan Arab nationalists. He also has wanted since he took power to embarrass the West and this was the perfect opportunity to do so. After Saddam denied he had such weapons why would he use them or leave them readily available to be found? That would only legitimize President Bush, who he has a personal grudge against. What we are witnessing now is many who opposed the war to begin with are rallying around Saddam saying we overthrew a sovereign leader based on a lie about WMD. This is exactly what Saddam wanted and predicted. [See also 25 Aug 03 and 28 Jan 06]

21 July The UK House of Lords Select Committee on Intergovernmental Organisations releases *Diseases Know No Frontiers: How Effective are Intergovernmental Organisations (IGO) in Controlling their Spread?* The purpose of the report is to examine how the UK government is making use of its membership of IGOs in order to achieve objectives which meet both UK interests and those of the international community generally. Having regard to this, the report therefore examines the effectiveness of the IGOs themselves and the way they function without, however, attempting to audit their performance. On the question of the threat from bioterrorism,

the report states: "We have concluded that, so far as controlling the spread of infectious diseases is concerned, the deliberate release of toxic organisms should not be considered as in a separate category from the normal arrangements for controlling natural outbreaks. We recommend that the Government should support, both nationally and intergovernmentally, generic surveillance and response systems which are capable of addressing both deliberate and naturally occurring outbreaks of infectious diseases."

21 July In the UK, a judge rules that an Iraqi national suspected of terrorist ties may not enrol on college courses to study chemistry and biology. The student, identified only as 'A.E.', had sought to reverse a decision last September by Home Secretary Jacqui Smith to prevent him from enrolling on the courses on the grounds that he could pass the knowledge acquired on to terrorists [see 1 Nov 07]. In upholding Smith's decision, Justice Stephen Silber refers to an audio statement by Abu Ayyub al-Masri, also known as Abu Hamz al-Muhajir, the leader of al-Qaeda in Iraq, which called for scientists and explosive experts to travel to Iraq to experiment with unconventional "dirty" and "biological" weapons against US troops based there [see 28 Sep 06]. Silber says: "[A.E. was motivated by] a wish to use the information gained on such courses for some form of terrorist purposes which might be to teach others how to produce explosives or pathogens or to do so himself, especially in the light of the call for help from al-Qaeda in Iraq... In my view, this call for scientific information to be used in the holy war against the West is significant... [By studying the subjects A.E. would be] in a substantially stronger position to produce or to assist in the growth of pathogens than somebody who had not... These pathogens are and can be very dangerous and one such culture is anthrax which can be obtained, cultured and disseminated as a powder."

22 July UK Prime Minister Gordon Brown announces, in the House of Commons, that the government is creating an inter-agency forum of specialists to assess emerging threats posed by terrorism and other sources, in accordance with the UK's first National Security Strategy published four months previously [see 19 Mar]. The forum will have "a core group of 12 publicly appointed members reflecting the broad range of the subject areas in the national security strategy" and "is likely to include people with a range of experience and expertise in [security challenge] issues". Additionally, a register will be created of "up to 100 expert associates who could be called upon to provide advice in specific areas". The forum will provide annual reports on its findings to the Cabinet Committee on National Security, International Relations and Development, which itself will be supported by a new national security secretariat. A unit will also be established that will "co-ordinate the security-related horizon scanning currently undertaken in a number of Government Departments, with the intention of giving it an overarching framework and a more coherent output".

22 July In the UK House of Commons, Minister for Security, Counter-Terrorism, Crime and Policing Tony McNulty announces that the government has now completed a review of what it needs to do to strengthen security to protect against the use of hazardous substances for terrorist purposes. Though he says that the review will not be published for security reasons, McNulty provides the following summary of the main conclusions of the review: "The review shows that a substantial amount of work has been undertaken in this area. It also identifies areas where further improvements could be made but recognises that we must ensure that protective

security measures are proportionate to the risk... The main outcome of the review is a new risk-based strategic framework to drive prioritisation of work to reduce the accessibility of hazardous substances for terrorist purposes... The framework will direct a cross-Government programme of work to reduce the vulnerability of highest risk substances. This programme will be delivered under the 'Protect' strand of the Government's Counter-Terrorism Strategy (CONTEST) and will be led by the Office for Security and Counter-Terrorism in the Home Office... This framework has prioritised hazardous substances on the basis of the risk they pose, taking account of the threat, vulnerability and impact of those substances. The review examined the vulnerability of substances across their life-cycle (from their precursors through to their disposal)... We are reviewing the pathogens and toxins listed under schedule 5 of the Anti-Terrorism Crime and Security Act 2001 with the assistance of the Health Protection Agency. We are also considering whether further legislative changes are required to clarify the scope of the application of the legislation, and will consult on any proposed changes in due course as appropriate... We are also considering what further work may be appropriate to reduce the vulnerability of hazardous sites and substances to insider action. This will build on existing work led by the Centre for the Protection of National Infrastructure and take account of the findings of the independent review of personnel security in the transport sector by Stephen Boys Smith."

