

**CD membership**

The long-running question of expansion of the membership of the Geneva-based Conference on Disarmament (CD) was resolved when on 17 June, the CD unanimously decided to admit 23 new members to bring the total up to 61. The CD membership is now (new members in italics): Algeria, Argentina, Australia, *Austria*, *Bangladesh*, *Belarus*, Belgium, Brazil, Bulgaria, *Cameroon*, Canada, *Chile*, China, *Colombia*, Cuba, *Democratic People's Republic of Korea*,

*Egypt*, Ethiopia, *Finland*, France, Germany, Hungary, India, Indonesia, Iran, *Iraq*, *Israel*, Italy, Japan, Kenya, Mexico, Mongolia, Morocco, Myanmar, Netherlands, *New Zealand*, Nigeria, *Norway*, Pakistan, Peru, Poland, *Republic of Korea*, Romania, Russian Federation, *Senegal*, *Slovak Republic*, *South Africa*, Spain, Sri Lanka, Sweden, *Switzerland*, *Syria*, Turkey, *Ukraine*, United Kingdom, United States, *Venezuela*, *Viet Nam*, Yugoslavia, Zaire, *Zimbabwe*.

**The Draft Comprehensive Test Ban Treaty — Article by Article**

**The 28 June text**

On 28 June 1996, the last day of negotiations before a four-week break, Ambassador Jaap Ramaker (Netherlands), Chairman of the Ad Hoc Committee on a Nuclear Test Ban at the Conference on Disarmament in Geneva, tabled a working paper (CD/NTB/WP.330/Rev.1) containing a draft comprehensive test ban treaty (CTBT). Negotiations are to reopen on Monday 29 July.

The text is examined here, article by article, with discussion of significant issues about which there has yet to be consensus, such as on-site inspection decisions (Article IV) and entry into force requirements (Article XIV).

**Preamble**

The Preamble, where the intentions of the Parties to the Treaty are expressed, contains such paragraphs as:

*Stressing* therefore the need for continued systematic and progressive efforts to reduce nuclear weapons globally, with the ultimate goal of eliminating those weapons, and of general and complete disarmament under strict and effective international control,

*Recognizing* that the cessation of all nuclear weapon test explosions and all other nuclear explosions, by constraining the development and qualitative improvement of nuclear weapons and ending the development of advanced new types of nuclear weapons, constitutes an effective measure of nuclear disarmament and non-proliferation in all its aspects,

*Further recognizing* that an end to all such nuclear explosions will thus constitute a meaningful step in the realisation of a systematic process to achieve nuclear disarmament,

...

*Noting also* the views expressed that this Treaty could contribute to the protection of the environment,

While the Preamble welcomes the 'international agreements and other positive measures of recent years in the field of nuclear disarmament', there is no specific mention of other treaties except the 1963 Partial Test Ban Treaty, notwithstanding the aspirations for a CTBT expressed in the Preamble to the 1968 nuclear Non-Proliferation Treaty (NPT) and the prohibitions on testing in nuclear-weapon-free zone treaties.

**Article I — Basic Obligations**

Article 1 reads as follows:

1. Each State Party undertakes not to carry out any nuclear weapon test explosion or any other nuclear explosion, and to prohibit and prevent any such nuclear explosion at any place under its jurisdiction or control.
2. Each State Party undertakes, furthermore, to refrain from causing, encouraging, or in any way participating in the carrying out of any nuclear weapon test explosion or any other nuclear explosion.

This text is understood to include all text explosions down to a zero yield.

Peaceful nuclear explosions, which were the subject of much discussion before a scope text could be agreed, are now referred to in Article VIII (Review of the Treaty).

**Article II — The Organization**

This establishes the 'Comprehensive Nuclear Test-Ban Treaty Organization' (CTBTO or 'the Organization'). The CTBTO is to be based in Vienna and though an independent body 'shall seek to utilise expertise and facilities, as appropriate, and to maximise cost efficiencies, through co-operative arrangements with other international organizations such as the International Atomic Energy Agency'.

As in other recent treaties, such as the Chemical Weapons Convention (CWC), the CTBTO will have a Conference of the States Parties, an Executive Council and a Technical Secretariat. The Technical Secretariat will contain the International Data Centre (IDC) and will operate the International Monitoring System (IMS) (see Article IV).

