

# 23rd Workshop of the Pugwash Study Group on the Implementation of the Chemical and Biological Weapons Convention Achieving a successful outcome of the Sixth Review Conference<sup>1</sup>

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Geneva, Switzerland, 3-4-December 2005  
Workshop report C A McLeish (Harvard Sussex Program)

This was the twenty-third of the current Pugwash workshop series on chemical and biological warfare and the twelfth to be held in Geneva. The workshop was hosted by the Swiss Pugwash Group, and was jointly convened by the Harvard Sussex Program on Chemical and Biological Weapons (HSP). More than fifty-nine people attended the workshop, by invitation and in their personal capacities, from 21 countries: Australia, Belgium, Brazil, Canada, China, Finland, France, Germany, India, Ireland, Italy, Japan, the Netherlands, New Zealand, Norway, Pakistan, Russian Federation, Sweden, Switzerland, the United Kingdom (UK), and the United States of America (US). This report of the workshop is the sole responsibility of its author, who was asked by the meeting to prepare a short report in consultation with the Steering Committee. It does not necessarily reflect a consensus of the workshop as a whole, or of the Study Group.

The meeting opened with a welcome from the Swiss Pugwash Group and the observation that this workshop was occurring at a critical moment - one year until the 6th Review Conference of the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction (the BWC) - and at a moment when the situation in arms control and non proliferation was not encouraging. It was observed that the international community, including Pugwash, needs to participate in a common search for answers.

The focus of the workshop was the Sixth Review Conference of the BWC although it was noted that the third Intersessional Meeting of States Parties was due to open in Geneva on 5th December 2005, the day following the close of the workshop. The workshop received its regular report on CWC progress in implementation and also received an update on United Nations Security Council Resolution 1540 (2004). In addition to these reports on developments outside the BWC during the previous year, the main items for discussion by the workshop came under the rubric of achieving a successful outcome at the Sixth Review Conference including: what might constitute a successful outcome and what needs to be done to achieve a successful outcome. In looking beyond the Sixth Review Conference, the workshop discussed action plans and topics for future Intersessional Meetings.

## **CWC Progress and Implementation**

A report was given on the status of implementation of the Chemical Weapons Convention including updates in relation to chemical weapons destruction and CWPF destruction and/or conversion; verification overview; action plans; and education and outreach. Other items

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<sup>1</sup> A list of participants is included below in this document.

touched upon included verification system optimization, international cooperation, assistance & protection and institutional issues such as the re-election of the Director-General, the establishment of the working group to prepare for the 2nd CWC Review Conference, and the report by the Director-General, due by mid 2006, evaluating the effects of tenure-policy implementation.

Since the last report to the workshop destruction figures for chemical weapons agent tonnes and items, including munitions and containers, stands at some 12,200 agent tonnes out of a declared total of 71,400 and 2,375,105 items out of a total of 8,671,564 (as of end of October 2005). Whilst destruction of chemical weapons production facilities is on track, the workshop was told that conversion of facilities has been delayed for reasons such as the EC decision-making processes and Libya entering the regime as a latecomer. The workshop was reminded that conversion of such facilities was originally seen as an exception but is now applied to approximately one third of all declared production facilities.

With regard to verification, the workshop was informed that, as of end October 2005, some 2256 inspections had taken place comprising of 124,479 inspector days. Over 70 percent of the total number of inspector days have been at Chemical Weapons Destruction Facilities despite there being only 43 such facilities declared to the OPCW by six States Parties. An opinion was expressed that the CWC requires these facilities to be under verification at all times. Such a verification demand has resource implications if efforts to increase the pace of destruction are not matched with an increase in inspectorate size.

The report then turned its attention to the Action Plan on National Implementation of Article VII. It was noted that the plan was based on a recommendation from the First Review Conference (28 April - 9 May 2003) and adopted by the Conference of the States Parties at its eighth session (20-24 October 2003). The target adopted then was to have full Article VII implementation by the tenth session (7-11 November 2005). At that tenth meeting the action plan was reviewed and considered basically a success because the number of countries working on national legislation had increased. However, concerns about CWC national implementation remains - the main concern being the numbers of States Parties without legislation, or with major gaps in their legislation, but with significant chemical activities in production, trade, or use.