22 July In the US House of Representatives, testifying before the Homeland Security Subcommittee on Emerging Threats, Cybersecurity, and Science and Technology, the Chief Medical Officer at the Department of Homeland Security, Jeffrey W. Runge says "the risk of a large-scale biological attack on the Nation is significant". He continues: "We know that our terrorist enemies have sought to use biological agents as instruments of their warfare, and we believe that capability is within their reach... We have determined that al-Qaeda seeks to develop and use a biological weapon to cause mass casualties in an attack on the homeland. Our analysis indicates that anthrax is a likely choice; and a successful single-city attack on an unprepared population could kill hundreds of thousands of citizens. A coordinated attack on multiple targets would come much closer in magnitude to our enemy's goal. Because of this, we see the threat of an aerosolized anthrax attack as our number one bioterrorism concern, and it is that threat which we vigorously plan, invest and intend to defeat." [See also 16 Jul]

22-23 July In Buenos Aires, there is a regional meeting of representatives of CWC national authorities and parliaments in Latin America and the Caribbean.

23 July In China, the Islamic Party of East Turkestan – an ethnic Uighur group that has been labelled a terrorist organization by both the USA and China – reportedly releases a video that, amongst other things, says it is able and willing to use biological weapons in an attack during the Olympic Games in August.

23 July Russian President Dmitriy Medvedev has signed a federal law "on the ratification of the protocols to the agreement between the Russian Federation and the United States of America concerning the secure and reliable transportation, storage and destruction of weapons and the prevention of the proliferation of weapons [including nuclear and chemical] from 17 June 1992", so states a press release by the Kremlin press office. According to RIA Novosti news agency, the law was passed by the State Duma three weeks

previously and approved by the Federation Council nine days thereafter. The protocols to the mentioned agreement ratified by the law, signed in Moscow and Washington on 15 and 16 July 1999 and in Moscow on 16 June 2006, extend the validity of the agreement in question for seven years.

23 July Czech Defence Minister Vlasta Parkanova says the government has approved the military strategy of the Ministry of Defence for the next twenty years, which puts weapons of mass destruction and ballistic missiles as the least likely of all threats. According to the Prague daily *Pravo*, the move was contrary to the recommendation of Foreign Ministry officials, who wanted such weapons to be assigned as the country's high-priority threats. The Defence Ministry says that it made the decision so as to assign higher standings to more specific security threats. "It will be more and more difficult for the Czech Republic to maintain sufficiently strong conventional forces in the whole spectrum of abilities," the strategy.

24 July Malaysia plans to expand the patrol areas of maritime policing along its coastlines in a new effort to combat terrorism, according to the *New Straits Times*. Speaking to the *Times*, Police Inspector General Tan Sri Musa Hassan says: "Police boats will patrol coastal areas more frequently to shield the country against parties which have the intention of breaching the nation's peace and security... We have seen anthrax threats in the country before. CBRN has been trained and specialized to handle such situations." He adds that the country's CBRN response force will be involved in the enforcement operations.

28 July In South Waziristan, Pakistan, a suspected US missile strike on a house and madrasa near the Afghan border is reported to have killed Abu Khabab al-Masri, who is widely considered to be the leading chemical weapons expert for al-Qaeda, according to Agence France-Presse, quoting "a senior Pakistani security official", who spoke on condition of anonymity. Previously, al-Masri [see also 21 Jul], an Egyptian national also known as Midhat Mursi al-Sayid Umar, was erroneously reported to have been killed in 2006 in a strike aimed at al-Qaeda deputy head Ayman al-Zawahiri [see also 11 Jun 06]. The official says: "We believe he [al-Masri] was killed in this strike... It was his hide-out and information that has been shared with us says he was targeted in this strike." Another unidentified official is quoted as saying that at least three missiles hit the house and madrasa, killing six people, including foreigners, and wounding three others. In a statement, Chairman of Pakistan's Joint Chiefs of Staff Committee General Tariq Majid says: "Our sovereignty and territorial integrity must be respected, any violation in this regard could be detrimental to bilateral relations [with the USA]." The Associated Press quotes Defense Department spokesman Bryan Whitman as responding to the question as to whether a strike took place, as follows: "We have a very close working relationship with Pakistan. We respect their sovereignty. Pakistan is an ally in the global war on terror. Beyond that, I have nothing specific for you."

