



**CTBTO**  
PREPARATORY COMMISSION

COMPREHENSIVE  
NUCLEAR-TEST-BAN  
TREATY ORGANIZATION



# CTBT: ENDING NUCLEAR EXPLOSIONS

**The Comprehensive Nuclear-Test-Ban Treaty (CTBT) bans nuclear explosions by everyone, everywhere: above ground, under water and underground.**

## WHAT IS THE CTBT?

The Comprehensive Nuclear-Test-Ban Treaty (CTBT) bans nuclear explosions by everyone, everywhere: above ground, under water and underground.

## A GLOBAL NORM AGAINST NUCLEAR TESTING

The CTBT has created a firm and virtually unchallenged global norm against nuclear testing. Tests have been conducted on only 10 occasions since it opened for signature in 1996, compared with more than 2,000 over the five previous decades. In this century, only one country – North Korea – has breached the norm and tested nuclear weapons.

## NEAR-UNIVERSAL SUPPORT

The CTBT has near-universal support, signed by 186 countries to date and ratified by 174. However, 44 specific nuclear technology holder countries must sign and ratify before the CTBT can enter into force as international law. Ratification by eight of these Annex 2 States is still required: by China, Egypt, India, Iran, Israel, North Korea, Pakistan, and the United States. Of these, India, North Korea and Pakistan are yet to sign the Treaty.

## THE MISSION OF THE CTBTO

Known formally as the Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization, the CTBTO exists to prepare for the Treaty's entry into force. It has two main tasks:

- **promoting universal recognition of the Treaty**
- **building up the CTBT verification regime to ensure no nuclear explosion can go undetected**

Headquartered in Vienna, Austria, it has nearly 300 staff from more than 90 countries and is led by Executive Secretary Robert Floyd, from Australia. The annual budget is approximately \$130,000,000 or €120,000,000.



THE TREATY'S COMPREHENSIVE VERIFICATION REGIME CONSISTS OF THREE COMPONENTS:

THE INTERNATIONAL MONITORING SYSTEM (IMS)

The IDC at the CTBTO's headquarters in Vienna receives data from the global monitoring stations. The data are processed and distributed to the CTBTO's Member States in both raw and analyzed form. Within just hours of a suspected nuclear test, all Member States receive information about the location, magnitude, time and depth of the event, followed by further analysis and any later detection of radionuclides that may indicate a nuclear explosion.

DATA CENTRE (IDC)

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ON-SITE INSPECTIONS (OSI)

OSI is the crucial component of the Comprehensive Nuclear-Test-Ban Treaty (CTBT) verification regime. Once the Treaty enters into force, Member States will be able to request an inspection to gather further evidence on the ground if the global monitoring system detects a possible nuclear explosion. As well as establishing whether a nuclear explosion has been carried out, facts might also be gathered to identify who was responsible for a Treaty violation. It is the ultimate verification measure.

ADDITIONAL BENEFITS: FROM TSUNAMI WARNINGS TO CLIMATE RESEARCH

Beyond the core purpose of detecting nuclear explosions, IMS data yield a range of wider benefits scientific knowledge. National tsunami warning centres in Member States can receive data in near-real time to support faster, more accurate public alerts. IMS stations can contribute to the international

response to a nuclear emergency by tracking the movement of harmful radionuclides. Researchers can access selected data to better understand the natural world, from whale behaviour to climate change or the timing of monsoon rains.

A KEY PART OF THE GLOBAL NUCLEAR ARMS CONTROL FRAMEWORK

The CTBT is an essential component of the international nuclear arms control and disarmament framework.

- Nuclear testing is a key step in the development of nuclear weapons. By ending this, the CTBT curbs all nuclear arms proliferation, be it the development of nuclear weapons by countries that do not currently have them, upgrades to current nuclear arsenals or the creation of new, more advanced generations of nuclear weapons.
- The CTBT is fundamental to nuclear disarmament because it establishes trust that any clandestine nuclear test will be detected.
- CTBT prevents the serious health and environmental impacts associated with nuclear tests.