In recognition of this ongoing concern the workshop was informed that it was decided at the tenth session of the Conference of the States Parties to adopt a series of follow-up measures focused on improving implementation. For those States Parties without a national authority and legislation, the Technical Secretariat has requested them, by the end of 2005, to submit an implementation plan with target dates. The Technical Secretariat in turn is now required to report to each Executive Council session on the status of implementation. Should full implementation not be fulfilled by the 47th session of the Executive Council in November 2006, or notification of steps submitted to the Technical Secretariat, the Executive Council will consult with those States Parties before a final review, scheduled to take place at the eleventh session of the Conference of the States Parties in December 2006, decides whether any appropriate measures should be taken to ensure full implementation.

Turning to the universality action plan adopted by the Executive Council at its twenty-third meeting (October 2003), the speaker noted that it "was inspired by the idea" of full universality of the Convention by 2007. In the year since the last update to the workshop, the speaker reported that good progress had been made - since October 2004 seven new states parties had

joined the CWC and it is hoped that Iraq will join the CWC in the next year. It was noted that the OPCW has no regional offices and has no plans to establish them so much of the universality work depends on its relationship with regional organisations such as EU, AU, PIF, OAS, ASEAN. It was reported that the OPCW is working actively in the African region and that an exception to the 'no regional office' stance might be made for this region. It was reported that communication channels with the Arab League are now open but that there was still no progress regarding North Korea.

Regarding international co-operation the workshop was told that at the tenth session of the Conference of States Parties a decision had been adopted on Article XI implementation. The issue of Article XI implementation has remained unresolved since the PrepCom era so achieving a decision on this issue should be seen as confirming progress. Some of the main elements of the decision outlined to the workshop included: confirming the current portfolio of the TS ICA programmes; encouraging States Parties to develop cooperation projects; exchange scientific/technical information; chemicals & equipment and offers of cooperation; encouraging further programme development; and avoiding duplication of efforts by other International Organisations. The workshop was told that this decision still left many issues unresolved - for example, for some States Parties the main obstacles to Article XI implementation remain trade regulations and the Australia Group. There are also divergent views as to how much international cooperation programmes should be implemented by the OPCW, and how much by States Parties.

One of the areas of interest to the workshop was the matter of education and outreach. The workshop was told of the joint efforts with IUPAC on how to integrate CWC requirements into professional codes of ethics/conduct and how to integrate CWC awareness and knowledge about its implementation into chemistry education. In October 2005 the material produced by IUPAC was piloted at a conference in Moscow. The next pilot will occur in Seoul in June 2006.

A further area of interest to the workshop was the advancement in technology relevant to the Convention. It was suggested that more attention needs to be given to the non lethal weapons issue. Concern was expressed that asking whether a new technology was covered or not could be eroding the norm contained in the Convention. Although acknowledged as a delicate issue, several participants recommended that an informal discussion process ought to be initiated now. It was believed that such a process need not necessarily be done under the auspices of the OPCW.

In addition to the more general report on the OPCW, the workshop also received a paper on what next for the OPCW. It was noted that in principle the CWC regime was in better health than the other regimes dealing with WMD and that the programme on universality and national implementation was impressive. The issue of national implementation, the workshop was reminded, will continue to be an agenda item because situations and environments will change. Regarding the balances in verification efforts, it was suggested that changes can take place without changes to the Convention. It was suggested that the current verification effort is not properly supported and, because verification was a basic provision of the Convention, lack of support constituted a serious problem.

It was also noted that the ten-year destruction deadline will not be met. Although not questioning the need to extend that deadline to 15 years, questions were raised about the parameters of the decision that the Convention would necessitate. Several participants asked whether this would be a one-time-only extension or would States Parties to the Convention be

forced to consider a new deadline if that extended deadline is not met. Participants also expressed concern that the Convention would be undermined if a second extension was requested because several thousand tonnes of agent remained in tact. It was asked whether it was time to revisit the definition of 'destruction' so that a second extension will not be requested.

### **UNSCR 1540 (2004)**

The workshop was reminded that United Nations Security Council Resolution 1540 put the United Nations in the front line of arms control efforts again. Since UNSCR 1540 came into force, the 1540 Committee has received 124 responses, of which 35 have been followed up. Of the 67 states that have thus far failed to respond, most are in the African, Caribbean and Pacific regions. The power of UNSCR 1540, the workshop was reminded, is that it applies to both State Parties of the BWC, and also to non State Parties: indeed its measures do not differentiate between those inside the treaties and those outside of them. However, because the focus of Resolution 1540 is terrorism there is pressure upon even small states to adhere strictly to the resolution so that terrorists cannot exploit them.

