

ASEAN and the commitment to end nuclear testing

ASEAN and nuclear disarmament

Nuclear non-proliferation and disarmament are central themes of the security policy of the Association of Southeast Asian Nations (ASEAN). The 10 countries that make up ASEAN have also consistently supported international efforts to achieve nuclear disarmament as members of the Non-Aligned Movement (NAM).

All ASEAN States are parties to the Nuclear Non-Proliferation Treaty (NPT). The NPT aims at preventing the spread of nuclear weapons and weapons technology, and furthering the goal of nuclear disarmament. It also promotes international cooperation in the peaceful uses of nuclear energy.

At the Preparatory Committee for the 2015 NPT Review Conference in New York in March 2013, NAM underscored that “the only way to rid the world of the threat or use of nuclear weapons is their total elimination. In this regard, the Comprehensive Nuclear-Test-Ban Treaty (CTBT)

is a practical step on the road to nuclear disarmament and, therefore, cannot substitute for the objective of complete elimination of nuclear weapons.”

Each ASEAN country is a Member State of the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO). They all signed the CTBT early on, some on the very first day it opened for signature on 24 September 1996. Two have yet to ratify the Treaty: Myanmar and Thailand. The most recent ASEAN country to ratify was Brunei Darussalam in March 2013. Indonesia’s ratification in February 2012 was particularly important as it is one of those States that must ratify before the Treaty can enter into force. Leaders worldwide, including the UN Secretary-General Ban Ki-moon, U.S. President Barack Obama and several foreign ministers, welcomed Indonesia’s step.

“I am determined to ensure that Indonesia’s decision today will create momentum to encourage others who are still holding out to do the right thing. And the only right thing is to ratify the CTBT now, no more procrastination, no more delaying because it is right, it is proper and it makes a more secure world.”

Indonesia’s Foreign Minister Marty Natalegawa, on 6 December 2011, when the Indonesian Parliament unanimously endorsed ratification of the CTBT

ASEAN

The Association of Southeast Asian Nations is a regional political and economic organization. It was established on 8 August 1967 by Indonesia, Malaysia, the Philippines, Singapore and Thailand. Brunei Darussalam joined in 1984, Viet Nam in 1995, Laos and Myanmar in 1997 and Cambodia in 1999.

ASEAN aims to accelerate economic growth, social progress and cultural development within its Member States and to promote regional peace and stability.



ASEAN'S 10 MEMBER STATES



THE SOUTHEAST ASIA NUCLEAR-WEAPON-FREE ZONE INCLUDES ALL ASEAN STATES.



2013 CONFERENCE ON FACILITATING THE ENTRY INTO FORCE OF THE CTBT, UN HEADQUARTERS, NEW YORK. FROM LEFT TO RIGHT: CARL BILDT, FOREIGN MINISTER OF SWEDEN, BAN KI-MOON, UN SECRETARY-GENERAL, JÁNOS MARTONYI, FOREIGN MINISTER OF HUNGARY, MARTY M. NATALEGAWA, FOREIGN MINISTER OF INDONESIA AND LASSINA ZERBO, CTBT EXECUTIVE SECRETARY.

Southeast Asia Nuclear-Weapon-Free Zone

The 10 ASEAN States also make up the Southeast Asia Nuclear-Weapon-Free Zone (SEANWFZ).

Under the SEANWFZ Treaty, known as the Bangkok Treaty, the ASEAN countries commit themselves to refrain from developing, manufacturing, acquiring or testing nuclear weapons. CTBT ratification by all ASEAN countries would thus reconfirm the goals of the Bangkok Treaty.

“The Philippines recognizes the critical role of the CTBT as a key confidence building mechanism to promote cooperation among States in resolving issues that have huge ramifications on regional and global security.”

*Evan Garcia,
Deputy Foreign Minister, Republic of the Philippines,
Conference on Facilitating the Entry into Force of
the CTBT, New York, 27 September 2013.*

The CTBT

The 1996 Comprehensive Nuclear-Test-Ban Treaty (CTBT) bans all nuclear explosions. Over 180 States have signed and over 160 have 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 SEANWFZ is one of six nuclear-weapon-free zones and was established in December 1995 when the Bangkok Treaty was signed by its initial seven members. The Bangkok Treaty came into effect in March 1997.

