

# The prohibition of biological weapons

## Current activities and future prospects

by **Graham S. Pearson**

### **Introduction**

Deliberately induced disease or biological warfare is a source of increasing concern as we approach the twenty-first century, as its prevention is central to the security, health and well-being of the global community. In the simplest terms, biological warfare means placing the health of humans, animals and plants at risk from disease deliberately induced as a hostile act. Disease has caused more casualties in all wars than actual weapons of war and there is increasing — and justified — worldwide concern about new and emerging diseases.<sup>1</sup> As the world population continues to increase, new areas of land are occupied and there is greater overcrowding in populated areas, with an ever-greater demand for both plants and animals as sources of food. This creates more opportunities for new or old diseases to spread among humans, animals and plants, with all the consequential socio-economic damage to the countries concerned.

Awareness of the susceptibility of humans, animals and plants to disease is increasing. Headline reports of plague in India in September 1994 and of Ebola fever in Zaire in April 1995 show how the spread of disease can prompt widespread if not worldwide alarm and concern. A World Health Organization (WHO) team visited India in October 1994

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<sup>1</sup> Laurie Garrett, *The coming plague: Newly emerging diseases in a world out of balance*, Farrar, Strauss and Giroux, New York, 1994.

and reported that there had been an outbreak of bubonic plague in the town of Beed some distance inland from Bombay, followed by an outbreak of pneumonic plague in the city of Surat on the coast some 250 km north of Bombay.<sup>2</sup> In the Ebola outbreak, WHO had reported 93 cases and 86 deaths less than two months after the start of the outbreak, a similar pattern to the earlier 1976 outbreak in which 290 people died out of 318 infected — a 90% mortality rate.<sup>3</sup> Animals and plants are no less vulnerable. Livestock and crops can suffer devastating losses. In these times of universal air travel an infectious disease that breaks out in one country on one continent can all too readily reach countries on other continents, sometimes before the signs of the initial outbreak have been recognized. Outbreaks of disease can understandably lead to attempts to seal off areas and regions where they have occurred.

It is therefore hardly surprising that WHO chose to devote its 1996 World Health Report to the subject: "Fighting disease, fostering development".<sup>4</sup> In the foreword, WHO Director-General Hiroshi Nakajima not only says: "We stand on the threshold of a new era in which hundreds of millions of people will at last be safe from some of the world's most terrible diseases", but goes on to warn: "We also stand on the brink of a global crisis in infectious diseases. No country is safe from them. No country can any longer afford to ignore their threat". This worldwide concern about new and emerging diseases was expressed at the May 1995 World Health Assembly, which passed a resolution calling for "strategies enabling rapid national and international action to investigate and combat infectious disease outbreaks and epidemics".<sup>5</sup> The resolution recognized that new and re-emerging diseases are of growing national and international concern, as the speed and ease of air travel means that infected individuals can reach any other country within 24 hours, well before the symptoms of the disease become apparent. Similarly, a biological attack can be carried out covertly from far away, long before it is known that such an attack has occurred. And such attacks may be aimed at livestock and crops, resulting in major socio-economic damage.

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<sup>2</sup> "India ponders the flaws exposed by plague...", *Nature*, No. 372, 10 November 1994, p. 119. See also "India confirms identity of plague", *Nature*, No. 373, 23 February 1995, p. 650.

<sup>3</sup> "The hobbled horseman", *The Economist*, 20 May 1995, pp. 83-89, and "Disease fights back", *ibid.*, pp. 15-16.

<sup>4</sup> *World Health Report 1996: Fighting disease, fostering development*, World Health Organization, Geneva, 1996.

<sup>5</sup> Forty-eighth World Health Assembly, *Communicable diseases prevention and control: new, emerging and re-emerging infectious diseases*, World Health Organization, Geneva, Resolution WHA 48.13, 12 May 1995.