A week later, Mustafa Abu al-Yazid, al-Qaeda's top leader in Afghanistan, issues a statement, dated three days previously, confirming that Abu Khabab al-Masri was among four al-Qaeda operatives killed, though it does not provide details on how or when they were killed. The statement reads thus: "Although Abu Khabab is gone, he left behind him a generation who will seek revenge and punishment with God's help... And while the 'expert' is gone, he left behind experts who were taught and trained under his hands throughout the years."

28 July The Russian company GNPP Bazalt is developing a range of non-lethal weapons, of which “chemicals, various types of police gases with reduced negative effect on humans” account for between 50 and 60 per cent, so reports Interfax-AVN military news agency.

28 July In London, a Danish national appears before Southwark Crown Court for a pre-trial hearing on charges of transferring chemical and biological weapons to an aide to Ugandan President Museveni, so reports *The (Ugandan) Black Star*. The Ugandan *Daily Monitor* reports having seen the indictment, which alleges that between 1 April 2007 and 4 April 2008 Niels Jørgen Tobiasen – a director for a Copenhagen-based firm that supplies software and hardware to armed forces in the USA, UK, NATO and more than 20 other countries – “conspired together with Ananias Tumukunde [the aide to Museveni, who has been in the custody of the UK authorities since the beginning of April on five charges relating to money laundering] and Lt. Col. Rusoke Tagaswire to transfer, acquire, use or have possession of criminal property” in contravention of the UK’s Proceeds of Crime Act 2002. The Prosecution alleges that Tobiasen “on the 15th day of January 2008 transferred criminal property, namely chemical and biological weapons”. Tobiasen was arrested on 17 July 2008, while Tumukunde was apprehended on 2 April 2008.

Three days later, the *Black Star* prints the following response by Ian Day: “I was the Operations Director for the Ugandan project which your article [refers]... We do not deal in chemical, biological, radiological or nuclear weapons. We are a UK-based company, completely cleared by the UK government to supply equipment to many governments throughout the world, including Uganda. All equipment supplied had full and complete UK Export Licenses, authorized by the Foreign Office and the UK Ministry of Defense... The equipment supplied to the Ugandan Presidential Guard Brigade is designed to detect the presence of somebody/some group trying to use poisons or chemical/biological agents... The Ugandan Government have no capability to use Chemical or Biological weapons, neither would they want to... Mr. Tobiasen has nothing to do with operations and was the Financial Director of the company which supplied this detection and protection equipment... We are regularly inspected by UK Government Officials (both the UK and Danish Governments have some of the strictest rules anywhere in the world).”

Three weeks later, Tobiasen pleads guilty to one count of making corrupt payments, however, he still faces the charge relating to the transfer of chemical and biological weapons, and one other charge, alongside Tumukunde and Tagaswire. The UK government subsequently says it will return £40,000 to Uganda, which was paid by Tobiasen to Tumukunde as part of a bribe, though according to the *Daily Monitor*, it is not clear why this is being paid to the Ugandan government.

28 July The US Congressional Research Service releases *Terrorism and Security Issues Facing the Water Infrastructure Sector*. The report presents an overview of the US water supply and water quality infrastructure, describes security-related actions by the government and private sector since 11 September 2001, and discusses additional policy issues and responses, including congressional interest.

28-31 July In Virginia, Oregon, Colorado and Indiana, Defense Department agencies, together with state and local emergency-preparedness organizations participate in a series of exercises aimed at testing disaster-preparedness communications and coordination systems. Among the areas of focus of Exercise ‘Noble Resolve ’08’ is managing population

movement in the event of a natural disaster, and ensuring the long-term maintenance of consequence management forces following a possible chemical, biological, radiological, nuclear or high-yield explosive event. The exercises are sponsored by the US Joint Forces Command, Norfolk, Virginia.

29 July In Frederick, Maryland, Dr Bruce E Ivins dies aged 62 from an overdose of acetaminophen and codeine, apparently self-administered. Set to retire in September, Dr Ivins had been employed for most of his professional life at the US Army Medical Research Institute of Infectious Diseases, Fort Detrick, as a research microbiologist working in the field of vaccines against bacterial diseases of biological-warfare importance, principally anthrax. Three days later, the *Los Angeles Times* publishes investigative reporting by staff writer David Willman stating that the US Department of Justice had been about to charge Dr Ivins for the ‘anthrax letter’ attacks of 2001 [see 4 Oct 01 Florida, 12 Oct 01 New York City, 15 Oct 01 Washington, and 27 June Washington] and relating what seem to be details of the case against him. The report quotes a spokeswoman for the Federal Bureau of Investigation declining to comment, but notes that FBI Director Robert Mueller had during the previous week spoken to CNN about “great progress in the investigation” and of “breakthroughs” in the anthrax-letters case [see also 28 Mar]. Over the next five days, before the FBI officially breaks its silence on the case, there follows detailed and often unattributed reporting in the American press, and much commentary, especially in electronic journals and blogs, including expressions of opinion by well-known experts in the field. On 6 August, the Department of Justice convenes a press conference to announce that an indictment against Dr Ivins had been prepared and that, with his death, the case was now in the process of being closed.