Benefits of the CTBT

By signing and ratifying the CTBT, a State gains a number of political benefits. It subscribes to a key



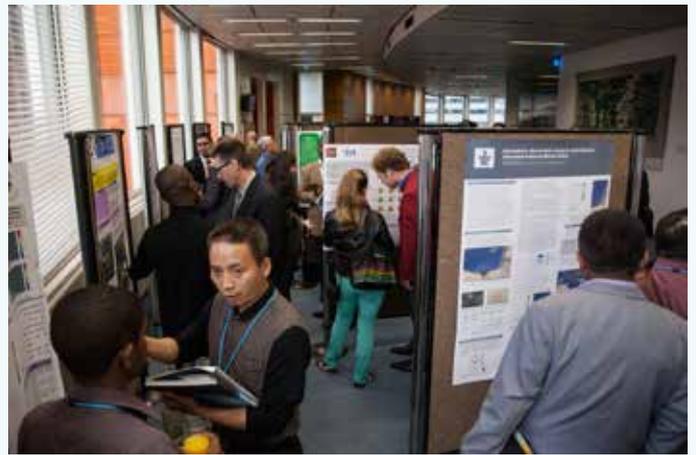
OVER 500 SCIENTISTS FROM AROUND 100 COUNTRIES PARTICIPATED IN THE CTBT: SCIENCE AND TECHNOLOGY 2013 CONFERENCE IN VIENNA, AUSTRIA. IT WAS THE FOURTH IN A SERIES OF BIENNIAL CONFERENCES THAT HELP ESTABLISH INTERACTION AND PARTNERSHIPS BETWEEN THE SCIENTIFIC AND TECHNOLOGICAL COMMUNITY AND THE CTBTO.

norm in the field of nuclear non-proliferation and disarmament and actively contributes to regional and international peace and security. Small and big countries join forces in a large family of like-minded States that have committed themselves to ridding the world of nuclear weapons.

There are also wide-ranging technical benefits for CTBTO Member States. Technology is transferred to States through the building of monitoring stations on their territories. The availability of monitoring data and their analysis reports contribute to capacity building as well as to scientific and technological research.

“This is not only a step towards a safer and more peaceful future in Asia. Brunei Darussalam has made an important contribution to ridding the planet of nuclear tests and nuclear weapons.”

*Lassina Zerbo,
CTBTO Executive Secretary, on the occasion of
Brunei Darussalam's ratification of the CTBT on 10
January 2013.*



REPRESENTATIVES FROM THE ASEAN REGION HAVE PARTICIPATED IN MANY WORKSHOPS AND TRAINING ACTIVITIES ORGANIZED BY THE CTBTO SUCH AS THE INFRASOUND TECHNOLOGY WORKSHOP IN VIENNA, OCTOBER 2014.

National Data Centres

All but one (Singapore) of the ASEAN States have designated their respective National Authorities to liaise with the CTBTO. The National Authority leads a country's efforts in the implementation of the Treaty. Six ASEAN States - Indonesia, Malaysia, Myanmar, Philippines, Thailand and Viet Nam – have established a National Data Centre (NDC), which is the direct counterpart for receiving monitoring data and analysis reports. NDCs may also take on the role of sending data from monitoring stations to CTBTO headquarters in Vienna.

The CTBTO

The Vienna-based Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO) is tasked with building up and operating the CTBT verification regime to make sure that no clandestine nuclear test remains undetected.



ENGINEER PATTREEYA THAPANAPHA FROM THAILAND INVESTIGATES A PROBLEM WITH THE CTBTO'S COMMUNICATIONS INFRASTRUCTURE. SHE IS ONE OF 12 CTBTO STAFF MEMBERS FROM THE ASEAN REGION (AS OF SPRING 2015).