The Conference of the States Parties will meet annually, or in special session if the circumstances so require.

In the CTBTO the Executive Council will have 51 members, compared with the equivalent body under the CWC which has 41. Unlike other recent treaties, the allocation of states to regional groups for the purposes of allocating seats at the Executive Council is specified and contained in Annex 1 to the Treaty. The groups are: Africa; Eastern Europe; Latin America and the Caribbean; Middle East and South Asia; North America and Western Europe; and South East Asia, the Pacific and the Far East.

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Israel is included as a member of the Middle East and South Asia group which has prompted dissent from Iran.

The prime area of controversy regarding the CTBTO is the means by which the Executive Council deals with requests for on-site inspections (see Article IV below).

### **Article III — National Implementation Measures**

Article III obliges States Parties to prohibit natural and legal persons that it has control over from carrying out any activity prohibited to a State Party under the Treaty.

### **Article IV — Verification**

The verification system is based on multinational data collected by the International Monitoring System and collated at the International Data Centre. Data collected by 'national technical means' (i.e., national intelligence assets) may be used to back up a call for an on-site inspection if it has been obtained 'in a manner consistent with generally recognized principles of international law'. This is understood to exclude human intelligence for espionage purposes.

#### *Monitoring technologies*

The International Monitoring System is based on four monitoring technologies, specified in the Protocol: seismological, radionuclide, hydroacoustic and infrasound. These are set out in the Protocol to the Treaty (see below)

#### *On-site inspection — decision making*

The 28 June text states that:

The decision to approve the on-site inspection shall be made by a majority of all members of the Executive Council. (Article IV, paragraph 46)

Some states, in particular China and Pakistan, have called for this decision to be made by a two-thirds majority — thus requiring 34 votes instead of 26.

The CWC, agreed in 1992 and opened for signature in 1993, deals with the situation in the following way:

The Executive Council may, not later than 12 hours after having received the inspection request, decide by a three-quarter majority of all its members *against* carrying out the challenge inspection, if it considers the inspection request to be frivolous, abusive or clearly beyond the scope of this Convention ... (CWC, Article IX, paragraph 17, emphasis added)

Thus the two conventions have quite different mechanisms. It is worth noting that both China and Pakistan signed the CWC on 13 January 1993 — the opening day of the signing ceremony.

#### *On-site inspection — limits of powers*

Article IV, paragraph 57 (c) reads that a State Party subject to an inspection shall have the obligation 'to provide access within the inspection area for the sole purpose of determining facts relevant to the purpose of the inspection, taking into account [national security and confidentiality concerns] and any constitutional obligations it may have with regard to proprietary rights or searches and seizures.'

No such language appears in the CWC or other significant arms control treaties such as the Conventional Armed Forces in Europe (CFE) Treaty. While the intent seems to have been to enhance managed access provisions, it could allow a potential transgressor to hinder the activities of inspectors by adaptation of its national constitution.

### **Article V — Measures to Redress a Situation and to Ensure Compliance, Including Sanctions**

This Article gives powers to the Conference of the States Parties, in the event of questions of non-compliance with the Treaty: to suspend a State Party from exercising rights and privileges under the Treaty; to recommend collective measures; or to bring a case to the attention of the United Nations.

### **Article VI — Settlement of Disputes**

This Article allows organs of the CTBTO and the International Court of Justice [World Court] to assist in settlement of disputes between States Parties on issues relating to the Treaty.

### **Article VII — Amendments**

Any amendment would have to be agreed by consensus at an Amendment Conference.

### **Article VIII — Review of the Treaty**

Article VIII allows for review conferences to be held every ten years if the Conference of the States Parties so decides in the preceding year. If the Conference of the States Parties so decides, review conferences may also be held after shorter intervals.

This Article includes the following text on peaceful nuclear explosions (PNEs):

On the basis of a request by any State Party, the Review Conference shall consider the possibility of permitting the conduct of underground nuclear explosions for peaceful purposes. If the Review Conference decides by consensus that such nuclear explosions may be permitted, it shall commence work without delay, with a view to recommending to States Parties an appropriate amendment to this Treaty that shall preclude any military benefits of such nuclear explosions.