It was suggested to the workshop that the respective organizations of the WMD treaties might wish to explore the full possibilities and opportunities offered by Resolution 1540. It was thought there some pressures existed that might lead to the possibilities offered by Resolution 1540 being squandered. These include a lack of experts from developing countries; indifference or lack of support in capitals; and placing too much expectation on this measure whilst it is still new and fragile.

The workshop was told that the greatest threat to Resolution 1540 was bureaucratic: that 1540 would be swallowed up into other counter terrorism proposals and be merged with the other UNSC committees to form some sort of super committee on counter terrorism.

The workshop was informed that Argentina had held a Resolution 1540 workshop in September of this year and that a further workshop will be held in China next April. It seems clear that the mandate of the resolution will be extended beyond 2006 so achieving that extension will be the next hurdle.

The workshop agreed that Resolution 1540 has been a useful tool in raising awareness about the WMD problem and in mobilizing State Parties to work on or pass national implementation legislation. However, participants noted that the measure has also caused problems, such as State Parties prioritising Resolution 1540 reports over their other treaty obligations. It was thought that this problem was caused by State Parties not understanding that 1540 obligations should have already been met by being a member of one of the WMD treaties - indeed those State Parties that are already in the CWC and BWC are already obliged to enact Resolution 1540 priorities.

As states will be reviewing their obligations under both the BWC and Resolution 1540 during 2006 the workshop considered how the BWC and 1540 could and should interact in the future to achieve a more effective non-proliferation framework.

Despite the complementary nature of the two approaches, the workshop was reminded that certain practical differences in their implementation make the two very different animals. For example, there is a fundamental difference in the scope of the two regimes and in who is legally

bound by their provisions. It was thought though that within those differences lay a certain degree of overlap in both purpose and aim. Both, for example, contain similar language and are founded on an international norm against the weaponization of disease (although where the BWC proscribes these weapons in their entirety, the UNSC Resolution 1540 proscriptions only apply to non-state actors). By comparing key elements of Resolution 1540 with texts from the BWC, the workshop was reminded that there is a confluence in the activities pursued under the two regimes.

These include

- Endorsing activities to create or strengthen mechanisms for regulating access to certain technologies and resources;
- Enhancing implementation assistance so that those States in a position to offer assistance (whether directly or indirectly) do so;
- Pursuing the universalization and strengthening of the BWC;
- Ensuring the effective national implementation of the provisions of the BWC;
- Developing more effective cooperation and enhancing dialogue amongst States as a means of addressing the proliferation of biological and toxin weapons;
- Improving awareness-raising activities for industry and the general public;
- Regularly reviewing the regimes to facilitate any decisions necessary to strengthen their activities.

It was suggested that the future evolution of Resolution 1540 might include assessing the legislative completeness of states' replies, harmonizing regulations between countries (e.g. harmonization of national control lists) and harmonizing legal jurisdictions.

The workshop was reminded that at present, there is no implementing body or organization in place to support the work of the BWC that is comparable to the OPCW or the IAEA. It was suggested that this lack of institutional presence may be a significant barrier to the integration of the BWC with other control mechanisms, including Resolution 1540, and that this complicates the development of any ongoing relationships. The authors of the report told the workshop that they believed that given the confluence of activities, there was a clear need to develop an operational mechanism for the BWC to cooperate with the 1540 Committee so that duplication of efforts can be avoided and benefits maximised.

An historical note The workshop received an historical note examining the tension between the taboo against germ weapons and the institutional norms of government secrecy which can be seen to have been present during the offensive BW programmes in the 20th century.

The historical note reminded the workshop that at the same time as prosecuting defeated fascist leaders for crimes against humanity and for conducting a war of aggression in Nuremberg, Allied Forces were suppressing evidence of identical crimes at the Toyko war crimes trial. It was suggested that this was because US intelligence and military officials were brokering a secret amnesty agreement with Japanese biological weapons scientists to protect them from

war crimes prosecution - these scientists had been responsible for inhumane research on Chinese civilians and others and for repeated attacks on Chinese cities and towns with lethal and debilitating disease agents.