The feasibility of biological warfare has been proven by all sorts of means short of actual use in war and has been demonstrated to a greater extent than had been the case for nuclear weapons before they were used on Hiroshima and Nagasaki. Although there is no proof that biological weapons have been used in war in recent years, it is evident that they were used by Japan against China in the 1930s.<sup>6</sup> It should be emphasized that the work carried out on biological weapons in the 1950s and 1960s is still valid today, and that advances in biotechnology over the last few decades have simply made such weapons easier to produce and use. When the United States decided to abandon its offensive biological warfare programme in 1969, it was widely perceived that such weapons were of marginal military utility even though research and development programmes in the United States and the United Kingdom had demonstrated the opposite. The reasons for this perception are unclear. The spread of disease in the environment is not questioned and tests have demonstrated the credibility of biological attacks. As for inadvertent attacks on one's own forces, this is only a matter of target selection and meteorological prediction, both of which have become significantly more reliable over recent decades.

Many comparisons of the effects of biological, chemical and nuclear weapons have been made over the years;<sup>7</sup> all demonstrate that the effects of a biological attack are much greater than those of a chemical attack and are as great as if not greater than those resulting from a nuclear attack. That is why biological weapons are sometimes referred to as the poor man's atomic bomb; the costs associated with a biological weapons programme are so much lower — and are being reduced further by advances in microbiology and biotechnology — than those of a nuclear weapons programme. There is therefore a real risk that as the Chemical

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<sup>6</sup> Sheldon H. Harris, *Factories of death: Japanese biological warfare 1932-45 and the American cover up*, Routledge, London and New York, 1994.

<sup>7</sup> See, for example, Report of the Secretary-General, *Chemical and bacteriological (biological) weapons and the effects of their possible use*, A/7575/Rev.1, S/9292/Rev.1, United Nations, New York, 1969; United States Congress, Office of Technology Assessment, *Proliferation of weapons of mass destruction: Assessing the risks*, OTA-ISC-559, S/N 052-003-01335-5, dated 5 August 1993. United States Congress, Office of Technology Assessment, Background Paper, *Technologies underlying weapons of mass destruction*, OTA-BP-ISC-115, S/N 052-003-01361-4, dated December 1993; Stephen Fetter, "Ballistic missiles and weapons of mass destruction: What is the threat? What should be done?", *International Security*, No. 16/1, Summer 1991, p. 5; and Karl Lowe et al., *Potential values of a simple BW protective mask*, Institute for Defense Analyses, IDA Paper P-3077, September 1995.

Weapons Convention makes chemical weapons far more difficult to acquire, and considering that the quantities needed are so much greater, biological weapons may come to be seen as an attractive alternative<sup>8</sup> and their proliferation may become more of a problem, especially if action is not taken urgently to strengthen the Biological and Toxin Weapons Convention (BWC), which prohibits the development, production, acquisition and stockpiling of biological weapons.<sup>9</sup>

There is therefore no doubt in technical terms that biological warfare is a credible option. It is notable that although the UK, the US and the former Soviet Union are the co-depositaries of the Biological and Toxin Weapons Convention, President Yeltsin admitted in April 1992 that the Soviet Union/Russia had continued an offensive programme up to 1992. The fact that the Soviet Union continued such a programme for 20 years after signing the BWC clearly indicates that it saw biological warfare as a worthwhile capability. There is continuing concern on this count as the trilateral US/UK/Russian process agreed in 1992 continues with few public signs of progress.<sup>10</sup> The US Arms Control and Disarmament Agency Report submitted in July 1996 stated that "the progress has not resolved all US concerns".<sup>11</sup> It went on to say: "The United States remains actively engaged in efforts to work with the Russian leadership to ensure complete termination of the illegal program and to pursue a number of measures to build confidence in Russian compliance with the BWC". During the Gulf conflict of late 1990/early 1991 there was very real concern that Iraq might use biological weapons against the coalition forces; US and UK forces were vaccinated against the biological agents which were thought to be in Saddam Hussein's inventory (and which Iraq at last admitted holding to the UN Special Commission — UNSCOM — in 1995), and detection and identification capabilities were deployed. The coalition forces rightly regarded biological warfare as being a real threat. Subsequently, General Colin Powell, Chairman of the US Joint Chiefs of Staff said: "Of all the various weapons of mass destruction, biological

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<sup>8</sup> Stephen Fetter, *op. cit.* (note 7).

