

ANNUAL REPORT 2016

#CTBT20



LET'S FINISH
WHAT WE STARTED





THE TREATY

The Comprehensive Nuclear-Test-Ban Treaty (CTBT) is an international treaty that outlaws all nuclear explosions. By totally banning nuclear testing, the Treaty seeks to constrain the qualitative improvement of nuclear weapons and to end the development of new types of nuclear weapons. It constitutes an effective measure of nuclear disarmament and non-proliferation in all its aspects.

The Treaty was adopted by the United Nations General Assembly and opened for signature in New York on 24 September 1996. On that day, 71 States signed the Treaty. The first State to ratify the Treaty was Fiji on 10 October 1996. The Treaty will enter into force 180 days after it has been ratified by all 44 States listed in its Annex 2.

When the Treaty enters into force, the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO) will be established in Vienna, Austria. The mandate of this international organization is to achieve the object and purpose of the Treaty, to ensure the implementation of its provisions, including those for international verification of compliance with it, and to provide a forum for cooperation and consultation among States Parties.

THE COMMISSION

In advance of the entry into force of the Treaty and the establishment of the CTBTO proper, a Preparatory Commission for the organization was established by the States Signatories on 19 November 1996. The Commission was given the mandate of preparing for entry into force.

The Commission, which is located at the Vienna International Centre, has two main activities. The first is to make all necessary preparations to ensure that the Treaty verification regime can be brought into operation at entry into force. The second is the promotion of signature and ratification of the Treaty in order to achieve entry into force.

The Commission is made up of a plenary body responsible for directing policy and comprising all States Signatories, and a Provisional Technical Secretariat to assist the Commission in its duties, both technically and substantively, and carry out such functions as the Commission determines. The Secretariat started work in Vienna on 17 March 1997. It is multinational in composition, with staff recruited from States Signatories on as wide a geographical basis as possible.

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The maps on pages 11–13 and page 15 show the approximate locations of International Monitoring System facilities based on information in Annex 1 to the Protocol to the Treaty adjusted, as appropriate, in accordance with proposed alternative locations that have been approved by the Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization for reporting to the initial session of the Conference of the States Parties following entry into force of the Treaty.

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MESSAGE

FROM THE EXECUTIVE SECRETARY

Coinciding with the 20th anniversary of the opening for signature of the Comprehensive Nuclear-Test-Ban Treaty (CTBT) and the establishment of the Preparatory Commission, 2016 was a year of challenges and opportunities.

The Treaty and the work of the Commission received notable recognition and appreciation throughout the year. World leaders and civil society took every opportunity to renew their commitment to the Treaty and their support for the activities of the Commission.

During the 20th anniversary Ministerial Meeting and ministerial round table in Vienna in June, at the eighth Ministerial Meeting of the “Friends of the CTBT” in New York in September, in a statement by the five permanent members of the United Nations Security Council, and at the 71st session of the United Nations General Assembly, national leaders, ministers and other high ranking officials repeatedly voiced their support for the Treaty and called for its entry into force. They welcomed the contribution of the Treaty to the nuclear non-proliferation and disarmament regime. Furthermore, they underlined the achievements of the organization, including the robustness of the verification regime of the Treaty and its scientific and civil applications.

Just before the Ministerial Meeting of the Friends of the CTBT in September, Myanmar and Swaziland deposited their instruments of ratification. With these, the number of ratifications of the Treaty reached 166, making the CTBT one of the most adhered to international instruments in the field of disarmament.

The high point of the year was a historic meeting of the United Nations Security Council on the eve of the 20th anniversary of the Treaty. The Security Council debated the continuing relevance of the Treaty and the importance of pursuing its entry into force and adopted a resolution on the Treaty co-sponsored by 45 countries.

As part of our outreach in 2016, I met with President Roch Marc Christian Kaboré of Burkina Faso, Vice-President Jorge Glas of Ecuador and Prime Minister Benjamin Netanyahu of Israel. I also held talks with foreign ministers and other high ranking state officials of Argentina, Austria, Bangladesh, China, the Comoros, Costa Rica, Cuba, Denmark, Ecuador, Egypt, Ethiopia, France, the Gambia, Germany, the Islamic Republic of Iran, Iraq, Japan, Jordan, Montenegro, Morocco, Pakistan, the Republic of Korea, the Russian Federation, Senegal, Slovakia, Slovenia, Somalia, South Sudan, the Sudan, Turkmenistan, Ukraine, the United States of America and the European Union.

In clear defiance of the established norm against nuclear testing, the Democratic People’s Republic of Korea conducted two nuclear tests during the year. The tests, on 6 January and 9 September, once more highlighted the urgency of the entry into force of the Treaty.