In discussion the workshop was informed that many interviews were now being conducted in China about this period and that over 20 books (in Chinese) had been written on the subject. The workshop was also informed that the former offensive programme was still a taboo subject in Japan and that consequently discussions about its nature or consequences do not take place. It was suggested that not having these discussions hampers the current development of Japanese thoughts on disease protection. It was also claimed that the Japanese government still has documents about Unit 731 which it refuses to release and that such actions prevent this period from being laid to rest.

The workshop noted that there was much contemporary relevance for this historical study. The paper highlighted for example the unusual and complex circumstances in which national security rationales can justify deviance from widely accepted humanitarian norms. The workshop noted that national security has its own norms based on protection of the state through the pursuit of military or military-related advantage. However, the culture of secrecy that often surrounds national security activities runs counter to the fundamentally humanitarian enterprise of studying and controlling infectious disease outbreaks from any source. It was suggested that secrecy would actually increase the health risks to the public because countering outbreaks relies on timely and accurate information in order to make appropriate safe decisions about medical intervention.

### **The Sixth BWC Review Conference**

What would be a successful outcome? Much discussion during the workshop centred on what might constitute a successful outcome of the upcoming Sixth Review Conference. For some, success would be defined by State Parties realizing tangible products such as a comprehensive review of the operation of the Convention; a Final Declaration with reaffirmations and extended understandings such as a reaffirmation that prohibitions embrace all scientific and technological advances; a reaffirmation that possibility of use is excluded completely and forever; and a reaffirmation that Article III is sufficiently comprehensive to cover any recipient whatsoever. It was also proposed that State Parties needed to reinforce the importance of ensuring, through national measures, the effective fulfilment of obligations under the Convention in order to exclude use of biological and toxin weapons in terrorist or criminal activity and it was suggested that this might be done through the adoption of a series of action plans on universal adherence, universal national implementation, and the adoption of measures to enhance the submission of CBM returns by all State Parties.

Comment was made that there was a need to avoid sending the same message as the Nuclear Non Proliferation Treaty Review Conference i.e. that something was seriously wrong. It was thought that this Review Conference ought to do something useful. On the issue of reaffirming past commitments the workshop was asked what message might be sent if no reaffirmation could be agreed this time? Some participants felt that there was no need to make these reaffirmations arguing that once something has been agreed then it remains so.

The workshop considered whether the proposals being made for next year's BWC Review Conference might be based on an unduly limited approach. It was thought, for example, that the proposals aired were thus far based on what was politically possible now in 2005, and

centred on today's issues of concern. The opinion was mooted that State Parties need to ask where they wish the BWC to stand in 10 years time, or at the 10th Review Conference. Are, for example, annual meetings a long-term goal for the Convention or just something to see State Parties through the immediate future?

It was suggested that perhaps one reason for the lack of ambition in the proposals is that few in any of the delegations will have ever been present for a full review of the Convention. It was suggested to the workshop that any proposal to strengthen the BWC rests on its broader political appeal and that given the crowded political agenda during 2006 efforts to prevent the spread of biological weapons and to strengthen the BWC are unlikely to be at the top of the agenda unless a lot of effort is expended putting it there.

3. Achieving a successful outcome A. The Preparatory Committee- what needs to be achieved? In respects of the preparation of the Review Conference, the workshop received the suggestion that the PrepCom for the 6th Review Conference ought to last for a whole week so that State Parties have time to consider issues under the general headings: (a) Date and duration;(b) Provisional agenda; (c) Draft rules of procedure; (d) Background documentation; (e) Publicity; and (f) Final document(s).

In terms of date and duration of the Review Conference the workshop was reminded that as this is to be the first time since 1991 that a full review of the Convention is to take place then it should last three weeks. It was agreed however, that if sufficient consultation had taken place prior to the PrepCom then this suggested one week period of meeting for the PrepCom could be reduced.

It was suggested to the workshop that, if it was intended that this Review Conference be deliberately different from the preceding one, a different mandate to the Secretariat might be needed. It was suggested that there was much value in the Secretariat undertaking specific pieces of work between the PrepCom and the actual Review Conference. Whilst the topics for such papers and the extent of those pieces of work are matters to be decided by the States Parties, it was suggested that in addition to the three background documents normally prepared for Review Conferences (participation in CBMs, compliance by States Parties, and information on scientific and technological advances) State Parties might consider additional background documents detailing information on actions taken by States Parties following MSP/2003, MSP/2004 & MSP/2005 and specifically focused papers on the possible modalities for measures such as Action Plans, transparency and CBMs, etc.

