

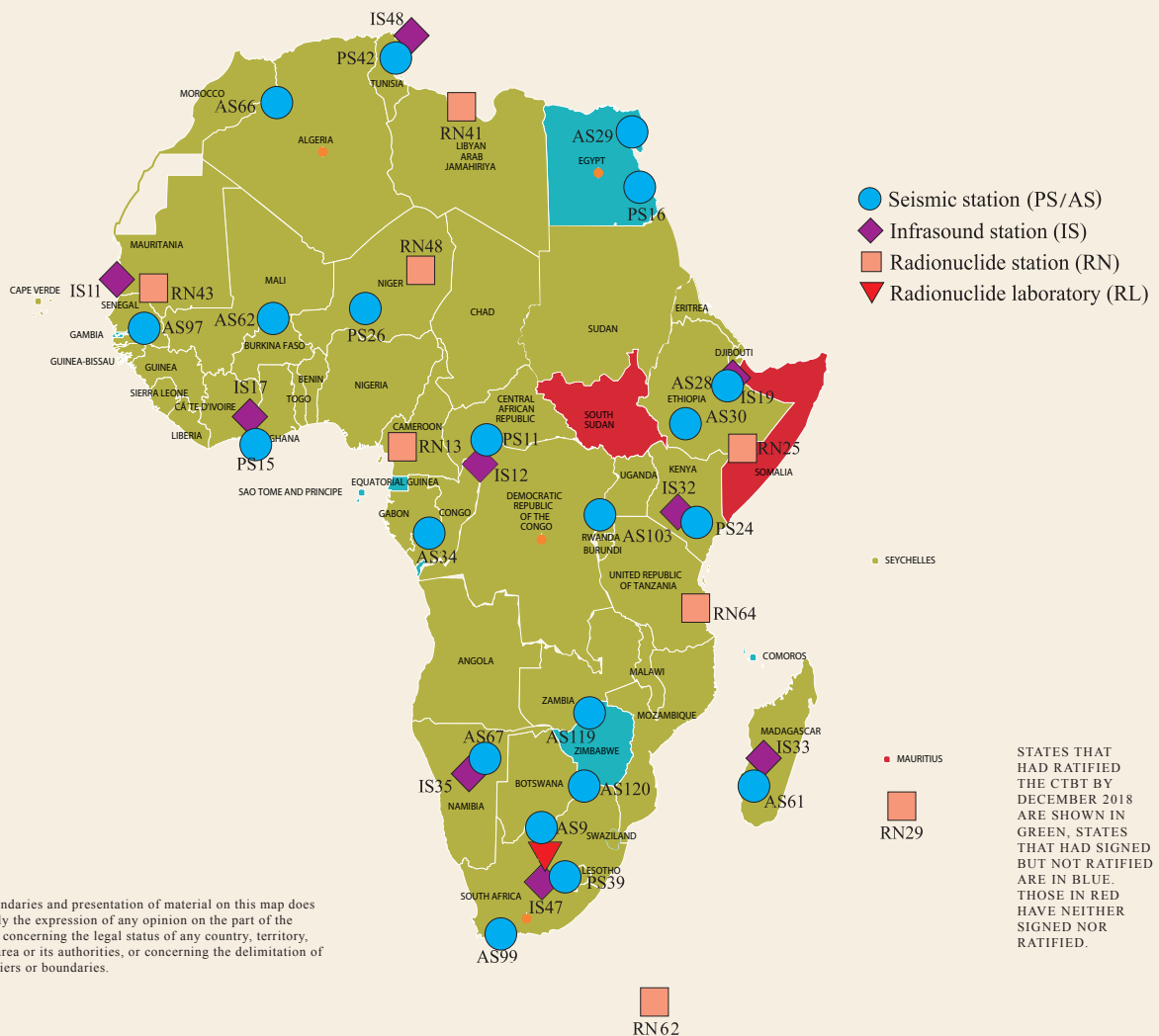
Africa's contribution to putting an end to nuclear explosions

Africa and nuclear disarmament

African States play an important role in worldwide efforts to achieve nuclear non-proliferation and disarmament. All African States except newly independent South Sudan are parties to the Nuclear Non-Proliferation Treaty (NPT), which aims at preventing the spread of nuclear weapons and weapons technology, advancing nuclear disarmament, and facilitating the peaceful uses of nuclear energy. The continent is also the world's most recent and largest nuclear-weapon-free zone.

