



## Press kit for the Conference on Facilitating the Entry into Force of the Comprehensive Nuclear-Test-Ban Treaty

New York, 21–23 September 2005

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### **BACKGROUND MATERIAL:**

- World map of the International Monitoring System (IMS) facilities
- CTBTO Spectrum newsletter
- Feature article: “Tristan da Cunha: The International Monitoring System at work on a remote island”
- DVD: “Verifying the Nuclear-Test-Ban, CTBTO: For a safer and more secure world”



## Provisional agenda of the 2005 Conference

1. Opening of the Conference by the Secretary-General of the United Nations or his representative
2. Election of the President
3. Adoption of the rules of procedure
4. Adoption of the agenda and other organizational matters
5. Election of officers other than the President
6. Credentials of representatives to the Conference:
  - (a) Appointment of the members of the Credentials Committee
  - (b) Report of the Credentials Committee
7. Confirmation of the Secretary of the Conference
8. Address by the Executive Secretary of the Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization
9. Presentation of a progress report on cooperation to facilitate the entry into force of the Treaty
10. General exchange of views by ratifiers and signatories on facilitating the entry into force of the Comprehensive Nuclear-Test-Ban Treaty<sup>1</sup>
11. Consideration of draft final declaration and measures to facilitate the entry into force of the Comprehensive Nuclear-Test-Ban Treaty
12. Statements by non-signatory States<sup>1</sup>
13. Statement on behalf of NGOs<sup>2</sup>
14. Adoption of a final document
15. Any matters arising from paragraph 3 of Article XIV of the Treaty
16. Adoption of the report of the Conference
17. Closure of the Conference

<sup>1</sup> *As general guidance, it is assumed that speakers, at the discretion of the President, will talk for up to five minutes each.*  
<sup>2</sup> *Time limit of approximately five minutes, at the discretion of the President.*

## Proposed timetable for the Conference

### WEDNESDAY, 21 SEPTEMBER 2005

#### 3:00 p.m. - 6:00 p.m.

- Item 1 Opening of the Conference by the Secretary-General of the United Nations or his representative
- Item 2 Election of the President
- Item 3 Adoption of the rules of procedure
- Item 4 Adoption of the agenda and other organizational matters
- Item 5 Election of officers other than the President
- Item 6(a) Credentials of representatives to the Conference: Appointment of the members of the Credentials Committee
- Item 7 Confirmation of the Secretary of the Conference
- Item 8 Address by the Executive Secretary of the Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization
- Item 9 Presentation of a progress report on cooperation to facilitate the entry into force of the Treaty
- Item 10 General exchange of views by Ratifiers and Signatories on facilitating the entry into force of the Comprehensive Nuclear-Test-Ban Treaty

### THURSDAY, 22 SEPTEMBER 2005

#### 10:00 a.m. - 1:00 p.m.

- Item 10 (continued) General exchange of views by Ratifiers and Signatories on facilitating the entry into force of the Comprehensive Nuclear-Test-Ban Treaty

#### 3:30 p.m. - 6:00 p.m.

- Item 10 (continued) General exchange of views by Ratifiers and Signatories on facilitating the entry into force of the Comprehensive Nuclear-Test-Ban Treaty

### FRIDAY, 23 SEPTEMBER 2005

#### 10:00 a.m. - 1:00 p.m.

- Item 10 (continued) General exchange of views by Ratifiers and Signatories on facilitating the entry into force of the Comprehensive Nuclear-Test-Ban Treaty
- Item 11 Consideration of draft final declaration and measures to facilitate the entry into force of the Comprehensive Nuclear-Test-Ban Treaty

*If required, this item can be taken up in a parallel session of the Committee of the Whole at any time during the Article XIV Conference.*

#### 3:00 p.m. - 6:00 p.m.

- Item 10 (continued) General exchange of views by Ratifiers and Signatories on facilitating the entry into force of the Comprehensive Nuclear-Test-Ban Treaty
- Item 12 Statements by non-signatory States
- Item 13 Statement on behalf of NGOs
- Item 6(b) Credentials of representatives to the Conference: Report of the Credentials Committee
- Item 14 Adoption of a final document
- Item 15 Any matters arising from paragraph 3 of Article XIV of the Treaty
- Item 16 Adoption of the report of the Conference
- Item 17 Closure of the Conference



## About the Conferences on Facilitating the Entry into Force of the Comprehensive Nuclear-Test Ban Treaty (Article XIV Conferences)

### BRIEF BACKGROUND

- The Comprehensive Nuclear-Test-Ban Treaty (CTBT) was adopted in New York on 10 September 1996. The Treaty, which prohibits nuclear explosions in any environment, consists of 17 Articles, 2 Annexes and a Protocol.
- Article XIV specifies the conditions for the Treaty's entry into force. This will take place 180 days after the 44 States listed in Annex 2 to the Treaty have all ratified it. *(For the list of Annex 2 States, please see insert 3.)*
- The negotiators of the CTBT also included a mechanism under Article XIV to accelerate the Treaty's entry into force, if this had not taken place three years after the anniversary of its opening for signature.
- Ratifying States can request the Secretary-General of the United Nations, who is the Depositary of the Treaty, to convene a Conference to examine how the ratification process can be accelerated. These Conferences can be convened at subsequent anniversaries until the Treaty enters into force.

### SIGNIFICANCE OF THE TREATY

The Treaty constrains the development and qualitative improvement of nuclear weapons. The CTBT constitutes an effective measure of nuclear disarmament and non-proliferation.

### DATE AND VENUE OF THE 2005 CONFERENCE ON FACILITATING THE ENTRY INTO FORCE OF THE CTBT

At the request of the ratifying States, the Secretary-General of the United Nations has convened the 2005 Conference on Facilitating the Entry into Force of the CTBT. The Conference will take place from 21 to 23 September 2005 at the United Nations Headquarters in New York, USA.

### OBJECTIVE

The conference will decide which measures consistent with international law may be taken to accelerate the

ratification process in order to facilitate the entry into force of the CTBT.

### PARTICIPATING STATES AND ORGANIZATIONS

Representatives of States which have ratified the CTBT are invited to participate in deliberations. Signatory States, non-signatory States, international organizations and non-governmental organizations are invited to attend as observers.

### PRESIDENT-DESIGNATE OF THE CONFERENCE

His Excellency Mr Alexander Downer, Minister for Foreign Affairs of Australia. *(For a profile of Mr. Downer, please see insert 10.)*

### CHAIRPERSON OF THE PREPARATORY PROCESS

Her Excellency Ambassador Deborah Stokes, Permanent Representative of Australia to the United Nations and other international organizations in Vienna. *(For a profile of Ambassador Stokes, please see insert 10.)*

### ANTICIPATED OUTCOME

- The main outcome of the Conference will be the Final Declaration. This document will include measures consistent with international law that may be undertaken to accelerate the ratification process in order to facilitate the early entry into force of the Treaty.
- It is anticipated that a number of States, which have not yet signed or ratified the Treaty, will decide to do so prior to or during the Conference, as has been the case in previous Conferences on Facilitating the Entry into Force of the CTBT.