Although there was a recognized limit on what the Secretariat can do that is both substantial and innovative, the workshop participants did think that such additional background documents would greatly assist in the necessary collective preparation for this Review Conference. B.

### **The Outcomes of the Intersessional Process - how to deal with these?**

In respect of the outcomes of the intersessional process, the workshop was reminded that the Sixth Review Conference will consider the work of the intersessional meetings and decide on any further action. It was thought that State Parties might consider all the meetings together under one agenda item or consider each of the five topics under the appropriate Article(s) of the Convention - so that national measures to implement will be discussed under Article IV; national biosecurity measures discussed during the review of Articles III & IV; investigation

& response to alleged use when Articles VI & VII are discussed, disease surveillance when Article X is reviewed and finally codes of conduct under Article IV discussions.

Under the topic of codes of conduct, the workshop heard two reports from participants interested in the role that ought to be played by scientists in the guardianship of their work. The first report addressed whether the time has come to formulate guidelines, perhaps in the form of a voluntary Hippocratic oath, for the ethical conduct of work performed by life scientists and the second report summarised the recent international biosecurity efforts involving the U.S. National Academy of Sciences, including a report from a conference organized by the International Forum on Biosecurity (Como, 20-22 March 2005) and the recent Inter Academy Panel Statement on Biosecurity.

Both reports recognised that the issue of codes of conduct was not new, one participant recalled that at the Third Review Conference in 1991 the Council for Responsible Genetics organised an oath which was similar to what is now being discussed. Furthermore it was also noted that calls had been made in 1992 for postdoctoral students to be the focus of such codes because of the spread of postdocs within the academic community and the scientific industries. However, the importance of codes for all engaged in the life sciences was also recognised.

The observation was made that discussions about codes have turned out to be more complicated than initially expected: regarded as a simple exercise, issues concerning definitions, scope and legalities have proved more complicated than anticipated. For example, whilst participants fully accepted that scientists ought to be guardians of their own work, participants debated whether that meant a purely self-governing system excluding the possibility of external criticism. Some believed that rather than leave this important oversight work to scientists alone, oversight committees were needed to scrutinize the work of scientists. It was argued that representatives of many constituencies, not simply the scientific community, ought to sit on these committees and review individual experiments or programmes of work before the experiments have begun.

On the issue of whistle blowing it was suggested that any code ought to include some form of words that offer encouragement to those who wish to come forward to report deviations from the accepted standards of behaviour and show that adequate protection will be offered to them. It was noted that the global coalition against corruption 'Transparency International' has developed some thoughts on the issue of whistle blowing and the protection needed, although better wording than presented there would be needed for BW issues.

Both reports stressed the need significantly to increase efforts to educate scientists about the nature of the risks associated with dual-use biological and chemical technologies and the responsibilities of scientists to address and manage those risks. It was suggested that such awareness-raising courses could take place at the university level, and that any universities which undertake to teach such courses ought to be rewarded. At the very least these courses need to make it clear that scientists have obligations under national and international law.

### **C: Key Elements of the Sixth Review Conference**

The workshop received a number of reports concerning key elements of the Sixth Review Conference. Topics covered included: advances in science and technology relevant to the BWC; national implementation; consultation and co-operation including CBMS; international co-operation and development and universality.



Concerning the issue of advancing science and technology, the workshop received two reports and was forewarned about two issues. The first, that the increasing multidisciplinary dimensions of scientific work needs to be addressed; and the second issue concerned a potential paradigm shift being indicated by the new research agendas. Concern was expressed that together these two issues might result in the dual use dilemma being raised to a new level of complexity. Looking beyond the Sixth Review Conference, both reports suggested that more frequent analysis and review of science and technology advances was needed. Participants believed that scientific and technological advances were occurring too rapidly for a meaningful assessment to take place only at five-year intervals.

There was debate amongst participants at this workshop about the recommendation put forward in both reports that States Parties to the BWC should consider reaffirming that the prohibitions contained in the BWC covered all scientific and technological advances. As before, some participants voiced their concern that continual reaffirmations about commitments or obligations previously made might be construed as a necessary activity before those prohibitions are placed upon the new scientific or technological advancement. For example, it was noted that although nanotechnology is a 'new' technology it is already covered under the General Purpose Criterion contained in Article I.

Participants were reminded that this General Purpose Criterion applies to all science and technology advances and that all participants need to be vigilant against deviant interpretations. It was also suggested that time spent reaffirming commitments and prohibitions could be spent reviewing other aspects of the Convention.