Africa and the CTBT

Of Africa's 54 States, 51 had signed the Comprehensive Nuclear-Test-Ban Treaty (CTBT) and 45 had also ratified it by the end of 2018. Mauritius, Somalia and South Sudan have yet to sign the Treaty. The States that have signed but not yet ratified are: Comoros, Egypt, Equatorial Guinea, The Gambia, Sao Tome and Principe, and Zimbabwe. Egypt's ratification is of particular importance as this is required for the Treaty's entry into force.



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CTBTO EXECUTIVE SECRETARY LASSINA ZERBO SPEAKING AT THE 2ND SCIENCE DIPLOMACY SYMPOSIUM IN VIENNA, MAY 2018.



AFRICA GROUP MEETING WITH CTBTO EXECUTIVE SECRETARY LASSINA ZERBO HELD ON 22 JUNE 2018 IN VIENNA.

“... As we prepare for the 19th anniversary of the adoption of the CTBT, the African Group stresses the importance of achieving universal adherence to this instrument, bearing in mind the special responsibilities of nuclear-weapon States in this regard and to encourage the remaining Annex 2 States, in particular nuclear-weapon States to sign and ratify the CTBT without further delay, in order to allow its entry into force. The achievement of such an objective will contribute to the process of nuclear disarmament and in bringing us to a significant step of realizing the objective of NPT.”

Ambassador U. Joy Ogwu from Nigeria delivering a statement on behalf of the Africa Group at the Nuclear Non-Proliferation Treaty (NPT) Review Conference, New York, USA, April 2015.

African States participate actively in the work of the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO). Several representatives of African States have presided over the CTBTO’s executive body. These include the very first Chairperson from South Africa from 1996 to 1997, two from Algeria in 1999 and 2005, one from Namibia in 2010, and one from Nigeria in 2015.

Leading the CTBT entry-into-force process

Morocco together with France presided over the 2009 Conference on Facilitating the Entry into Force of

The CTBT

The 1996 Comprehensive Nuclear-Test-Ban Treaty (CTBT) bans all nuclear explosions. By 2018, 184 States had signed and 167 had also ratified the Treaty. Of the 44 nuclear technology holding States whose ratification is needed for the Treaty’s entry into force, eight have yet to ratify: China, Egypt, India, Iran, Israel, North Korea, Pakistan and the United States. India, North Korea and Pakistan have also yet to sign the Treaty.

the CTBT (also known as the Article XIV conference) in New York. Both countries led the entry-into-force process from 2009 to 2011, when Taïb Fassi Fihri, the Foreign Minister of Morocco, reported that: “Over the last two years, Morocco and France have undertaken a number of official steps at the multilateral, regional and bilateral level to accelerate the ratification process of the CTBT.”

Regional security

Africa’s active participation in the work of the CTBTO is a reflection of the continent’s continuing efforts to promote regional and international security. In 1963, African leaders adopted a resolution on “General Disarmament”, expressing their support for a nuclear-



MICHELLE NDIAYE, DIRECTOR OF THE AFRICA PEACE AND SECURITY PROGRAMME AT THE INSTITUTE FOR PEACE AND SECURITY STUDIES, SPEAKING AT THE 2ND SCIENCE DIPLOMACY SYMPOSIUM IN VIENNA 25 MAY 2018.



STUDENTS FROM MALI IN LEIPZIG, THEN EAST GERMANY, PROTESTING AGAINST THE FIRST FRENCH NUCLEAR TEST ON 13 FEBRUARY 1960.

weapon-free world. This commitment was re-affirmed by the African Nuclear-Weapon-Free Zone Treaty (Pelindaba Treaty) when it opened for signature in 1996. The creation of the African Union in July 2002 further strengthened Africa’s commitment to regional and international peace and stability. African leaders recognized that security is a prerequisite for sustainable economic development and human welfare.

Africa’s nuclear history

The African continent’s own history in the area of nuclear testing and the development of nuclear weapons has led to the active engagement of African States in nuclear non-proliferation and disarmament issues. On 13 February 1960, France detonated its first nuclear device at Reggane in the Sahara desert in

“This Treaty which commits each State to refrain from conducting a nuclear test explosion and to prevent any explosion of this type anywhere under its jurisdiction or control will, without question, contribute to nuclear disarmament and the non-proliferation of such weapons around the world.”