### PREVIOUS CONFERENCES

Conferences on Facilitating the Entry into Force of the CTBT have been held in Vienna in 1999, in New York in 2001 and again in Vienna in 2003. *(For a summary of the Conferences, please see insert 4.)*

## Mechanism for the Treaty's entry into force

The provisions of a treaty generally determine the requirements for its entry into force. In the case of the CTBT, the Treaty requires ratification by the 44 States listed in its Annex 2. *(Please see overleaf)*

Annex 2 States are those States that participated in the work of the Conference on Disarmament which drafted the CTBT in 1996 and possessed nuclear power or research reactors at the time. The CTBT will enter into force 180 days after all the Annex 2 States have ratified it.

Signature and ratification by States other than the 44 Annex 2 States is also important since this indicates support for the Treaty and willingness to help the CTBT move towards early entry into force. As the number of signatures and ratifications continues to increase, the Treaty draws closer to achieving universality and the important goal of enhancing international peace and security.

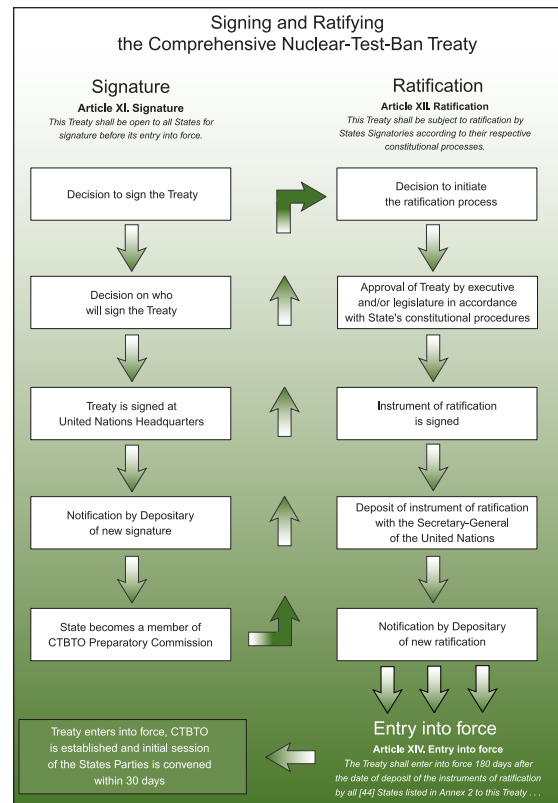
### SIGNATURE OF THE CTBT

Signature is accomplished when an authorized representative of a State signs the Treaty at the United Nations Headquarters in New York.

The national steps leading to signature of the CTBT are the same as for other Treaties.

- When a government decides to sign the Treaty, a decision must be made as to who will represent the State when signing the Treaty.
- The capacity of that representative to sign must be determined. Unless the representative is the Head of State or Government or the Minister for Foreign Affairs, he or she will have to be issued with or possess full powers to sign the Treaty.

States Signatories are bound by the basic obligations of Article I of the Treaty not to carry out any nuclear weapon test explosion or any other nuclear explosion. Signatories are also obliged to refrain from acts that would defeat the object and purpose of the Treaty.



SIGNATURE AND RATIFICATION PROCESS

### RATIFICATION OF THE CTBT

Ratification follows signature and indicates the final consent of a State to be bound by the terms of the Treaty.

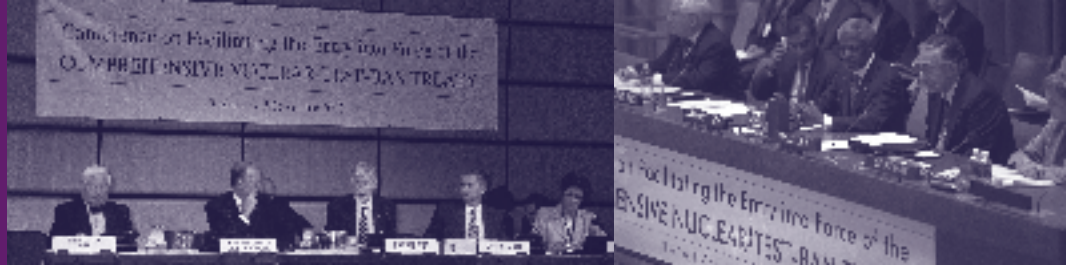
- First of all, the instrument of ratification needs to be signed by the Head of State or Government or the Minister for Foreign Affairs or another authorized representative.
- The ratification process is completed on the date on which the State deposits its instrument of ratification with the United Nations Secretary-General in New York.

As of 15 July 2005, 175 States have signed the CTBT. A total of 122 States have deposited their instruments of ratification. Of the 44 Annex 2 States, 41 have signed and 33 have ratified the Treaty.

ANNEX 2 TO THE TREATY  
LIST OF STATES PURSUANT TO ARTICLE XIV

1. Algeria \*
2. Argentina \*
3. Australia \*
4. Austria \*
5. Bangladesh \*
6. Belgium \*
7. Brazil \*
8. Bulgaria \*
9. Canada \*
10. Chile \*
11. China
12. Colombia
13. Democratic People's Republic of Korea
14. Democratic Republic of the Congo (formerly Zaire) \*
15. Egypt
16. Finland \*
17. France \*
18. Germany \*
19. Hungary \*
20. India
21. Indonesia
22. Iran (Islamic Republic of)
23. Israel
24. Italy \*
25. Japan \*
26. Mexico \*
27. Netherlands \*
28. Norway \*
29. Pakistan
30. Peru \*
31. Poland \*
32. Romania \*
33. Republic of Korea \*
34. Russian Federation \*
35. Slovakia \*
36. South Africa \*
37. Spain \*
38. Sweden \*
39. Switzerland \*
40. Turkey \*
41. Ukraine \*
42. United Kingdom of Great Britain and Northern Ireland \*
43. United States of America
44. Viet Nam

\* RATIFIERS OF THE CTBT AS OF 15 JULY 2005



## Summary of previous Conferences on Facilitating the Entry into Force of the Comprehensive Nuclear-Test-Ban Treaty

Since the 2003 Conference, twenty-three States ratified the Comprehensive Nuclear-Test-Ban Treaty (CTBT), including on 28 September 2004 the Democratic Republic of the Congo, a State listed in Annex 2 of the Treaty. During this period, eight States also signed the CTBT.\*

### CONFERENCE ON FACILITATING THE ENTRY INTO FORCE OF THE COMPREHENSIVE NUCLEAR-TEST-BAN TREATY, VIENNA, 3-5 SEPTEMBER 2003

One hundred and eight States participated in the 2003 Conference along with representatives of seven international organizations and nineteen non-governmental organizations. His Excellency Mr Erkki Tuomioja, Minister for Foreign Affairs of Finland, was President of the Conference.