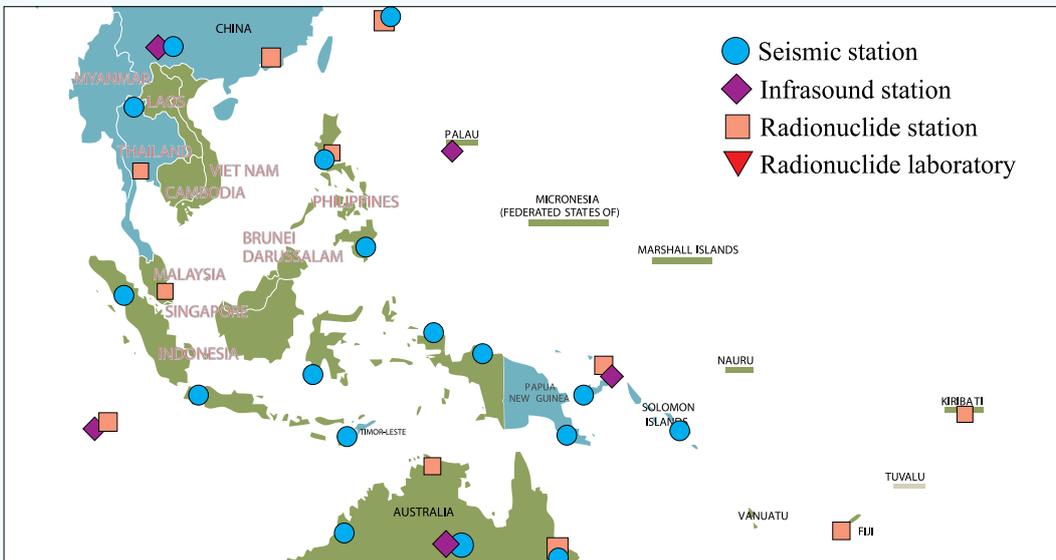
THE 10 ASEAN STATES HOST 12 MONITORING FACILITIES OF THE CTBT VERIFICATION REGIME. THE PHILIPPINES HAS CONCLUDED A FACILITY AGREEMENT WITH THE CTBTO TO REGULATE ALL LEGAL, TECHNICAL AND LOGISTICAL ASPECTS RELATED TO THE THREE MONITORING STATIONS ON ITS TERRITORY, INCLUDING RADIONUCLIDE STATION RN52 IN TANAY WHICH IS PICTURED HERE.

Monitoring stations in ASEAN States

The 10 ASEAN countries are home to 12 monitoring facilities – nine seismic stations and three radionuclide stations. Of these, 11 are already certified and sending data to the CTBTO's headquarters in Vienna. The most recent station to be fully integrated into the system was a seismic station in Sorong, Irian Jaya, Indonesia, when it was certified in April 2010. The last station that is still under construction is a radionuclide station in Nakorn Pathom, Thailand, which will be equipped with noble gas detection technology.

Disaster warning

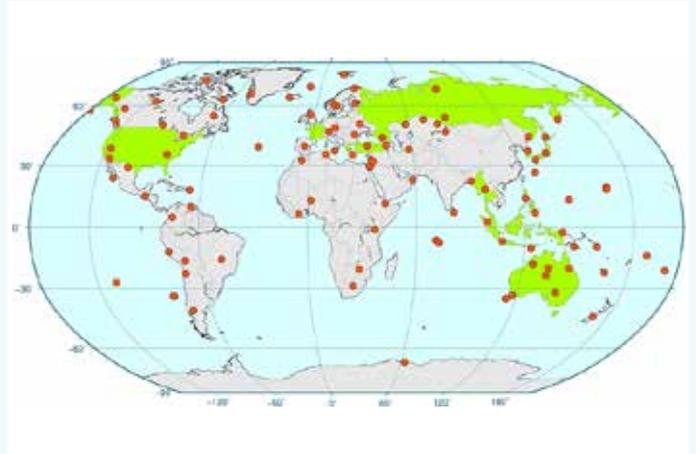
ASEAN States were among the countries worst hit by the 2004 tsunami disaster in the Indian Ocean. Hundreds of thousands of people perished and coastal regions were devastated. The catastrophe triggered an initiative in cooperation with UNESCO's Intergovernmental Oceanographic Commission to explore how CTBT verification data could be used for tsunami warning purposes. The CTBTO has been sending monitoring data to a number of tsunami warning centres in the Indo-Pacific region since November 2006. In the ASEAN



STATES THAT HAVE RATIFIED THE CTBT AS OF MARCH 2015 ARE SHOWN IN GREEN, SIGNATORY STATES IN BLUE. ALL MONITORING STATIONS IN THE REGION ARE SHOWN AS WELL.