<sup>9</sup> Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction, which opened for signature in 1972 and entered into force in 1975, Annex to UN General Assembly resolution 2826(XXVI), hereafter "Convention".

<sup>10</sup> Joint Statement on Biological Weapons by the Governments of the United Kingdom, the United States and the Russian Federation, 15 September 1992.

<sup>11</sup> United States Arms Control and Disarmament Agency, *Threat control through arms control: Annual Report to Congress*, Washington, DC, 1995 (issued 26 July 1996).

weapons are of the greatest concern to me".<sup>12</sup> Such a statement would only have been made if biological weapons were regarded as being a credible option.

The reality and danger of the Iraqi biological warfare capability has become apparent through the work of UNSCOM.<sup>13</sup> Over a five-year period, Iraq initiated and aggressively developed a biological weapons programme which, by the outbreak of the Gulf conflict in 1991, had resulted in the filling of over 160 aircraft bombs and 25 Al Hussein missile warheads with biological warfare agents and their deployment to four locations. In addition, Iraq has stated that authority to launch biological and chemical warheads was pre-delegated in the event that Baghdad was hit by nuclear weapons during the Gulf conflict. A wide range of agents including not only anthrax and botulinum toxin but also aflatoxin, ricin and viruses such as camel pox virus, as well as a plant agent, wheat cover smut, were studied and a sizeable fermentation capability was established for their production. It is also clear that Iraq was engaged in the design and development of longer-range missiles capable of carrying biological warheads that could reach targets at distances of up to 3,000 km, thus bringing cities such as Paris and Bonn within range of attack from Baghdad. Iraq was thus potentially seeking the capability to pose much more than a regional threat.

There is therefore real and justified concern about the proliferation and potential acquisition of biological weapons in the changing world of the 1990s. President Clinton in his address to the UN on 27 September 1993 said: "One of our most urgent priorities must be attacking the proliferation of weapons of mass destruction, whether they are nuclear, chemical or biological; and the ballistic missiles that can rain them down on populations hundreds of miles away. If we do not stem the proliferation of the world's deadliest weapons, no democracy can feel secure".<sup>14</sup> This continues to be a major concern. As John Deutch, US Director of Central Intelligence, testified in 1996: "Of the transnational issues, the prolifera-

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<sup>12</sup> General Colin Powell, Chairman, Joint Chiefs of Staff, House Armed Services Committee, 30 March 1993.

<sup>13</sup> United Nations Security Council, *Report of the Secretary-General on the status of the implementation of the Special Commission's plan for the ongoing monitoring and verification of Iraq's compliance with relevant parts of Section C of Security Council resolution 687 (1991)*, S/1995/864, New York, 11 October 1995.

<sup>14</sup> United Nations General Assembly, *Address by Mr William J. Clinton, President of the United States of America*, Forty-eighth Session, 4th Plenary Meeting, 27 September 1993, A/48/PV.4, 4 October 1993.