The Conference was opened by Mr Antonio Maria Costa, Director-General of the United Nations Office at Vienna, who delivered a statement on behalf of Mr Kofi Annan, Secretary-General of the United Nations. Her Excellency Ms Benita Ferrero-Waldner, Federal Minister for Foreign Affairs of Austria, gave a welcoming address on behalf of the host State.

States noted that the “prevention of the proliferation of weapons of mass destruction is one of the most important challenges facing the world” and that since the 2001 Conference international developments had occurred which made entry into force urgent.

In the Final Declaration of the Conference, States reiterated that the cessation of all nuclear weapon test explosions and all other nuclear explosions constituted an effective measure of nuclear disarmament and non-proliferation in all its aspects and therefore a meaningful step in the realization of a systematic process to achieve nuclear disarmament. The States renewed their commitment to work for universal ratification of the Treaty and its early entry into force.

### CONFERENCE ON FACILITATING THE ENTRY INTO FORCE OF THE COMPREHENSIVE NUCLEAR-TEST-BAN TREATY, NEW YORK, 11-13 NOVEMBER 2001

A total of 118 States participated in the 2001 Article XIV Conference in New York along with representatives of both international and non-governmental organizations. The Conference was chaired by His Excellency Mr Miguel Marin Bosch, Deputy Foreign Minister of Mexico.

Mr Kofi Annan, Secretary-General of the United Nations, opened the Conference, calling the Treaty “a crucial element in the non-proliferation regime”.

During discussions, delegates referred to the Treaty as one of the cornerstones of the disarmament and non-proliferation process. Reference was also made to the Treaty’s role within the context of the fight against terrorism.

In the Final Declaration of the Conference, participants called upon all States to maintain a moratorium on nuclear weapon test explosions or any other nuclear explosions. The States renewed their commitment to work for universal ratification of the Treaty and its early entry into force.

\* STATUS OF SIGNATURES AND RATIFICATION FROM 5 SEPTEMBER 2003 TO 15 JULY 2005.



## Summary of previous Conferences on Facilitating the Entry into Force of the Comprehensive Nuclear-Test-Ban Treaty

### CONFERENCE ON FACILITATING THE ENTRY INTO FORCE OF THE COMPREHENSIVE NUCLEAR-TEST-BAN TREATY, VIENNA, 6-8 OCTOBER 1999

A total of 92 States Ratifiers and Signatories met in Vienna in 1999 to promote the early entry into force of the CTBT. Representatives of non-signatory States, international and non-governmental organizations also attended the Conference, which was chaired by His Excellency Mr Masahiko Koumura, former Minister for Foreign Affairs of Japan.

The Conference was opened by Mr Jayantha Dhanapala, Under-Secretary-General for Disarmament Affairs of the United Nations. His Excellency Mr Wolfgang Schüssel, Vice-Chancellor and Federal Minister for Foreign Affairs of Austria, gave a welcoming address on behalf of the host State.

During the three-day meeting, participants discussed the extent to which the requirement for the Treaty's entry into force had been met. Discussions also focused on which measures consistent with international law might be used to accelerate ratification of the Treaty.

In the Final Declaration, Member States reaffirmed their commitment to the Treaty's basic obligations and their undertaking to refrain from acts which would defeat the object and purpose of the Treaty pending its early entry into force. Non-signatory States were called upon to sign and ratify the Treaty as soon as possible.





## Brief history of nuclear non-proliferation and the CTBT

**1945**

The United States conducts its first nuclear explosive test on 16 July. In August, two atomic bombs explode over Hiroshima and Nagasaki, Japan.

**1949**

The Soviet Union conducts its first nuclear explosive test.

**1952**

The United Kingdom conducts its first nuclear explosive test.

**1954**

Prime Minister Jawaharlal Nehru of India proposes for the first time a suspension of nuclear-weapon testing.

**1958**

A Conference of Experts meets in August in Geneva to discuss the feasibility of monitoring a nuclear test ban. Expert tri-partite (the Soviet Union, the United Kingdom and the United States) negotiations begin in October and come to an indefinite adjournment in 1962.

**1959**

The Antarctic Treaty, providing for the demilitarization and denuclearization of the Antarctic continent, opens for signature.

**1960**

France conducts its first nuclear explosive test.

**1963**

The Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and under Water (Partial Test Ban Treaty) is signed by the United Kingdom, the Soviet Union and the United States. The treaty does not include verification procedures or international inspections.

**1964**

China conducts its first nuclear explosive test.

**1967**

The Treaty for the Prohibition of Nuclear Weapons in Latin America and, as amended in 1990, the Caribbean (Treaty of Tlatelolco), establishing a nuclear-weapon-free zone covering Latin America and the Caribbean, opens for signature.

**1968**

The Treaty on the Non-Proliferation of Nuclear Weapons (NPT) opens for signature. The Preamble of the NPT and its Article VI include a specific reference to a linkage between nuclear-weapon States disarmament and non-proliferation.

**1974**

India conducts a nuclear explosion and asserts that it was for 'peaceful' purposes. The Treaty on the Limitation of Underground Weapon Tests (Threshold Test-Ban Treaty), limiting the yield of such tests to 150 kilotons, is signed by the Soviet Union and the United States.

**1976**

The Treaty on Underground Nuclear Explosions for Peaceful Purposes (Peaceful Nuclear Explosions Treaty), limiting the maximum yield of peaceful nuclear explosions to 150 kilotons, is signed by the Soviet Union and the United States.

**1985**

The South Pacific Nuclear Free Zone Treaty (Treaty of Rarotonga), establishing a nuclear-free zone in the South Pacific, opens for signature.

**1990**

The Soviet Union conducts what is to be its last nuclear explosive test.

**1991**

Russia announces in January a four-month unilateral moratorium on nuclear testing, which is subsequently extended three times, the last of which is by presidential decree in July 1993. Parties to the Partial Test Ban Treaty hold an amendment conference to discuss a proposal to convert the Treaty into an instrument banning all nuclear weapon tests for all time. The United

Kingdom conducts what is to be its last nuclear explosive test.

#### 1992

The newly independent State of Kazakhstan announces that it will close its nuclear test site. France announces a unilateral moratorium on nuclear testing until the end of 1992, which is extended in January 1993. The United States conducts what is to be its last nuclear explosive test. United States legislation (Hatfield amendment) establishes a moratorium on nuclear explosive testing, which is extended in July 1993.