The useful information that emerged from the 2003 meetings about national implementation, the workshop was told, needed to be further developed before the Review Conference so that something meaningful could be done with it. For example, the suggestion was made that a modular approach was needed whereby an action plan was backed by an implementation support unit which itself fed into a legal advisors network. This latter network was considered to be one way of co-ordinating assistance by states and NGOs and of also gaining experience from other treaties. The workshop was reminded that there was no one way to approach such co-ordination activities because political matchmaking as well as legal-system matchmaking and language matchmaking was required for effective implementation assistance.

The idea that State Parties might consider implementing an action plan using the OPCW's Action Plan on national implementation as a model was discussed by the workshop. Participants were reminded that it took 6 months from the decision being made by the Executive Council to the action plan existing. It was suggested then that an informal consultation process was needed which might consider issues such as objectives and criteria for such plans in the BWC context; the evaluation procedures at the end of such plans; and time frames for such plans.

Agreeing on an action plan for universality was considered as something uncontroversial which the States Parties at the 6th Review Conference might be able to adopt. Indeed it was suggested at the workshop that it might be possible to link that action plan with other activities such as joint missions and workshops and civil society collaborations. The workshop was told that new approaches would be needed if the BWC was to catch up with the CWC in terms of membership. At the time of writing, the BWC lagged behind by about 20 states, having 155 States Parties out of the 191 UN members. It was thought that these 20-odd states hold no major political

objections to the BWC and so might be persuaded to join before attention turns to the common-difficult states. The idea of creating a special role for certain countries to promote regional universality was put forward. If such a role were to be given to the depository states then this role might promote general universality to all WMD related treaties.

The workshop was reminded that central to the issue of universality is the creation of incentives to join a treaty. Once such advantages are visible for all to see then non States Parties, especially those that do not see a direct threat from biological weapons, might wish to be "in the club". For example, under the CWC schedule 1 and 2 chemicals are not allowed to be exported to non CWC states parties and although they have failed to agree to ban exports of schedule 3 chemicals to non states parties these access restrictions are persuasive. Similarly in the CTBT member states are given access to a lot of data and given assistance. The Landmine Treaty also recognised the need to create incentives so that states might join the treaty. In its case, certain states took the responsibility to convene 'open ended workshops' in an attempt to improve transparency and trust and to build confidence.

One issue raised in connection to increasing transparency and trust was the CBMs. It was suggested that a revamp of the CBM form and content might be timely with States Parties at the Review Conference considering deletion of superfluous topics and introduction of new ones, for example whether codes of conduct existed in relevant areas of science. Old questions remained unanswered however but hotly debated by participants: how does one get more participation in the CBM process? How does one deal with omission or ambiguities? What ought to be done with the information gathered?

A consensus of sorts was developed concerning the link between non-universality in the BWC and it having no implementing organisation. It was noted that although the depository states have a duty of stewardship to promote universality to the BWC it is not really their role because they have no real authority to be any more proactive than other States Parties. However, it was suggested that the depository states could make common lists of membership.

There was broad agreement amongst the participants at the workshop that all those engaged in the Sixth Review Conference needed to prepare actively for a successful outcome. The focus needs to be on what can be achieved to strengthen the regime prohibiting biological and toxin weapons.

## **Participant List**

Dr. Jan van Aken, Head, Study Group on Biological Arms Control, Hamburg University, Germany [formerly: Director, Sunshine Project, Hamburg; Genetic Engineering Campaigner for Greenpeace, Germany]

Dr. Maurizio Barbeschi, Scientist, Preparedness to Accidental and Deliberate Epidemics, Department of Epidemic and Pandemic Alert and Response, Communicable Disease Cluster (EPR/CSR), World Health Organization (WHO), Geneva, Switzerland [formerly: CBW Inspector, UNMOVIC; Director of the CBW Programme of the Landau Network-Centro Volta, Como, Italy; Senior Policy Officer, Verification Division, Policy and Review Branch, Organisation for the Prohibition of Chemical Weapons (OPCW)]

Amb. Sergey Batsanov, Director, Geneva Office of International Pugwash; Member, Pugwash CBW Steering Committee [formerly: Director, Special Projects, Organization for the Prohibition of Chemical Weapons (OPCW), The Hague, The Netherlands; Director for External Relations, OPCW Preparatory Commission (1993-97); Representative of the Russian Federation to the Conference on Disarmament, Geneva (1989-93)]