tion of weapons of mass destruction and advanced conventional weapons systems pose the gravest threat to national security and world stability. At least 20 countries have or may be developing nuclear, chemical, *biological* weapons and ballistic missile systems to deliver them. *Biological weapons, often called the poor man's atomic bomb, are also on the rise. Small less developed countries are often eager to acquire such weapons to compensate on the cheap for shortcomings in conventional arms*" [emphasis added].<sup>15</sup> At the Fourth Review Conference of the BWC in Geneva in November 1996, David Davis, the UK Minister of State for Foreign Affairs, said: "Biological weapons have for 25 years remained something of a Cinderella in international efforts to control the spread of weapons of mass destruction (...) A general perception held that the biological weapons problem was solved; that it did not present a real risk or threat (...) But over the last decade, we have seen these comfortable assumptions overturned".<sup>16</sup> The danger of the possible use of chemical and biological materials for terrorist purposes was recognized by the Heads of the G7 States at their meeting in Lyons, France, in their declaration on terrorism of 27 June 1996, which stated: "Special attention should be paid to the threat or utilization of nuclear, biological and chemical materials, as well as toxic substances, for terrorist purposes".<sup>17</sup>

The past decade has seen a move from the bipolar superpower stand-off of the Cold War era to a rash of regional conflicts around the world and the collapse of several economies. The deliberate spread of disease — among humans, animals or plants — may become to be regarded, especially by small States whose conventional military capabilities may be limited, as a possible option if we do not take action to make it unattractive. The window of opportunity to do this is now, with benefits not only for national, regional and international security but also for national and international prosperity and trade. We all need to focus on this growing problem and do what we can to make biological warfare a less attractive option. In this 25th year since the opening for signature of the BWC, it is particularly timely to give increased attention to the

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<sup>15</sup> John Deutch, Director of Central Intelligence, *Worldwide threat assessment brief*, US Senate Select Committee on Intelligence, Statement for the record, 22 February 1996.

<sup>16</sup> David Davis, MP, Minister of State for Foreign and Commonwealth Affairs, Statement, Biological Weapons Convention Fourth Review Conference, 26 November 1996.

<sup>17</sup> United Nations, Letter dated 5 July 1996 from the Permanent Representative of France to the United Nations, addressed to the Secretary-General, A/51/208, S/1996/543, 12 July 1996.

strengthening of the Convention, as significant developments have occurred in relation to the other two classes of weapons of mass destruction — nuclear and chemical weapons. Progress is being made to reduce nuclear weapon stockpiles, and in April 1995 the Nuclear Non-Proliferation Treaty was extended indefinitely. The Chemical Weapons Convention opened for signature in 1993; thus far over 160 States have signed and over 85 States have lodged their instruments of ratification. The Convention entered into force on 29 April 1997.

### **The prohibition of biological weapons**

The 1925 Geneva Protocol prohibits the use in war of biological (bacteriological) weapons. This instrument recognized that “the use in war of asphyxiating, poisonous or other gases, and of all analogous liquids, materials and devices, has been justly condemned by the general opinion of the civilized world” and that their use has been prohibited “in Treaties to which the majority of Powers of the World are Parties”. It went on to say that “the High Contracting Parties, so far as they are not already Parties to Treaties prohibiting such use, accept this prohibition, *agree to extend this prohibition to the use of bacteriological methods of warfare* and agree to be bound as between themselves according to the terms of this declaration” [emphasis added]. However, some signatories to the Geneva Protocol entered reservations which effectively reserved their right to retaliate in kind should biological weapons be used against them. During the last few years several States have given up their reservations;<sup>18</sup> the UK, for example, withdrew its reservation in respect of the 1925 Protocol in 1991.<sup>19</sup>

In 1972, the Biological and Toxin Weapons Convention prohibiting the development, production, acquisition and stockpiling of biological weapons opened for signature; it entered into force in 1975.<sup>20</sup> It had no provisions for verification of compliance. The basic prohibition is stated in Article I:

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<sup>18</sup> See Nicholas A. Sims, “Article VIII: Geneva Protocol obligations”, in Graham S. Pearson and Malcolm R. Dando (eds), *Strengthening the Biological Weapons Convention: Key points for the Fourth Review Conference*, Quaker United Nations Office, Geneva, 1996.

<sup>19</sup> The Third Review Conference of the States Parties to the Convention ..., Geneva, 9-27 September 1991, BWC/CONF.III/23, Geneva 1992. See p. 2 of BWC/CONF.III/SR.8 dated 1 October 1991, reproduced as p. 210 of BWC/CONF.III/23, Part IV.