#### 1993

The Conference on Disarmament establishes the Ad Hoc Nuclear-Test-Ban Committee to negotiate a Comprehensive Test-Ban Treaty (CTBT).

#### 1994

Russia advocates the signing of a CTBT in 1995, the 50th anniversary of the United Nations. China urges for negotiations to conclude a CTBT not later than 1996.

#### 1995

The United States announces extension of its moratorium on nuclear testing until the entry into force of a CTBT. The NPT Review and Extension Conference and, later, the UN General Assembly call for the conclusion of the CTBT negotiations in 1996. France announces it will halt all tests by May 1996 and sign a CTBT. The Southeast Asia Nuclear Weapon-Free Zone Treaty (Treaty of Bangkok), establishing a nuclear-weapon-free zone in Southeast Asia, opens for signature.

#### 1996

France conducts its last nuclear explosive test on 27 January. Two days later, France permanently closes its testing programme. The African Nuclear-Weapon-Free Zone Treaty (Treaty of Pelindaba), establishing a nuclear-weapon-free zone in Africa, opens for signature. China conducts its last nuclear explosive test on 29 July and announces the beginning of a moratorium on nuclear testing effective the next day.

The Conference on Disarmament is unable to reach consensus on the draft Comprehensive Nuclear-Test-Ban Treaty; 127 States sponsor a draft resolution by the UN General Assembly,

which adopts the Treaty on 10 September 1996 by 158 in favor, 3 against, with 5 abstentions.

#### 24 September 1996

The CTBT is opened for signature at the UN in New York. 71 States, including the five nuclear-weapon States, sign the Treaty on that day.

#### May 1998

India and Pakistan conduct nuclear explosive tests. Both countries then declare moratoria on further nuclear testing.

#### October 1999

The Conference on Facilitating the Entry into Force of the Comprehensive Nuclear-Test-Ban Treaty is held in Vienna.

#### September 2000

At the United Nations Millennium Summit, the Secretary-General calls upon States, *inter alia*, to sign, ratify or accede to Treaties, in particular 25 core Treaties, including the CTBT. 13 States seize the opportunity to sign and/or ratify the CTBT.

#### November 2001

The Conference on Facilitating the Entry into Force of the Comprehensive Nuclear-Test-Ban Treaty is held in New York. Between 24 October 2000, when the ratifying States requested the Secretary-General to convene the Conference, and the opening of the Conference, 22 States ratified the Treaty and four signed it.

#### May 2003

Mauritania is the one hundredth State to ratify the CTBT.

#### September 2003

The Conference on Facilitating the Entry into Force of the Comprehensive Nuclear-Test-Ban Treaty is held in Vienna. The Final Declaration of the Conference stresses the importance of a universal and effectively verifiable comprehensive Treaty as a major instrument in all aspects of nuclear disarmament and non-proliferation.

#### September 2004

A joint statement in support of the CTBT was released by 42 foreign ministers. The statement calls on States to ratify the Treaty which it calls “a major instrument in the field of nuclear disarmament and non-proliferation”.



## Summary of the Comprehensive Nuclear-Test-Ban Treaty (CTBT)

The Comprehensive Nuclear-Test-Ban Treaty bans all nuclear-weapon test explosions, for military or civilian purposes.

It comprises a preamble, 17 articles, two annexes and a Protocol with two annexes.

**The preamble** outlines the significance of the Treaty.

**Article I** stipulates the basic obligations of the Treaty, and prohibits State Parties from carrying out any nuclear-weapon test explosion in any environment.

**Article II** provides for the establishment of the Comprehensive Nuclear-Test-Ban Treaty Organization in Vienna to ensure the Treaty's implementation and to provide a forum for consultation and cooperation.

**Article III** focuses on national implementation measures.

**Article IV** provides for a global verification regime to monitor compliance with Treaty provisions. The regime is to comprise a global network of monitoring stations (the International Monitoring System), an International Data Centre in Vienna, a consultation and clarification process, on-site inspections and confidence-building measures.

**Article V** outlines measures to redress a situation which contravenes CTBT provisions and to ensure compliance with the Treaty.

**Article VI** deals with the settlement of disputes that may arise concerning the application or the interpretation of the Treaty.

**Article VII** contains the procedure for amending the Treaty.

**Article VIII** stipulates when a review of the Treaty will take place after its entry into force.

**Article IX** states that the Treaty is of unlimited duration.

**Article X** deals with the status of the Protocol and the Annexes.

**Article XI** concerns signature of the Treaty.

**Article XII** deals with ratification of the Treaty.

**Article XIII** concerns accession to the Treaty.

**Article XIV** establishes the requirements for the Treaty's entry into force. This will take place 180 days after the 44 States listed in Annex 2 to the Treaty have all ratified it. Article XIV also includes a mechanism to accelerate the Treaty's entry into force, if this has not taken place three years after the anniversary of its opening for signature.

**Article XV** specifies that the Treaty shall not be subject to reservations.

**Article XVI** stipulates the functions of the Depositary of the Treaty.

**Article XVII** deals with the authenticity of the Arabic, Chinese, English, French, Russian and Spanish texts of the Treaty.

**Annex 1** to the Treaty lists States by geographical regions for the purpose of elections to the Executive Council.

**Annex 2** to the Treaty lists the 44 States that must ratify the Treaty for it to enter into force.

**Protocol Part I** describes the functions of the International Monitoring System (IMS) and the International Data Centre (IDC).

**Protocol Part II** outlines the procedures for on-site inspections.

**Protocol Part III** deals with confidence-building measures.

**Annex 1 to the Protocol** lists the facilities comprising the IMS network.

**Annex 2 to the Protocol** lists the characterization parameters for IDC standard event screening.

*(The full Treaty text can be found at [www.ctbto.org](http://www.ctbto.org))*



STAFF MEMBERS OF THE PROVISIONAL TECHNICAL SECRETARIAT

# Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization

## INTRODUCTION

The Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO Preparatory Commission) was established by the States Signatories to the Treaty on 19 November 1996 at the United Nations in New York.

## MANDATE

The Commission's mandate is:

- to carry out the necessary preparations for the effective implementation of the Treaty, including the establishment of the global verification regime, which should be operational when the Treaty enters into force; and
- to prepare for the first Conference of the States Parties to the Treaty.

## STATUS

- The Preparatory Commission is an international organization with a strong technical focus.
- In June 2000, a Relationship Agreement between the United Nations and the Preparatory Commission entered into force. The Relationship Agreement provides a framework for cooperation between the two organizations.

## COMPOSITION

The Preparatory Commission is composed of all States which sign the CTBT. States Signatories participate in the Preparatory Commission's decision-making process and support its activities through the payment of assessed contributions.