I am pleased to note that the performance of the verification system was timely and effective and proved the value of the investment made in its establishment. The announced tests were detected by the International Monitoring System (IMS) facilities and the data were shared with States Signatories in near real time. The States Signatories received the reviewed data products within the defined time lines. The Commission also held briefings to discuss the findings of the verification system.

The response of the IMS and the International Data Centre (IDC) to the two tests established that their capabilities are nearing full maturity. In addition, the tests underlined

the significance of the on-site inspection (OSI) mechanism as a complementary element of our verification regime and the need for constant testing and validation of the regime.

The international reaction to the announced tests was swift and strong. Many countries condemned the nuclear tests and considered such actions to seriously threaten international peace and security. They called on the Democratic People's Republic of Korea to cease any further tests and to immediately sign and ratify the Treaty.

Work on the build-up of the verification system continued. Several important new IMS stations were installed or certified. These included the installation of the last remaining hydroacoustic station HA4, Crozet Islands, France, and radionuclide station RN24, Isla Santa Cruz, Galápagos Islands, Ecuador. In December, the organization certified its first IMS station in China, raising the prospects for further certifications in the country in 2017.

By the end of the year, the total number of certified IMS facilities reached 286, improving both the coverage and the resilience of the network. This figure represents 85% of the network foreseen by the Treaty.

OSI related activities during 2016 focused on the finalization, approval and initial implementation of the OSI action plan for 2016–2019 and the OSI exercise plan for 2016–2020, derived from the review and evaluation process of the 2014 Integrated Field Exercise.

Our capacity building activities, workshops, training courses and educational programmes were expanded to cater to the technical needs of States Signatories, in particular developing countries. These activities aim to assist States Signatories to better fulfil their Treaty obligations and to use the data and products of the verification system more efficiently.

The anniversary year started with the symposium “Science and Diplomacy for Peace and Security: the CTBT@20” in January, which brought together former negotiators of the Treaty, representatives of States Signatories, civil society and the media, and the CTBTO Youth Group. The Youth Group also featured prominently in a panel discussion with United Nations Secretary-General Ban Ki-moon in Vienna in April. In December, youth featured again at an event in Vienna, where the United Nations High Representative for Disarmament Affairs and I joined young people in person and online for a discussion on the Treaty.

States Signatories made several key decisions to further the organizational development of the Commission and to finance important activities. These include, to mention just a few, accepting the statute of the International Civil Service Commission, implementing the new staff compensation package, and providing additional resources for capacity building activities and the establishment of a permanent Equipment Storage and Maintenance Facility. In November, the Commission extended my mandate as Executive Secretary of the organization for an additional four year term starting on 1 August 2017.

This is a brief summary of our collective accomplishments in 2016. The following report presents details of the main activities of the Commission throughout the year. I would like to take this opportunity to express my sincere appreciation to States Signatories for their trust in me and their unwavering commitment to the objectives of the Treaty and the work of the organization.



Lassina Zerbo
Executive Secretary
CTBTO Preparatory Commission
Vienna, March 2017

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ABBREVIATIONS

3-C	three component
ARISE	Atmospheric dynamics Research InfraStructure in Europe
ATM	atmospheric transport modelling
CIF	Capital Investment Fund
CTBT	Comprehensive Nuclear-Test-Ban Treaty
CTBTO	Comprehensive Nuclear-Test-Ban Treaty Organization
ECS	Experts Communication System
ESMF	Equipment Storage and Maintenance Facility
EU	European Union
FIMS	field information management system
GCI	Global Communications Infrastructure
IAEA	International Atomic Energy Agency
IDC	International Data Centre
IFE	Integrated Field Exercise
IIMS	Integrated Information Management System
IMS	International Monitoring System
MPLS	multiprotocol label switching
MSIR	multispectral including infrared
NDC	National Data Centre
O&M	operation and maintenance
OPCW	Organisation for the Prohibition of Chemical Weapons
OSC	Operations Support Centre
OSI	on-site inspection
PCA	post-certification activity
PRTool	performance reporting tool
PTE	Proficiency Test Exercise
PTS	Provisional Technical Secretariat
QA/QC	quality assurance and quality control
QMS	Quality Management System
REB	Reviewed Event Bulletin
RRR	Reviewed Radionuclide Report
SAMS	Seismic Aftershock Monitoring System
SEL	Standard Event List
SOP	standard operating procedure
VCDNP	Vienna Center for Disarmament and Non-Proliferation
VIC	Vienna International Centre
VPN	virtual private network
VSAT	very small aperture terminal
WGA	Working Group A
WGB	Working Group B
WMO	World Meteorological Organization
WIN	work instruction