Basile Kouébé, Minister of Foreign Affairs and Cooperation of the Republic of the Congo, at the CTBT Ministerial Meeting, New York, USA, 26 September 2014 (translated from French).

Algeria. This atmospheric explosion was followed by three more at the same location. From 1961 to 1966, France conducted a series of 13 underground nuclear explosions at its test site at the Hoggar Mountains near In Ekker, in the Algerian Sahara.

South Africa – former nuclear weapons possessor

At the southern end of the continent, a nuclear weapons development programme took shape between the 1960s and 1980s. During this time, South Africa developed a small arsenal of six nuclear bombs.

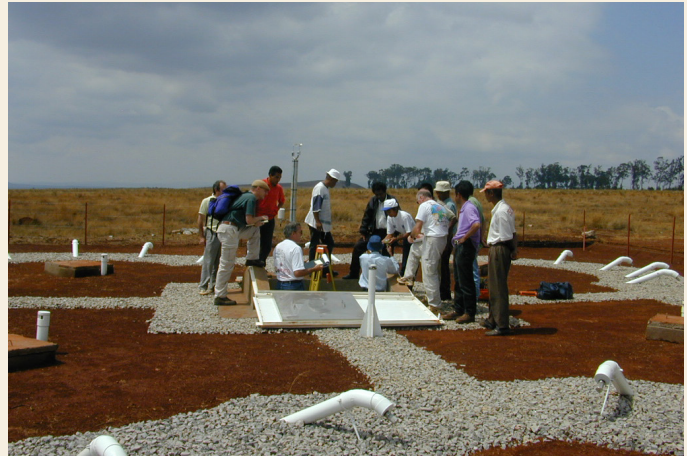
Towards the end of apartheid in 1990, South Africa voluntarily renounced and dismantled its nuclear weapons programme. All nuclear devices were destroyed. Shortly after in 1991, South Africa acceded to the NPT as a non-nuclear weapon State.

The CTBTO

The Vienna-based Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO) is tasked with building up and maintaining the CTBT verification regime. It also promotes signatures and ratifications of the Treaty.



RADIONUCLIDE STATION RN43 IN NOUAKCHOTT, MAURITANIA.



INFRA SOUND STATION IS33 IN ANTANANARIVO, MADAGASCAR.

African Nuclear-Weapon-Free Zone

The Pelindaba Treaty, establishing the African Nuclear-Weapon-Free Zone, came into effect on 15 July 2009 when Burundi ratified the Treaty. It was the 28th State to do so, thus meeting the Treaty’s requirements for entry into force. This makes the African continent the world’s most recent nuclear-weapon-free zone and the largest in terms of countries and size. The entire southern hemisphere is now an area free of nuclear weapons.

The French nuclear tests in the Algerian desert in the 1960s triggered the first initiative towards creating a nuclear-weapon-free zone in Africa. In 1961, the United Nations General Assembly endorsed it by adopting a resolution calling for a zone free of nuclear weapons in Africa. South Africa’s renouncement and dismantling of its nuclear weapons and its accession to the NPT provided the necessary momentum for the Treaty to be finalized. The Treaty is named after Pelindaba, where South Africa developed its nuclear

“We want to see a synergy between the CTBT and the Pelindaba Treaty, because they augment each other. We have decided that Africa will be a nuclear-weapon-free zone and that is what the CTBT is seeking to do on a global scale.”

Ambassador Selma Ashipala-Musavyi of Namibia, Chairperson of the CTBTO in 2010.

weapons programme and hosts a nuclear research centre.

Benefits of the CTBT

A State gains a number of political benefits when signing and ratifying the CTBT. It subscribes to an important norm in the field of nuclear non-proliferation and disarmament. A CTBTO Member State joins forces with other like-minded States that have committed themselves to rid the world of nuclear weapons.

There are also wide-ranging technical benefits for CTBTO Member States. Technology may be transferred to a State, for example, through the building of monitoring facilities on its territory. The availability of CTBTO monitoring data and analysis reports contribute to capacity-building as well as to scientific research and technological advances. Moreover, CTBTO data can help disaster mitigation efforts, in particular for tsunami early warning and aviation safety.

Only nationals of CTBT Signatory States may work in the organization. As of 2018, roughly 40 of around 275 staff members at the CTBTO came from Africa. Since August 2013, the organization has been headed by Lassina Zerbo (Burkina Faso). Prior to this, Zerbo served as the Director of the CTBTO’s International Data Centre Division from February 2004 to July 2013.