## STRUCTURE

The Preparatory Commission consists of two main organs: a **plenary body** composed of all States Signatories and the **Provisional Technical Secretariat (PTS)**.

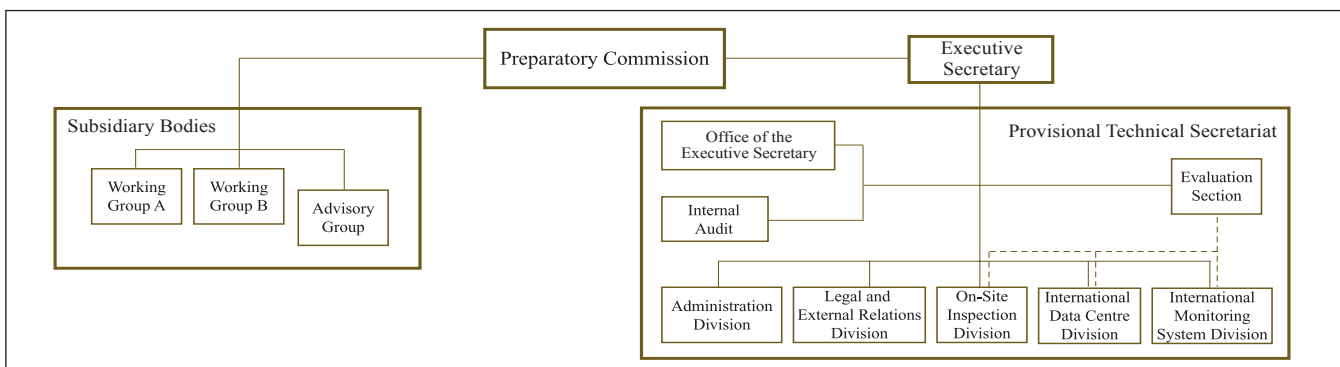
The plenary body has three subsidiary organs:

- Working Group A on budgetary and administrative matters;
- Working Group B on verification issues;
- An Advisory Group made up of financial experts from States Signatories. It advises the Commission and its subsidiary bodies on financial, budgetary and associated administrative issues.

The PTS started work in Vienna on 17 March 1997 under its Executive Secretary, Ambassador Wolfgang Hoffmann, who served in this position until 31 July 2005. The new Executive Secretary, Ambassador Tibor Tóth, took office on 1 August 2005. The global character of the PTS is reflected in its multinational composition, with 271 staff members from 70 States Signatories as of 15 July 2005.

## FINANCIAL BASIS

As of 2005, budgetary appropriations and assessments are split between US Dollars and Euros. The Preparatory Commission's budget for 2005 is US\$ 51,047,250 and € 42,540,900. About eighty per cent of the budget is allocated to the establishment of the global verification regime. The rate of payments of assessed contributions by Member States continues to be high, indicating strong support for the Commission's work.



ORGANIZATIONAL CHART OF THE PREPARATORY COMMISSION



LAYING THE CABLES FOR HYDROACOUSTIC STATION (HA05) IN MARTINIQUE, FRANCE



RADIONUCLIDE STATION (RN46), CHATHAM ISLAND, NEW ZEALAND

## Global verification regime

Article IV of the Comprehensive Nuclear-Test-Ban Treaty provides for the establishment of a unique global verification regime. The purpose of the regime is to ensure that non-compliance with the provisions of the Treaty can be detected in a timely manner.

The regime consists of:

- The International Monitoring System (supported by the International Data Centre and the Global Communications Infrastructure)
- A consultation and clarification process
- On-site inspections
- Confidence-building measures

The Treaty stipulates that the verification system must be operational by the time the CTBT enters into force. The Preparatory Commission and its Provisional Technical Secretariat are responsible for this task.

### International Monitoring System

The International Monitoring System (IMS) comprises a global network of 337 monitoring facilities (170 seismic stations, 11 hydroacoustic stations, 60 infrasound stations, 80 radionuclide stations and 16 radionuclide laboratories). Many stations are located in remote areas in order to provide global coverage. This has presented logistical and engineering challenges unprecedented in the history of arms control.

#### OBJECTIVE

To monitor the earth in order to detect and provide data on possible nuclear explosions and ambiguous events.

#### MONITORING TECHNOLOGIES

When a nuclear device is detonated, two basic phenomena occur: energy is released and physical products are created. The energy interacts with the environment and propagates as sound vibrations through the solid earth, ocean or atmosphere. The physical products created are released into the surrounding medium and can leak back into the atmosphere from underground or underwater.

The IMS uses seismic, infrasound, hydroacoustic and radionuclide monitoring technologies to register vibrations underground, in

the air and in the sea, and to detect radionuclides released into the atmosphere by nuclear explosions. Once fully established, the IMS will be capable of detecting nuclear explosions of very low yield detonated in any environment on earth.

The **seismological** component of the IMS detects and locates seismic events. The seismic network comprises 50 primary stations supplemented by 120 auxiliary stations. Seismic data allow for the distinction between an underground nuclear explosion and an earthquake.

The **infrasound** network of 60 stations uses microbarometers (acoustic pressure sensors) to detect low-frequency sound waves in the atmosphere produced by natural and man-made events.

Infrasound data are used to locate and distinguish between atmospheric explosions, natural phenomena such as meteorites, erupting volcanoes and meteorological events and man-made phenomena, such as space debris, rocket launches and aircraft in supersonic flight.

**Hydroacoustic** monitoring detects acoustic waves produced by natural and man-made phenomena in the oceans. The hydroacoustic network consists of 11 stations and covers the world's oceans.



HYDROACOUSTIC STATION (HA08), CHAGOS ARCHIPELAGO, BIOT, UNITED KINGDOM



INFRASOUND STATION (IS33), ANTANANARIVO, MADAGASCAR

Few stations are required because of the very efficient propagation of acoustic energy in the oceans.

The data from these stations are used to distinguish between underwater explosions and other phenomena such as submarine volcano eruptions and earthquakes, which also propagate acoustic energy into the oceans.

The **radionuclide** network of 80 stations uses air samplers to detect radioactive particles released from atmospheric explosions or vented from underground or underwater explosions.

IMS radionuclide laboratories analyse air samples for radionuclide materials that may have been produced by a nuclear explosion. The presence of specific radionuclides provides unambiguous evidence of a nuclear explosion. The presence of noble gases is particularly important in detecting releases from underground explosions. Half of the stations in the radionuclide network will also have the capacity to detect noble gases.