From this it is clear that PNEs are prohibited unless the Treaty is amended.

### **Article IX — Duration and Withdrawal**

The Treaty is of unlimited duration with withdrawal by any state at six months notice 'if it decides that extraordinary events related to the subject matter of this Treaty have jeopardised its supreme interests'. Notice of such withdrawal shall include a statement of such extraordinary event or events.

France, Russia, the United Kingdom and the United States have each stated that loss of confidence in their nuclear arsenals would be such an event.

### **Article X — Status of the Protocol and Annexes**

The Annexes to the Treaty and the Protocol and its Annexes 'form an integral part of the Treaty'

### **Article XI — Signature**

### **Article XII — Ratification**

### **Article XIII — Accession**

CTBT open to all states for signature, is subject to ratification and is open for accession to non-signatory states after entry into force.

### **Article XIV — Entry Into Force**

According to the 28 June draft text, the CTBT will enter into force 180 days after the deposit of instruments of ratification of the States listed in Annex 2 (see below).

This Article also allows for a Conference to be held if the Treaty has not entered into force within three years of signature to 'decide by consensus what measures consistent with international law may be undertaken to ac-

celerate the ratification process'. While such a conference could exert political pressure on states that had not yet ratified, it could not decide to waive any of the entry into force requirements.

The entry into force requirements have been a disputed issue in the last few months only, primarily because other issues were seen earlier as having a greater precedence.

There seems no dispute that all of the five nuclear-weapon states should have to have ratified before entry into force. The dispute occurs as to whether the three 'threshold' states, India, Israel and Pakistan — those states believed to have the technological capability to manufacture nuclear weapons but which are under no treaty obligations not to do so — should have to have ratified before entry into force.

The May draft of the Treaty text included entry into force provisions requiring the ratification of the 37 countries listed as providing primary seismic stations and/or radionuclide laboratories to the IMS. In the face of this suggestion India promptly announced that it would withdraw its offer of seismic stations on its territory.

The current draft criteria relate to the current operation of nuclear reactors (see notes on Annex 2). As a specific set of ratifications from states are required for entry into force, any one of them could prevent entry into force.

Lessons may be learned from a recent treaty that requires a number of specific states to ratify before entry into force — the Treaty on Open Skies, signed in Helsinki on 24 March 1992. This requires that signatory states with passive overflights quotas above a certain threshold must ratify before entry into force. Although there were confident predictions that this process would take only a couple of years to complete, the Treaty is not yet in force.

The Conventional Armed Forces in Europe (CFE) Treaty, signed in Paris on 19 November 1990, contained a list of ratifications required for entry into force, but was provisionally applied as this process was taking longer than expected.

#### **Article XV — Reservations**

'The Articles of and the Annexes to this Treaty shall not be subject to reservations. The provisions of the Protocol to this Treaty and the Annexes to the Protocol shall not be subject to reservations incompatible with the object and purpose of this Treaty.'

#### **Article XVI — Depositary**

The United Nations Secretary-General is the Depositary to the Treaty.

#### **Article XVII — Authentic Texts**

The Arabic, Chinese, English, French, Russian and Spanish texts are equally authentic.

#### **Annex 1 to the Treaty — List of States Pursuant to Article II, paragraph 28**

See Article II, above.

#### **Annex 2 to the Treaty — List of States Pursuant to Article XIV**

The criteria for inclusion on the list are that the state should be a member of the CD as at 18 June 1996 and which appear in either Table 1 of the April 1996 edition of 'Nuclear Power Reactors in the World' or Table 1 of the December 1995 edition of 'Nuclear Research Reactors in

the World', both published by the International Atomic Energy Agency.

The 44 states which conform to the above criteria are listed overleaf together with their record on ratification of certain other treaties.

#### **Protocol**

The Protocol to the CTBT is divided into three sections: the IMS and IDC functions; on-site inspections; and confidence-building measures. The Protocol also contains two annexes: tables of stations for the various monitoring networks; and a 'List of Characterisation Parameters for International Data Centre Standard Event Screening'.

#### *The International Monitoring System*

The IMS is based on four monitoring technologies, specified in the Protocol: seismological, radionuclide, hydroacoustic and infrasound.