<sup>20</sup> See note 9.

“Each State Party to this Convention undertakes never in any circumstances to develop, produce, stockpile or otherwise acquire or retain:

1. Microbial or other biological agents, or toxins whatever their origin or method of production, of types and in quantities that have no justification for prophylactic, protective or other peaceful purposes;
2. Weapons, equipment or means of delivery designed to use such agents or toxins for hostile purposes or in armed conflict.”

The BWC provides for Review Conferences to be held at about five-year intervals at which States Parties assess the operation of the Convention, taking into account any new scientific and technological developments relevant to the Convention; such Review Conferences have been held in 1980, 1986 and 1991, and most recently in November-December 1996. In their Final Declarations these Conferences have reaffirmed the basic prohibition laid down in the Convention and have confirmed that all developments in microbiology, biotechnology and genetic engineering are embraced by the Convention, thus reinforcing the international norm prohibiting biological weapons.

### **Strengthening the BWC: initial steps**

#### *Confidence-building measures*

The need to strengthen the BWC was recognized at the 1986 and 1991 Review Conferences. A series of politically binding confidence-building measures (CBMs) was agreed in 1986; these were improved and extended in 1991. Under these States Parties undertake to exchange information annually on a range of subjects of relevance to the Convention. In 1986 four CBMs were agreed:<sup>21</sup>

- a. Exchange of data on research centres and laboratories;
- b. Exchange of information on outbreaks of infectious disease and similar outbreaks caused by toxins;
- c. Encouragement of publication of results and promotion of use of knowledge;
- d. Active promotion of contacts.

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<sup>21</sup> The Second Review Conference of the States Parties to the Convention ..., Geneva, 8-26 September 1986, BWC/CONF.II/13, Geneva, 1986.

Under these measures information was to be provided by States Parties annually to the United Nations Department for Disarmament Affairs. At the Third Review Conference three (a, b and d above) of these four CBMs were amended and extended, and the fourth (c above) continued unchanged. Three new CBMs were added:

- e. Declaration of legislation, regulations and other measures,
- f. Declaration of past activities in offensive and/or defensive biological research and development programmes;
- g. Declaration of vaccine production facilities.

A useful simplified proforma was introduced on which States Parties could indicate "Nothing to declare" or "Nothing new to declare", so as to encourage more of them to make the agreed annual declarations.

The number of States Parties which have made at least a single CBM declaration during the ten years since the first CBMs were agreed in 1986 reached 70 in 1995 and 75 up to 22 May 1996. Some 11 States Parties have made the agreed CBM declarations every year.

#### *VEREX and the Ad Hoc Group*

In addition, the Third Review Conference in 1991 set up an Ad Hoc Group of Governmental Experts (VEREX) to consider potential verification measures from a scientific and technical viewpoint.<sup>22</sup> VEREX met four times, twice in 1992 and twice in 1993. Its final report in September 1993 identified and evaluated some 21 verification measures, both off-site and on-site, and concluded that "the potential verification measures as identified and evaluated could be useful in varying degrees in enhancing confidence, through enhanced transparency, that the States Parties were fulfilling their obligations under the BWC".<sup>23</sup> At the request of a majority of States Parties a Special Conference was held in 1994 to consider the VEREX report. This Special Conference mandated an Ad Hoc Group "to consider appropriate measures, including possible verification measures, and draft proposals to strengthen the Convention, to be included, as appropriate, in a legally binding instrument, to be submitted for the con-

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<sup>22</sup> The Third Review Conference of the States Parties to the Convention ..., Geneva, 9-27 September 1991, BWC/CONF.III/23, Geneva, 1992.