#### ACHIEVEMENTS

Since the Treaty opened for signature in 1996, significant progress has been made in the establishment of the IMS. Site surveys for 93% of the total number of stations have now been completed. Altogether, 191 stations have been built or substantially meet specifications, of which 126 have been certified, a process that is necessary for the stations to become part of the IMS network. An additional 70 stations are currently under construction or in contract negotiations. Some

163 facilities are already contributing data to the International Data Centre (IDC) in Vienna, where they are processed and, together with IDC products, released to States Signatories for further analysis and final judgement.

### International Data Centre

The IMS network is supported by the IDC, which is located at the Commission's seat in Vienna.

#### OBJECTIVE

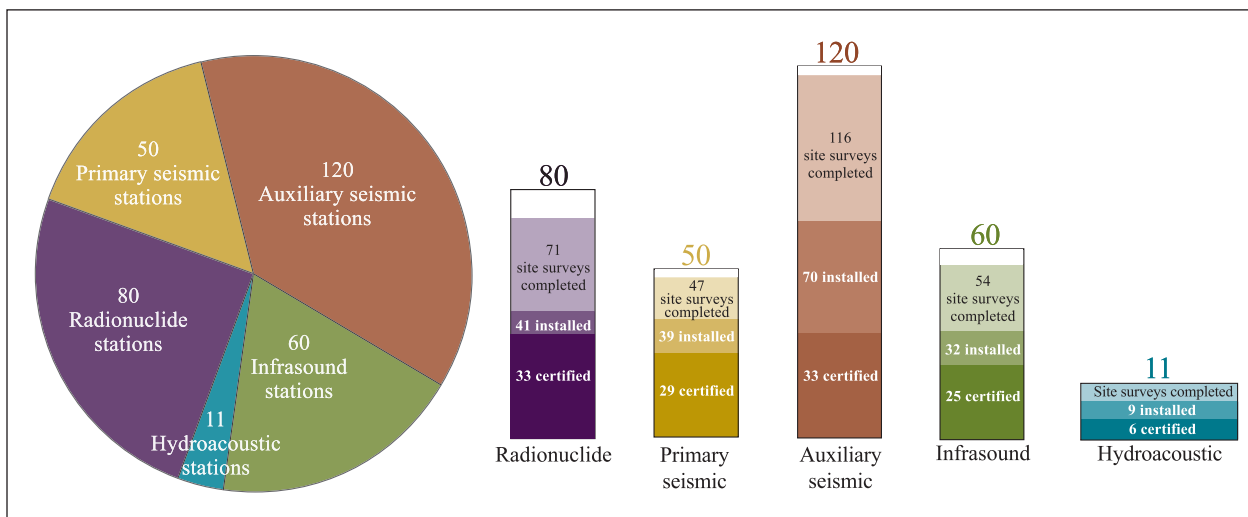
To support the verification responsibilities of States by providing objective products and services necessary for effective global monitoring.

#### ACTIVITIES

The IDC is responsible for receiving, collecting, processing, analysing and reporting on, and archiving data from IMS stations and laboratories. The results of the work at the IDC are put together as different types of reports, usually referred to as IDC products. Data are processed immediately upon arrival at the IDC and the first automated products are released within minutes.

#### IDC PRODUCTS

IDC products comprise automated lists of seismic, hydroacoustic and infrasound signals and radionuclides which have been detected at the IDC. Using information from all seismoacoustic IMS stations, the IDC also produces lists of the events that it has detected.



OVERVIEW OF INTERNATIONAL MONITORING SYSTEM STATION STATUS AS OF 28 MAY 2005



INFRASOUND STATION (IS 47),  
BOSHOF, SOUTH AFRICA



AUXILIARY SEISMIC STATION (AS101), HAGFORS, SWEDEN



IDC ANALYST REVIEWING RAW DATA

The automated lists are then reviewed by analysts, who prepare quality-controlled bulletins. The data, products and bulletins are transmitted immediately to States Signatories for their feedback. Data, products and bulletins are received and distributed using the Global Communications Infrastructure.

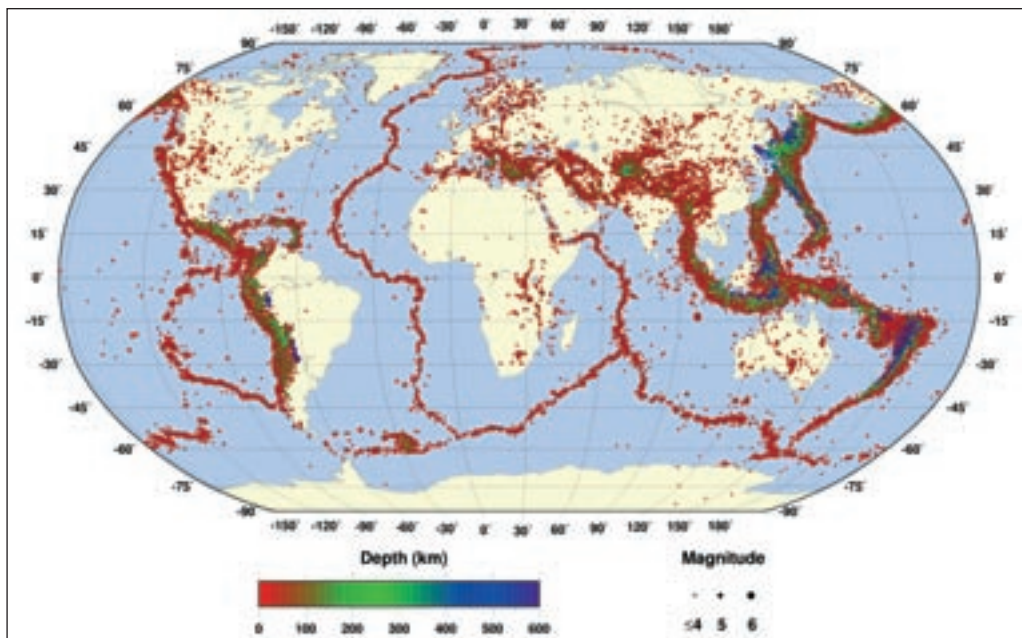
#### **IDC STANDARD SERVICES**

The IDC provides States Signatories with open, equal and timely access to all IMS data and products. The IDC continuously monitors and reports on the operational status of IMS facilities, communication links and its own processing systems.

events worldwide (such as earthquakes, mining blasts or volcanic eruptions) have been detected and reported to States Signatories. In this way, the IDC continues to be a valuable archive and resource of global monitoring.