Seismological monitoring consists of a network of 50 primary and 120 secondary stations feeding data about vibrations in the Earth to the IDC. While it is not impossible to carry out a nuclear test without being detected by seismic means, it is both difficult and expensive.

Radionuclide monitoring consists of a network of 80 stations which test the atmosphere for radioactive debris from nuclear explosions. All stations are to be capable of detecting 'relevant particulate matter' with 40 of the stations also able to monitor 'relevant noble gases'; although the noble gas provision has received some opposition. Some radionuclides are highly distinctive of nuclear tests. While this technique cannot pinpoint the location of a test event, unlike seismic means, it should provide a clear indication that a test has taken place.

Hydroacoustic monitoring consists of a network of 11 stations which detect soundwaves travelling through the oceans.

Infrasound monitoring consists of a network of 60 stations which detect soundwaves travelling through the atmosphere at frequencies far below those heard by the human ear. Sound at such frequencies travels for very long distances and is distinctive of a nuclear test.

#### *On-site inspections*

The Protocol contains rules for the conduct of on-site inspections. Unlike the CWC, which has a complicated mechanism for negotiating 'perimeters' of an inspection area, the draft CTBT allows the CTBTO to define the inspection area. However, the inspected State Party has the right 'to make recommendations at any time to the inspection team regarding possible modification of the inspection plan'.

The Protocol allows overflights of the inspection area by the inspection team. This will not only strengthen the verification regime but will also reduce costs if the location of an anomalous event picked up by the IMS cannot be accurately pinpointed.

#### *Confidence-building measures*

The Protocol allows for voluntary confidence-building measures in the form of notifications by States Parties of large conventional explosions (over 300 tonnes TNT-equivalent) carried out, for example, in mining operations. States Parties may arrange for visits to areas in its territory, in which large quantities of conventional explosives are used, by representatives of the CTBTO or other States Parties.