<sup>23</sup> Ad Hoc Group of Governmental Experts to Identify and Examine Potential Verification Measures from a Scientific and Technical Standpoint, Report BWC/CONF.III/VEREX/9, Geneva, 1993.

sideration of States Parties".<sup>24</sup> The Ad Hoc Group was also required to "complete its work as soon as possible and submit its report, which shall be adopted by consensus ...".

The Ad Hoc Group's mandate requires it, *inter alia*, to consider:

- definitions of terms and objective criteria (...) where relevant for specific measures designed to strengthen the Convention;
- the incorporation of existing and further enhanced confidence building and transparency measures, as appropriate, into the regime;
- a system of measures to promote compliance with the Convention, including, as appropriate, measures identified, examined and evaluated in the VEREX Report;
- specific measures designed to ensure effective and full implementation of Article X [the promotion of microbiology for peaceful purposes].

The mandate also requires that "measures should be formulated and implemented in a manner designed to protect sensitive commercial proprietary information and legitimate national security needs" and "to avoid any negative impact on scientific research, international cooperation and industrial development". Finally, the remit made it clear that "the regime would include, *inter alia*, potential verification measures, as well as agreed procedures and mechanisms for their efficient implementation and *measures for the investigation of alleged use*" [emphasis added].

The Ad Hoc Group, under the chairmanship of Ambassador Toth of Hungary, held five meetings, three in 1995 and two in 1996, prior to the Fourth Review Conference of the BWC at the end of 1996.<sup>25</sup> Three further meetings are scheduled up to September 1997. The Group has thus far functioned by the appointment of four Friends of the Chair, who chair the

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<sup>24</sup> Special Conference of the States Parties to the Convention ..., Final Report, BWC/SPCONF/1, Geneva, 19-30 September 1994.

<sup>25</sup> For a detailed account of the work of the Ad Hoc Group, see Graham S. Pearson, "Agenda Item 12, consideration of the work of the Ad Hoc Group established by the Special Conference in 1994", in Graham S. Pearson and Malcolm R. Dando (eds), *Strengthening the Biological Weapons Convention: Key points for the Fourth Review Conference*, Quaker United Nations Office, Geneva, 1996; and Graham S. Pearson, "Addendum to agenda item 12", in Graham S. Pearson and Malcolm R. Dando (eds), *Strengthening the Biological Weapons Convention: Key points for the Fourth Review Conference, addendum to agenda item 12*, Quaker United Nations Office, Geneva, 1996.

sessions concerned with the four respective elements of the mandate. The Friends of the Chair have produced papers which reflect the discussions that have taken place, but which are without prejudice to the positions of delegations on the issues under consideration in the Ad Hoc Group and do not imply agreement on the scope or content of the papers. These papers drawn up by the Friends of the Chair are considered by the Ad Hoc Group in plenary session and amended as requested by delegations so that they reflect the views expressed before being accepted for attachment to the procedural reports of the meetings.

### **Strengthening the BWC: future steps**

#### *The continuing importance of confidence-building measures*

Although the Ad Hoc Group is addressing the incorporation of existing and further enhanced confidence building and transparency measures, as appropriate, into the regime destined to be the subject of a legally binding instrument to strengthen the Convention, it is evident that even once the Group has completed its work and such an instrument has been agreed and subsequently adopted there is likely to be a continuing role for some confidence-building measures in parallel with whatever measures are included in the instrument. Not all the existing politically binding confidence-building measures will be appropriate for incorporation in the legally binding instrument. Moreover, not all States Parties may choose to adopt the instrument at the earliest possible opportunity; in other words, for at least some time there is very likely to be a parallel regime whereby some States will remain committed as they are at present to providing data and information under the current politically binding CBMs, and some States will be committed to providing data and information under the legally binding instrument.

Consequently, it is important to note that at the Fourth Review Conference the States Parties asserted in their Final Declaration that the Conference “welcomes the exchange of information carried out under the confidence-building measures, and notes that this has contributed to enhancing transparency and building confidence”, and urged “all States Parties to complete full and timely declarations in the future”.<sup>26</sup>

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<sup>26</sup> The Fourth Review Conference of the States Parties to the Convention ..., Geneva, 25 November-6 December 1996, BWC/CONF.IV/9, Geneva, 1996.