#### **GLOBAL COMMUNICATIONS INFRASTRUCTURE**

The Global Communications Infrastructure (GCI) provides communications links between IMS facilities and the IDC. The GCI is the first global satellite communications network to be based on Very Small Aperture Terminal (VSAT) technology. Monitoring facilities and States Signatories in all areas of the world can exchange data



SINCE FEBRUARY 2000, AROUND 125,000 SEISMOACOUSTIC EVENTS HAVE BEEN INCLUDED IN THE IDC'S REVIEWED EVENT BULLETINS (AS OF 31 MAY 2005)

#### **IDC REQUESTED SERVICES**

States Signatories receive training and technical assistance, such as help in developing the capacity to retrieve, process and analyse IMS data at a national data centre and in accessing the data and products in a convenient way.

#### **ACHIEVEMENTS**

On average, 70 Gigabytes of IDC products and IMS data and data segments are distributed to authorized users each month. Since February 2000, when States Signatories approved the experimental distribution of data and products, over three million such items have been distributed to 703 authorized users from 88 different States Signatories. To date, around 125,000

via their local VSAT earth stations through one of six geosynchronous satellites. The satellites route the transmissions to hubs on the ground, and the data are then sent to the IDC by terrestrial links. The GCI also transmits data and reports relevant to Treaty verification to States Signatories. The GCI is designed to be cost-effective, to operate to 99.5% availability and to provide data within seconds from origin to final destination.

#### **ACHIEVEMENTS**

Today, there are VSAT installations or special GCI connections in every region of the world. As of now, 190 VSATs and 15 special circuits had been installed at IMS stations, national data centres (NDCs) and development sites. More than 13 Gigabytes of IMS data and IDC products are transported every day through the GCI.



OSI FIELD EXPERIMENT, USE OF HAND-HELD TOOL FOR RADIONUCLIDE SURVEY AND IDENTIFICATION



TAKING OFF FOR AERIAL OBSERVATION, OSI FIELD EXPERIMENT IN KAZAKHSTAN



OSI AVIATION COMMUNICATION EXERCISE STOCKERAU, AUSTRIA

## Consultation and clarification process

- Before requesting an on-site inspection, States Parties are encouraged by the Treaty to try to resolve, either among themselves or with the assistance of the Organization, any matters which may indicate possible non-compliance with the CTBT's basic obligations.
- A State Party must provide clarification of an ambiguous event within 48 hours of receiving a request.
- If the requesting State Party considers the clarification obtained to be unsatisfactory, measures to redress the situation may be contemplated in accordance with Article V of the Treaty, including sanctions.

## On-site inspections

### OBJECTIVE

The purpose of an on-site inspection (OSI) is:

- to clarify whether a nuclear weapon test or any other nuclear explosion has been carried out in violation of the Treaty; and
- to gather facts, to the extent possible, which might assist in identifying any possible violator, thus serving as a final verification measure of the CTBT.

### REQUEST FOR AN ON-SITE INSPECTION

- The CTBT does not contain provisions for routine inspections.
- An OSI can only be carried out once the Treaty has entered into force.
- If a State Party to the CTBT suspects that a nuclear explosion may have been carried out in violation of the Treaty, that State may request an OSI.
- An OSI request must include, *inter alia*, the proposed boundaries of the area to be inspected and the location and the estimated time of the event triggering the request.
- States parties are prohibited from making frivolous or abusive OSI requests.
- An OSI will require 30 affirmative votes in the 51-member Executive Council.

(For more information about the global verification regime, please refer to our web site [www.ctbto.org](http://www.ctbto.org))

## CONDUCT OF AN ON-SITE INSPECTION

The State Party to be inspected is obliged to accept the OSI. The CTBT stipulates that inspections are to be conducted in the least intrusive manner possible.

### ON-SITE INSPECTION REPORTS

- OSI reports must contain, *inter alia*, the factual findings of the inspection team relevant to the purpose of the inspection.
- A draft inspection report is submitted to the inspected State Party, which has 48 hours in which to provide comments and explanations.
- The inspection report is then transmitted by the Director-General to the requesting State Party, the inspected State Party, the Executive Council and to all other States Parties.
- If the Executive Council decides that further action is necessary, it can take appropriate measures as stipulated in Article V of the Treaty, which include the possible use of sanctions.

### OPERATION MANUAL

An OSI Operational Manual is being developed to guide the actions of the Inspection Team, focusing on a description of procedures for an effective OSI. The first reading of the Draft Manual has been completed. The second reading has started, based on results of the first reading.

## Confidence-building measures

Confidence-building measures serve a twofold purpose:

- They contribute to the prompt resolution of compliance concerns relating to chemical explosions.
- They assist in the calibration of IMS stations by improving knowledge of how vibrations propagate through the earth's structure, thus enhancing the accuracy of the location of seismic events..

Working Group B, which is the Preparatory Commission's organ dealing with verification issues, has developed guidelines and reporting formats for the implementation of confidence-building measures with respect to chemical explosions.





NINTH OSI INTRODUCTORY COURSE, VIENNA, AUSTRIA, 13 - 17 JUNE 2005

## Membership benefits

In signing and ratifying the CTBT, a State contributes to the enhancement of international peace and security. Stressing the need for continued systematic and progressive efforts to reduce nuclear weapons globally, States Signatories recognize that ending nuclear weapon test explosions, by constraining the development and qualitative improvement of nuclear weapons, constitutes an effective measure of nuclear disarmament and non-proliferation in all its aspects.

Signing the Treaty provides States with concrete benefits in terms of access to specialized services and products. Member States benefit from access to the International Monitoring System (IMS), the largest and most extensive network of seismic, hydroacoustic, infrasound and radionuclide monitoring facilities in the world, which no State could hope to establish alone. All States have access to full technical support and training as well.

Member States have also identified a number of potential civil and scientific applications of the verification technologies, which could contribute to sustainable development and human welfare.

### ACCESS TO SERVICES AND PRODUCTS

Through the International Data Centre (IDC), States Signatories are provided with open, equal, timely and convenient access to all IMS data (raw or processed), all IDC products and all other IMS data in the IDC archive or in IMS facilities. These high-quality, cost-free data are made available in the form of a variety of automated lists and reviewed event bulletins. These products assist States in locating, analysing and identifying seismological and acoustic events, and radionuclides that have been detected in the IDC.

### EXPERTS COMMUNICATION SYSTEM

State-nominated users can participate in discussions on upcoming meetings or contribute to papers under preparation via the Experts Communication System (ECS) protected web site, which offers registered users a forum for information exchange, a list of meetings, a discussion board and a documents database.

### TECHNOLOGICAL ASSETS

The 337 International Monitoring System facilities located around the globe are established by the Preparatory Commission but are owned and operated by the host countries. States that host IMS facilities receive technical and financial assistance from the Preparatory Commission for the establishment, upgrading, operation and maintenance of these facilities. Other technical support is provided to States, where necessary, to facilitate national implementation of the Treaty, including the establishment of National Data Centres.

