



25 years [Vienna International Centre](#)



## The Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO)

### WORKING FOR NUCLEAR NON-PROLIFERATION

The Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO Preparatory Commission) is an international organization based in the Vienna International Centre. The Commission's objective is to prepare for the entry into force of the Comprehensive Nuclear-Test-Ban Treaty (CTBT). The CTBT bans all nuclear weapon test explosions in all environments, and was opened for signature on 24 September 1996.

### MANDATE

The CTBTO Preparatory Commission carries out the preparations for the effective implementation of the Comprehensive Nuclear-Test-Ban Treaty, and is preparing for the first session of the Conference of the States Parties to the Treaty. The Commission focuses its activities in two key areas: establishment of a global verification regime to monitor compliance with the comprehensive ban on explosive nuclear testing; and promotion of Treaty signature and ratification for early entry into force. The Treaty will enter into force 180 days after it has been ratified by all 44 States with nuclear capabilities which are listed in its Annex 2.

### RELATIONSHIP WITH THE UNITED NATIONS

The CTBTO Preparatory Commission has a Relationship Agreement with the United Nations, which provides a framework for cooperation between the two organizations. On the occasion of the Millennium Summit, the Treaty was listed among 25 core multilateral treaties representing the key objectives of the United Nations by the United Nations Secretary-General.

### COMPOSITION

The Preparatory Commission is composed of all the States which have signed the CTBT. A State becomes a member of the Commission upon signing the CTBT. Member States participate in the decision-making process of the Commission and support its activities through payment of assessed contributions. The Commission consists of two organs: a plenary body composed of all the States Signatories and the Provisional Technical Secretariat (PTS).

### PROVISIONAL TECHNICAL SECRETARIAT

The Provisional Technical Secretariat (PTS) assists the Commission and carries out functions determined by the Commission, including the verification activities listed in the Treaty. The Secretariat started work in Vienna on 17 March 1997. It is multinational in composition: staff is recruited from Member States, on as wide a geographical basis as possible.

The Secretariat is responsible for supervising and coordinating the provisional operation of the International Monitoring System (IMS), and of the International Data Centre. It receives, processes, analyses and reports on IMS data. The Secretariat is also responsible, inter alia, for the development of operational manuals to guide the various components of the verification regime, and for administrative matters such as budgeting and work planning.

## THE GLOBAL VERIFICATION REGIME

Under Article IV of the Comprehensive Nuclear-Test-Ban Treaty, a global verification regime to monitor compliance with the Treaty must be operational at entry into force. The regime must be capable of detecting nuclear explosions in all environments—underground, in water and in the atmosphere. The verification regime consists of the International Monitoring System, supported by the International Data Centre (IDC), a consultation and clarification process, on-site inspections and confidence-building measures.

## THE INTERNATIONAL MONITORING SYSTEM

The International Monitoring System is a global network of 321 monitoring stations and 16 radionuclide laboratories designed to monitor the earth for evidence of a nuclear explosion. The locations of the monitoring facilities are set out in Annex 1 to the Protocol of the Treaty. The IMS uses four complementary technologies to collect evidence of a nuclear explosion. Seismic, hydroacoustic and infrasound monitoring technologies are used to detect the energy produced by a nuclear explosion. These waveform technologies can detect seismic events by identifying the shock wave energy as it travels through water, underground and in the atmosphere.

The waveform technologies confirm the time and location of an event, and radionuclide monitoring technology, which measures the relative abundance of different radionuclides in air samples, is used to provide explicit evidence of a nuclear explosion.

As of 31 December 2003, 88 primary seismic, hydroacoustic, infrasound and radionuclide stations had been completed, of which 68 had been certified as fully meeting the requirements of the system. A further 66 were under construction or contract negotiation. Of the auxiliary seismic stations, 87 had been completed or substantially met specifications, of which 11 had been certified.

## THE INTERNATIONAL DATA CENTRE

The International Data Centre is located at the headquarters of the CTBTO Preparatory Commission in Vienna. It supports the verification responsibilities of the Member States by providing objective products and services necessary for effective global monitoring. These products are developed from the data collected by the International Monitoring System, which the IDC uses to detect, locate and analyse events. The data and products are then transmitted to the States Signatories. Data are received and distributed through the Global Communications Infrastructure.

## ON-SITE INSPECTIONS

Following the Treaty's entry into force, if a suspected nuclear explosion is detected either by the stations of the International Monitoring System or by national technical means, any Member State can request an on-site inspection (OSI). The purpose of an OSI is to clarify whether a nuclear explosion has been carried out in violation of the Treaty and to gather any information which might assist in identifying the potential violator. On-site inspections are regarded as a final verification measure.

## CURRENT STATUS OF TREATY SIGNATURES AND RATIFICATIONS

As of March 2004, the total number of Treaty signatures stands at 171. The total number of ratifications stands at 109. To enter into force, the Treaty must be signed and ratified by the 44 States that formally participated in the work of the 1996 session of the Conference on Disarmament and that possessed nuclear power or research reactors at that time. These States are listed in Annex 2 to the Treaty. Forty-one of these States have signed the Treaty, and 32 have ratified it.

### CTBTO Preparatory Commission

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