*The work of the Ad Hoc Group*

In its September 1996 report the Ad Hoc Group informed the Fourth Review Conference that it had made “significant progress towards fulfilling the mandate (...) including by identifying a preliminary framework and elaborating potential basic elements of a legally binding instrument to strengthen the Convention”. Moreover, it had decided “to intensify its work with a view to completing it as soon as possible before the commencement of the Fifth Review Conference”. The Fourth Review Conference later in 1996 commenced with two days of general debate in which 31 States Parties as well as the ICRC made statements. Some of these statements were delivered by ministers or other political representatives from countries including Bulgaria, Cuba, France, Germany, the UK and the US, and from the EU, reaffirming the importance of the BWC. The EU statement was noteworthy for the fact that it was made on behalf of 29 States. Without exception, every State which spoke in the general debate during the first two days of the Review Conference spoke in favour of the Ad Hoc Group’s work towards a legally binding instrument.<sup>27</sup> Although a number of delegations indicated the measures they envisaged being incorporated in the future legally binding instrument and suggested completion by 1998, there was no consensus on including such language in the Final Declaration. However, the wording adopted enabled the Ad Hoc Group to move on to a new form of negotiation based on a rolling text.

The report of the Group’s March 1997 meeting<sup>28</sup> included an annex outlining “Possible structural elements of a protocol to the BWC”, which should form the basis for the establishment of a rolling text in order to achieve the transition to a negotiating format. It is hoped that the Group’s future reports will contain an appendix comprising the rolling text available to date, always recognizing that nothing is agreed until everything is agreed. At the March meeting the Friends of the Chair further developed their papers, with the one on Compliance Measures providing four papers on declarations, investigations, other visits and procedures, and measures to strengthen the implementation of Article III; the one on Definitions

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<sup>27</sup> For a detailed account of the Fourth Review Conference, see Malcolm R. Dando and Graham S. Pearson, “The Fourth Review Conference of the Biological and Toxin Weapons Convention: Issues, outcomes and unfinished business”, *Politics and Life Sciences*, 16(1), 1-22 March 1997.

<sup>28</sup> Procedural Report of the Ad Hoc Group of the States parties to the Convention ..., BWC/ADHOC GROUP/34, 27 March 1997.

providing four papers on definitions, human pathogens, a list of equipment and threshold quantities; and the one on Article X presenting a paper suggesting how measures contained in Article X might be incorporated in a future instrument. These papers all include square brackets around parts of the text, a welcome initial move towards possible language for a legally binding instrument.

*Definitions:* An important point that has been discussed at some length by the Ad Hoc Group concerns precisely what the role of definitions might be in the legally binding instrument. It is clear from the Group's mandate that definitions and objective criteria are required where relevant for specific measures to strengthen the Convention. It is also recognized that care needs to be taken to avoid any attempt to define terms used in the Convention, as this would result in a reinterpretation of the Convention itself and its scope. The Convention has stood the test of time, with successive Review Conferences — including the Fourth Review Conference — reaffirming in relation to the basic prohibition in Article I that the undertaking given by States Parties in that Article applies to all “relevant scientific and technological developments, *inter alia*, in the fields of microbiology, biotechnology, molecular biology, genetic engineering”; and that “the Convention unequivocally covers all microbial or other biological agents or toxins, naturally or artificially created or altered, as well as their components, whatever their origin or method of production”.

*Confidence-building measures:* As the central structure of the legally binding instrument has yet to emerge clearly, it is difficult at this stage to identify which of the possible transparency and confidence-building measures will be required for the future instrument.