## CTBT (28 June 1996 text) — ratification record of the Annex 2 states

	Biological Weapons Convention	Chemical Weapons Convention	Non- Proliferation Treaty		Biological Weapons Convention	Chemical Weapons Convention	Non- Proliferation Treaty
Algeria	—	Si-13 Jan 93 R-14 Aug 95	Ac-12 Jan 95	Italy	Si-10 Apr 72 R-30 May 75	Si-13 Jan 93 R-8 Dec 95	Si-28 Jan 69 R-2 May 75
Argentina	Si-1 Aug 72 R-23 Nov 79	Si-13 Jan 93 R-2 Oct 95	Ac-17 Feb 95	Japan	Si-10 Apr 72 R-8 Jun 82	Si-13 Jan 93 R-15 Sep 95	Si-3 Feb 70 R-8 Jun 76
Australia	Si-10 Apr 72 R-5 Oct 77	Si-13 Jan 93 R-6 May 94	Si-27 Feb 70 R-23 Jan 73	Mexico	Si-10 Apr 72 R-8 Apr 74	Si-13 Jan 93 R-29 Aug 94	Si-26 Jul 68 R-21 Jan 69
Austria	Si-10 Apr 72 R-10 Aug 73	Si-13 Jan 93 R-17 Aug 95	Si-1 Jul 68 R-27 Jun 69	Netherlands	Si-10 Apr 72 R-22 Jun 81	Si-14 Jan 93 R-30 Jun 95	Si-20 Aug 68 R-2 May 75
Bangladesh	Ac-11 Mar 85	Si-14 Jan 93 R-	Ac-31 Aug 79	Norway	Si-10 Apr 72 R-1 Aug 73	Si-13 Jan 93 R-7 Apr 94	Si-1 Jul 68 R-5 Feb 69
Belgium	Si-10 Apr 72 R-15 Mar 79	Si-13 Jan 93 R-	Si-20 Aug 68 R-2 May 75	Pakistan	Si-10 Apr 72 R-25 Sep 74	Si-13 Jan 93 R-	—
Brazil	Si-10 Apr 72 R-27 Feb 73	Si-13 Jan 93 R-13 Mar 96	—	Peru	Si-10 Apr 72 R-11 Jun 85	Si-14 Jan 93 R-20 Jul 95	Si-1 Jul 68 R-3 Mar 70
Bulgaria	Si-10 Apr 72 R-2 Aug 72	Si-13 Jan 93 R-10 Aug 94	Si-1 Jul 68 R-5 Sep 69	Poland	Si-10 Apr 72 R-25 Jan 73	Si-13 Jan 93 R-23 Aug 95	Si-1 Jul 68 R-12 Jun 69
Canada	Si-10 Apr 72 R-18 Sep 72	Si-13 Jan 93 R-26 Sep 95	Si-23 Jul 68 R-8 Jan 69	Republic of Korea	Si-10 Apr 72 R-25 Jan 87	Si-14 Jan 93 R-	Si-1 Jul 68 R-23 Apr 75
Chile	Si-10 Apr 72 R-22 Apr 80	Si-14 Jan 93 R-	Ac-25 May 95	Romania	Si-10 Apr 72 R-25 July 79	Si-13 Jan 93 R-15 Feb 95	Si-1 Jul 68 R-4 Feb 70
China	Ac-15 Nov 84	Si-13 Jan 93 R-	Ac-9 Mar 92	Russian Federation	Si-10 Apr 72 R-26 Mar 75	Si-13 Jan 93 R-	Si-1 Jul 68 R-5 Mar 70
Colombia	Si-10 Apr 72 R-19 Dec 83	Si-13 Jan 93 R-	Si-1 Jul 68 R-8 Apr 86	Slovak Republic	Su-17 Mar 93 [wef 1 Jan 93]	Si-14 Jan 93 R-27 Oct 95	Su-1 Jan 93
Dem. People's Rep. of Korea	Ac-13 Mar 87	—	Ac-12 Dec 85	South Africa	Si-10 Apr 72 R-3 Nov 75	Si-14 Jan 93 R-13 Sep 95	Ac-10 Jul 91
Egypt	Si-10 Apr 72 R-	—	Si-1 Jul 68 R-26 Feb 81	Spain	Si-10 Apr 72 R-20 Jun 79	Si-13 Jan 93 R-3 Aug 94	Ac-5 Nov 87
Finland	Si-10 Apr 72 R-4 Feb 74	Si-14 Jan 93 R-7 Feb 95	Si-1 Jul 68 R-5 Feb 69	Sweden	Si-27 Feb 75 R-5 Feb 76	Si-13 Jan 93 R-17 Jun 93	Si-19 Aug 68 R-9 Jan 70
France	Ac-27 Sep 84	Si-13 Jan 93 R-2 Mar 95	Ac-2 Aug 92	Switzerland	Si-10 Apr 72 R-4 May 76	Si-14 Jan 93 R-10 Mar 95	Si-27 Nov 69 R-9 Mar 77
Germany	Si-10 Apr 72 R-7 Apr 83	Si-13 Jan 93 R-12 Aug 94	Si-28 Nov 69 R-2 May 75	Turkey	Si-10 Apr 72 R-4 Nov 74	Si-14 Jan 93 R-	Si-28 Jan 69 R-17 Apr 80
Hungary	Si-10 Apr 72 R-27 Dec 72	Si-13 Jan 93 R-	Si-1 Jul 68 R-27 May 69	Ukraine	Si-10 Apr 72 R-26 Mar 75	Si-13 Jan 93 R-	Ac-5 Dec 94
India	Si-15 Jan 73 R-15 Jul 74	Si-14 Jan 93 R-	—	United Kingdom	Si-10 Apr 72 R-26 Mar 75	Si-13 Jan 93 R-13 May 95	Si-1 Jul 68 R-27 Nov 68
Indonesia	Si-20 Jun 72 R-19 Feb 92	Si-13 Jan 93 R-	Si-2 Mar 70 R-12 Jul 79	United States of America	Si-10 Apr 72 R-26 Mar 75	Si-13 Jan 93 R-	Si-1 Jul 68 R-5 Mar 70
Iran (Islamic Republic of)	Si-10 Apr 72 R-22 Aug 73	Si-13 Jan 93 R-	Si-1 Jul 68 R-2 Feb 70	Viet Nam	Ac-20 Jun 80	Si-13 Jan 93 R-	Ac-14 Jun 82
Israel	—	Si-13 Jan 93 R-	—	Zaire	Si-10 Apr 72 R-16 Sep 75	Si-14 Jan 93 R-	Si-22 Jul 68 R-4 Aug 70

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