AFRICAN PARTICIPANTS AT THE 2ND SCIENCE DIPLOMACY SYMPOSIUM WHICH AIMS AT BRINGING EXPERTS, SCIENTISTS AND YOUTH TOGETHER TO RAISE AWARENESS OF THE CTBTO'S CONTRIBUTION TO INTERNATIONAL PEACE AND SECURITY, MAY 2018.



FORMER AMBASSADOR OF NIGERIA TO AUSTRIA AND SLOVAKIA ABEL ADEHLAKUN AYOKO DELIVERING A SPEECH AT THE 2017 SCIENCE AND TECHNOLOGY CONFERENCE IN VIENNA, AUSTRIA.

“Even the least developed African country is entitled to receive the same monitoring data as the world's most developed country. This makes the CTBT the most democratic Treaty in the world.”

CTBTO Executive Secretary Lassina Zerbo, during his keynote speech to mark Africa Day, Berlin, Germany, 25 May 2014.

National capacity-building

Of the 51 African Member States, over 30 have designated their respective National Authorities to liaise with the CTBTO and with other Member States. The National Authority leads a country's efforts in the implementation of the Treaty.

Around 37 African States have established their National Data Centres (NDC) as the direct national counterparts for receiving CTBTO monitoring data and analysis reports. The CTBTO helps to build and develop capacities, particularly in developing countries. It supports the establishment of NDCs by providing equipment and software as well as training NDC staff.

Beyond this technical training, the CTBTO also offers several live lectures and online courses under the auspices of the Capacity Development Initiative

covering the political, legal and technological aspects of the Treaty and its verification regime.

The CTBTO also offers a wide range of technical workshops and training programmes in the various verification-related fields for station operators, NDC staff and technical experts. Several African countries have hosted such training activities in the past.

The CTBT verification regime

A global network of 337 facilities constantly scans the Earth for evidence of a nuclear blast.

Seismic, infrasound and hydroacoustic stations listen for signs of a nuclear explosion underground, in the air and underwater, while radionuclide and noble gas stations sniff the air for radioactivity. All monitoring data are sent to the CTBTO's headquarters in Vienna for processing and analysis. Findings are shared with Member States in near real time. Once the Treaty is in force, Member States will be able to request inspectors to collect evidence on the ground if monitoring data and their analysis indicate that a nuclear explosion might have taken place in violation of the Treaty.

Monitoring stations in Africa

Africa plays a key role in the CTBT verification regime as it is the region with the largest number of States hosting monitoring facilities. Once complete, there will be 38 monitoring facilities located in 24 African States. Of these stations, 30 are already up and running. South Africa for example hosts five monitoring facilities. In addition to hosting stations, Cameroon, Cape Verde, Central African Republic, Kenya, Mauritania, Namibia, Niger, Senegal, South Africa, Tanzania, Tunisia, Uganda, and Zambia have also concluded Facility Agreements with the CTBTO to regulate all related legal, technical and logistical aspects.

“To build peace and safeguard itself against the threats posed by the most devastating kind of weapons, the world needs Africa’s participation. In turn, to protect itself against the misuse of its territory and resources, Africa needs the legal arrangements and technical mechanisms offered by the non-proliferation and disarmament regime – of which the CTBT is an integral part.”

CTBTO Executive Secretary Lassina Zerbo speaking at a national seminar on the CTBT, Luanda, Angola, October 2013. Angola subsequently ratified the CTBT on 20 March 2015.



PARTICIPANTS AND CTBTO STAFF AT THE AFRICAN REGIONAL INFRASOUND WORKSHOP FOR NATIONAL DATA CENTRES HELD IN TUNISIA IN FEBRUARY 2018.



CTBTO EXECUTIVE SECRETARY LASSINA ZERBO (FAR RIGHT) MEETING WITH MARIA CANDIDA PEREIRA TEIXEIRA, MINISTER OF SCIENCE AND TECHNOLOGY OF ANGOLA (LEFT), ALFA OUMAR DISSA, MINISTER OF ENERGY OF BURKINA FASO (MIDDLE), AND MARIA DE JESUS DOS REIS FERREIRA, PERMANENT REPRESENTATIVE OF ANGOLA IN VIENNA (RIGHT) DURING THE 2017 SCIENCE AND TECHNOLOGY CONFERENCE IN VIENNA.

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