Ms. Una Becker, Research Associate, Peace Research Institute Frankfurt (PRIF), Germany

Dr. Kenneth Bernard (USA), Adviser to the Director-General, World Health Organization (WHO), Geneva, Switzerland [formerly: Special Assistant to the President for Biodefense, Homeland Security Council, White House]

Mr. Robert Blum, Foreign Service Officer, US Department of State, Bureau of International Security and Nonproliferation, Washington, DC [formerly: Delegate, US Delegation to the Organization for the Prohibition of Chemical Weapons]

Mr. John Borrie, Project Leader, Disarmament as Humanitarian Action, United Nations Institute for Disarmament Research (UNIDIR), Geneva, Switzerland [formerly: ICRC Coordinator for Biotechnology, Weapons & Humanity, International Committee of the Red Cross, Geneva; Deputy Head of Mission for Disarmament, New Zealand Permanent Mission, Geneva; Research Fellow, UNIDIR; CBW/Export Controls Officer, Ministry of Foreign Affairs and Trade, New Zealand]

Mr. Bernhard Brasack, Permanent Representative of Germany to the Conference on Disarmament in Geneva [formerly: Head of the CW/BW Division, Foreign Office, Berlin; Permanent Representative of Germany to the OPCW/Chairman of the Executive Council of the OPCW (May 2000-May 2001)]

Mr. Bob Brooks, National Coordinator, CWC/BTWC, Nonproliferation and Disarmament (Chemical, Biological, Conventional), Department of Foreign Affairs, Ontario, Canada

Ms. Sarah Broughton, Head of CBW Section, Counter Proliferation Department, Foreign and Commonwealth Office, London, UK [formerly: 2nd Secretary, UK Mission to the UN, NY]

Dr. Vladimir S. Bundin, Senior Counselor, Department of Security & Disarmament Affairs, Ministry of Foreign Affairs of the Russian Federation, Moscow [formerly : Head of the BTWC Department of the Russian Munition Agency, Moscow; Member, National Academy for Biotechnology of Russia; Chief Scientific Secretary, Academy of Biotechnology of Russia, and of the Academy of Sciences of the USSR]

Col. (ret.) Pierre Canonne, Member, Pugwash Council; Senior Lecturer, Disarmament and Arms Control, Univ. Marne-la-Vallés/Paris, France [formerly: Head, Training and Staff Development Branch, OPCW; Senior Staff, Strategic Affairs Department, Ministry of Defence; Counsellor, Permanent Mission of France to the Conference on Disarmament, Geneva]

Dr. Marie Chevrier, Associate Professor, University of Texas at Dallas, Richardson, Texas, USA; Chair, Scientists Working Group on Biological and Chemical Weapons, Center for Arms Control and Nonproliferation, Washington, DC [formerly: Associate Director, Harvard Sussex Program on Chemical and Biological Warfare Armament and Arms Limitation]

Dr. Nancy Connell, Professor, Vice-Chair for Research, Department of Medicine, and Director, Center for BioDefense, University of Medicine and Dentistry of New Jersey-New Jersey Medical School, Newark, NJ, USA

Dr. Filippa Corneliussen (Norway), Research Fellow, BIOS Centre, London School of Economics, UK

Dr. Ottorino Cosivi (Italy), Project Leader, Preparedness for Deliberate Epidemics, Global Alert and Response, Department of Communicable Disease Surveillance and Response (CSR), World Health Organization (WHO), Geneva, Switzerland

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Mr. Jamie Fly, Action Officer, Nonproliferation Policy, Office of the US Secretary of Defense, Washington, DC

Mr. Masahiro Fujikawa, Officer, Biological and Chemical Weapons Conventions Division, Disarmament, Nonproliferation and Science Department, Ministry of Foreign Affairs, Tokyo, Japan

Prof. Erhard Geissler, retired Head, Bioethical Research Group, Max Delbrueck Center for Molecular Medicine, Berlin, Germany [formerly: Head, Department of Virology, Central Institute of Molecular Biology, Berlin Buch]

Dr. Jozef Goldblat (Sweden/Switzerland), Vice President, Geneva International Peace Research Institute (GIPRI), Geneva, Switzerland; Consultant, United Nations, Geneva [formerly: Leader, Arms Control Studies, SIPRI (1969-89)]

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