*Compliance measures:* The papers drawn up by the Friends of the Chair have focused on what are likely to be the central elements of the future instrument: mandatory declarations and their triggers; investigations of non-compliance whether at facilities or in the field; other non-challenge visits; and measures to strengthen the implementation of Article III (the undertaking to do nothing to assist in proliferation of biological weapons).

*Article X measures:* The papers have shown a welcome trend towards concentrating on potential measures relevant to the BWC and away from those which would duplicate unnecessarily measures being taken by other fora, such as Agenda 21 and the Convention on Biological Diversity. There appears to be promise in measures that will implement Article X

of the BWC whilst at the same time improving transparency and building confidence.<sup>29</sup>

*Towards a protocol:* The identification of possible structural elements in the March 1997 meeting and the imminent move to a negotiating rolling text should help to focus the negotiations on specific measures and procedures and so move towards problem-solving. As has already been said by several analysts, the basic measures needed to strengthen the BWC are already out there. Nothing new is needed; what is required is the tailoring of existing measures to meet the particular needs of the BWC. It must be recognized that a considerable number of valuable measures have been devised for the Chemical Weapons Convention — such as the procedures for the handling of confidential information by the Organisation for the Prohibition of Chemical Weapons — and these do not need to be reinvented for the strengthened BWC. However, all these existing measures need to be considered on their merits and adapted to meet the specific needs of the BWC.

### **Prospects for a stronger BWC**

As we look forward to the 21st century, it can be predicted that the negotiations of the Ad Hoc Group will lead to a legally binding instrument, hopefully in 1998, which will establish a regime of measures designed to strengthen the BWC and thus to achieve enhanced national and international security. It is clear that such an instrument is feasible and should be widely acceptable. It will involve safeguards against the loss of commercial proprietary or legitimate national security information. Mandatory declarations will be a central and key element of a strengthened BWC. A short list of pathogens and toxins appears likely to be included, but *only* as a tool to facilitate a specific measure in the legally binding regime: such a list can in *no way* redefine or limit the scope of the prohibition contained in Article I of the BWC. No new measures are needed for such a strengthened regime for the BWC; however, the States Parties need to be encouraged to demonstrate the political will to bring the work of the Ad Hoc Group to an early conclusion and then to adopt the legally binding instrument.

A Special Conference should be held in 1999 at which States Parties would open the legally binding instrument for signature and subsequent

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<sup>29</sup> Graham S. Pearson, "Environmental and security regimes for toxic chemicals and pathogens: A useful synergy", *Verification*, Westview Press, Boulder, 1997 (in press).

ratification. There is a clear need to bring this instrument into effect as soon as possible thereafter; consequently, the number of States needing to ratify it before it comes into force should be kept small. There will, however, inevitably be a period of transition during which some States are party to the BWC and have ratified the new instrument, some have only signed the instrument and some have not signed it; there will also be States which have signed the BWC but still have to ratify it; and yet others who have not signed it. Once the legally binding instrument has been opened for signature, there is much to be said for a move to encourage universal adhesion to the BWC.

Confidence-building measures are likely to continue to be important, either as politically binding measures as at present, or as mandatory or voluntary elements of a new instrument. There is a strong argument in favour of giving whatever organization is set up to implement such an instrument the task of collecting the annual confidence-building declarations, and then collating them and distributing them to States Parties. Such an organization could encourage States Parties to provide timely declarations and provide assistance in completing them, to help promote transparency and build confidence.

Disease, whether occurring naturally or caused deliberately, is increasingly on the agenda of governments and industry worldwide. The health and well-being of the global community (humans, livestock and crops) are of direct importance for prosperity and trade. Efforts to combat disease, whatever its origin, are in the interests of all. A realistic and pragmatic approach is needed now to strengthen the BWC. As President Clinton has said: "Let us strengthen our determination to fight the rogue states, the terrorists, the criminals who menace our safety, our way of life and the potential of our children in the 21st century. Let us recommit ourselves to prevent them from acquiring weapons of mass destruction". The BWC can and should be strengthened as a matter of urgency.

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