### WORKSHOPS AND TRAINING ACTIVITIES

The Provisional Technical Secretariat (PTS) has developed a number of training courses and workshops in various verification-related disciplines in which trainees acquire skills to facilitate implementation of the Treaty at the national level. These training activities also enable trainees to contribute towards the enhancement of their country's scientific capacity.



JOINT IMS/IDC TRAINING COURSE FOR IMS STATIONS OPERATORS AND NDC MANAGERS, VIENNA, AUSTRIA, 18-22 APRIL 2005

Between November 1997 and June 2005, the IMS Division organized 19 introductory training programmes about the International Monitoring System for the different geographical regions. In addition, the IMS Division conducted 44 technical training programmes for station operators and managers on the different IMS technologies, more than 40 equipment provider and/or on-site training

courses and two workshops on the operation and maintenance of IMS stations.

Since 1997, the IDC Division has organized eight training courses for analysts, six training courses for NDC managers, of which two have been jointly organized by the IDC and IMS Divisions, and ten training courses for NDC technical staff, five of which were jointly organized regional training courses by the IDC and IMS Divisions. In addition, six workshops have been held on aspects of data transmission through the Global Communications Infrastructure.

By the end of August 2005, the On-Site Inspection (OSI) Division has conducted ten workshops to address technical matters related to the OSI regime. It has also organized nine OSI introductory training courses and five curriculum building activities for the training of OSI inspectors after entry into force of the Treaty, three field experiments, four tabletop exercises simulating elements of an on-site inspection and OSI equipment testing activities.

A total of six workshops on evaluation have taken place so far and four workshops on quality assurance issues. In addition, two workshops have been held jointly with the Global Communications Section and one with the IMS and IDC Divisions.

The Preparatory Commission also acts as an information clearing house, coordinating PTS and Member States' initiatives to provide experts from developing States with training opportunities.

#### INTERNATIONAL COOPERATION

The Preparatory Commission organizes international cooperation activities such as workshops, seminars and information visits to the PTS for experts from developing



INTERNATIONAL COOPERATION WORKSHOP, SOLOMON ISLANDS, 18-19 MAY 2005

countries. Such activities are designed to:

- Enhance understanding of the significance of the Treaty and its work, and contribute to national capacity building.
- Promote cooperation among States through experience sharing and information exchange.

A series of international cooperation workshops has been held around the globe, bringing together over 500 participants from almost 200 States. These workshops have contributed actively to advancing Treaty understanding and the Commission's work. In addition, national seminars and information visit programmes have been organized, using the voluntary contribution funds provided by donor States in support of international cooperation and outreach activities of the Commission.

The Preparatory Commission is responsible for disseminating information about training courses from which Member States might benefit. A database of training-related information, such as courses provided by the Commission, a list of trainees and proposed follow-up activities, is currently being elaborated. International cooperation activities are also supported by voluntary contributions.

#### POTENTIAL CIVIL AND SCIENTIFIC APPLICATIONS

The Treaty encourages Member States to benefit from the application of the verification technologies for peaceful purposes. Scientific experts have met on several occasions, such as in May 2002 in London, United Kingdom, in September 2003 in Sopron, Hungary, and in May 2004 in Berlin, Germany, to identify and examine the potential civil and scientific applications of the Treaty's technologies. Consultations to examine these potential benefits are continuing.

Following the Indian Ocean tsunami disaster of 26 December 2004, a special session of the Preparatory Commission of the CTBTO adopted a decision relating to the possible contribution of the Commission to a disaster alert system. In accordance with this decision, the Commission has tasked the PTS to explore and assess with national authorities and international tsunami warning organizations recognized by UNESCO and upon their request, which data and products might be useful and could be provided for disaster warnings.

## Profiles of the President-designate of the Conference and the Chairperson of the preparatory process



**PROFILE OF THE  
PRESIDENT-DESIGNATE  
OF THE CONFERENCE  
ON FACILITATING THE  
ENTRY INTO FORCE OF  
THE COMPREHENSIVE  
NUCLEAR-TEST-BAN TREATY**

His Excellency Alexander Downer, Minister for Foreign Affairs of Australia, has been chosen as President-designate of the Conference on Facilitating the Entry into Force of the Comprehensive Nuclear-Test-Ban Treaty. The Conference will formally elect the President at its opening meeting.

Since becoming Minister for Foreign Affairs in 1996, Mr Downer has overseen a range of important developments on the international stage. He played a crucial role in the adoption of the Comprehensive Nuclear-Test-Ban Treaty (CTBT) at the United Nations and since then has been a strong supporter of efforts to achieve early entry into force of the Treaty.

Prior to becoming Minister for Foreign Affairs, Mr Downer served as Shadow Minister in a number of portfolios, including Treasurer, Defence, Trade and Trade Negotiations, Housing and Small Business, and Arts, Heritage and Environment. He also held various senior Parliamentary positions.

Mr Downer served as Executive Director of the Australian Chamber of Commerce from 1983 to 1984. Prior to that, from 1982 to 1983, he was a Political Adviser to the former Australian Prime Minister, the Hon. Malcolm Fraser.

From 1976 to 1982, Mr Downer served as a diplomat in the Department of Foreign Affairs. He also worked as an Economist at the Bank of New South Wales from 1975 to 1976.

Mr Downer is a Doctor of Civil Law (*honoris causa*) and holds a Bachelor of Arts (*hons*) in Politics and Economics.



**PROFILE OF THE  
CHAIRPERSON OF THE  
PREPARATORY PROCESS  
OF THE CONFERENCE  
ON FACILITATING  
THE ENTRY INTO  
FORCE OF THE CTBT**

Her Excellency Ambassador Deborah Stokes, Permanent Representative of Australia to the United Nations and other international organizations in Vienna, is chairing the preparatory process of the Conference on Facilitating the Entry into Force of the CTBT in New York from 21 to 23 September 2005.

Ms Stokes is a senior career officer with the Department of Foreign Affairs and Trade of Australia and was formerly Minister and Deputy Head of the Australian Mission to Tokyo, Japan, from 2000 to 2003. Prior to that, Ms Stokes served as First Assistant Secretary, International Security Division, Department of Foreign Affairs and Trade from 1998 to 1999.

Ms Stokes served with the Australian Agency for International Development (AusAID) as Deputy Director-General of the Corporate Development Division from 1995 to 1998 and as Assistant Director-General of the Development Issues and Corporate Policy Branch from 1994 to 1995.

Her previous overseas experience includes three years in the United Nations Development Programme (UNDP) in New York from 1989 to 1992. She was also Third Secretary at the Australian Embassy in Rangoon, Myanmar, from 1984 to 1986.

Ms Stokes holds a Masters degree in Development Studies from the University of Cambridge, United Kingdom, and a Bachelor of Arts degree with Honours from the University of Adelaide, Australia.