30 July In Manila, Philippine Defense Secretary Gilberto Teodoro signs a memorandum of understanding with Canadian Ambassador to the Philippines Robert Desjardins under which Canada will donate 300 suits designed to protect against hazardous chemicals. Teodoro says: “[T]he equipment will not only be used in case of CBRN attack. These can be used in ordinary chemical spill or ordinary gas explosion, for example.” Under the memorandum of understanding, Canada will also train Filipino troops in the use of the equipment. Desjardins says; “We were very pleased to be involved with extensive training of people from the Armed Forces (of the Philippines), from the police, from the health services, from the fire services in chemical biological, radiological and incident response...” In March 2007, Canada made a similar donation of protective suits to the Philippines.

30 July Iraq transported WMD by lorry to Syria and also to Lebanon’s Bekaa Valley in the three months prior to the US-led invasion of Iraq [see 20 Mar 03], according to the former national director of prison and jail operations in Iraq, who refers to statements made by about forty Iraqi prisoners. In an interview with WorldNetDaily, Don Bordenkircher says the prisoners – who were members of the Iraqi military or civilians assigned to the Iraqi military, often stationed at munitions facilities – “boasted of being involved in the transport of WMD warheads to Syria”, while a smaller number of prisoners claimed “they knew the locations of the missile hulls buried in Iraq”. He adds that some of the prisoners “wanted to trade their information for a release from prison and were amenable to showing the locations”. [See also 21 Jul]

30 July The US Institute of Medicine releases *Epidemiologic Studies of Veterans Exposed to Depleted*

Uranium: Feasibility and Design Issues. The report was compiled following a request by the Department of Defense for guidance in evaluating the feasibility and design of an epidemiologic study that would assess health outcomes of exposure to depleted uranium. The report, which was compiled by the Committee on Gulf War and Health: Updated Literature Review of Depleted Uranium, examines several options to study health outcomes of depleted uranium exposure in military and veteran populations. It concludes, however, that it would be difficult to design a study to comprehensively assess depleted uranium-related health outcomes with currently available data. It states that the most useful information about depleted uranium-related health outcomes would come from a prospective cohort study if future military operations involve exposure to depleted uranium. The report sets out a series of recommendations aimed at improving future epidemiologic studies and identifying current active-duty military personnel and veterans with potential exposure to depleted uranium.

31 July In Hawaii, a US Army team destroys four chemical weapons at Schofield Barracks using the Transportable Detonation Chamber TC-60, a day after destroying two others. KITV quotes unidentified Army 'officials' as saying that beforehand, the chamber was used to destroy another 65 other chemical weapons. The Army says it will now disassemble the chamber and send it to the mainland for further operations.

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

Forthcoming Events

11-13 February

The Hague, Netherlands
Meeting of governmental experts to consider the report submitted by the Scientific Advisory Board to the CWC
Second Review Conference
details: www.opcw.org

17-20 February

The Hague, Netherlands
55th Session of the OPCW Executive Council

17-20 April

The Hague, Netherlands
56th Pugwash Conference on Science and World Affairs.
Invitation only.

21-24 April

OPCW Headquarters, The Hague
56th Session of the OPCW Executive Council

30 June - 3 July

OPCW Headquarters, The Hague
57th Session of the OPCW Executive Council

24-28 August

Geneva, Switzerland
BWC Meeting of Experts 2009

13-16 October

OPCW Headquarters, The Hague
58th Session of the OPCW Executive Council

5-8 November

Wiston House, Sussex, UK
Wilton Park Conference *Responding to State-Assisted Terrorist use of CBRN Weapons*
details: www.wiltonpark.org.uk

30 November - 4 December

The Hague, Netherlands
14th Session of the Conference of the States Parties to the CWC

7-11 December

Geneva, Switzerland
Meeting of the BWC States Parties

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- Brewer, Noel T, William K Hallman and Howard M Kipen. "The symmetry rule: a seven-year study of symptoms and explanatory labels among Gulf War veterans", *Risk Analysis* vol 28 no 6 (December 2008) pp 1737-48.
- Brône, Bert, Pieter J Peeters, Roger Marrannes, Marc Mercken, Ronny Nuydens, Theo Meert and Harrie J M Gijsen. "Tear gasses CN, CR, and CS are potent activators of the human TRPA1 receptor", *Toxicology and Applied Pharmacology* vol 231 (2008) pp 150-56.
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