THE 2004 TSUNAMI IN THE INDIAN OCEAN CAUSED WIDESPREAD DESTRUCTION IN COASTAL AREAS OF MANY COUNTRIES IN THE REGION.



THE CTBTO CURRENTLY HAS TSUNAMI WARNING ARRANGEMENTS WITH 13 COUNTRIES (IN GREEN ON THE MAP), WHICH RECEIVE DATA FROM AROUND 100 IMS STATIONS (IN RED).

region, the CTBTO currently shares data with tsunami warning centres in Indonesia, Malaysia, Myanmar, the Philippines and Thailand.

After the magnitude 9.0 earthquake struck Japan on 11 March 2011, triggering a massive tsunami that caused widespread devastation, CTBT data from about 20 seismic and hydroacoustic stations were sent directly and in real time to seven tsunami warning centres in the region, including centres in Japan and the United States (Hawaii). This helped the centres issue swift alerts to Japan's neighbours as well as to the wider Pacific region.

Following the Fukushima nuclear power plant accident, CTBTO radionuclide stations provided first hand information on the dispersal of radioactive emissions. The Philippines was one of the CTBTO Member States to make CTBTO data publicly available through its radiological protection agency, the Philippines Nuclear Research Institute. The data helped assure the public that there was no cause for alarm.

There are many other potential uses of CTBT verification data including monitoring volcanic eruptions and research on the following: the Earth's core; climate change; meteorology; break-up of ice shelves and the creation of icebergs; oceans and marine life; meteors; and worldwide background radiation.

The CTBT verification regime

A global network of over 300 stations constantly scans the Earth for evidence of a nuclear blast. Seismic, infrasound and hydroacoustic stations listen for signs of a nuclear explosion in the ground, the air and under water, while radionuclide and noble gas stations "sniff" the air for radioactivity.

All monitoring data - currently around 15 gigabytes daily - are sent to the CTBTO's headquarters in Vienna for processing and analysis. Findings are shared with Member States in real-time.

Once the Treaty is in force, Member States will be able to request an on-site inspection if they suspect that a nuclear explosion has taken place in violation of the Treaty. In order to test its on-site inspection capabilities, the CTBTO organized its second Integrated Field Exercise - IFE14 - in Jordan in late 2014. The successful exercise involved four years of preparation, 150 tonnes of specialized equipment and over 200 international experts.

Capacity Building

The CTBTO invites States to attend workshops on a variety of subjects including CTBT ratification procedures, national implementation of the CTBT, information sharing and national capacity building.

ASEAN countries have hosted more than 10 capacity building courses for technical staff as well as workshops on the CTBT over recent years. Over 200 station operators, analysts and National Data Centre staff from ASEAN countries have received training in many technical areas such as operating and maintaining International Monitoring System stations and the use of CTBT monitoring data, enabling them to participate actively in nuclear test-ban verification.

In May 2014, Indonesia hosted a regional conference on the CTBT in Jakarta on ways to advance the ban on



SOME OF THE PARTICIPANTS AT THE ASEAN NATIONAL DATA CENTRE DEVELOPMENT WORKSHOP IN CHIANG MAI, THAILAND, IN NOVEMBER 2012 INSPECTING THE CTBTO'S PRIMARY SEISMOLOGICAL ARRAY PS41 IN CHIANG MAI. PHOTO COURTESY OF STEPHEN HERZOG.

nuclear tests in South-East Asia, the Pacific and the Far East region. The conference, which was opened by Indonesian Foreign Minister Marty Natalegawa, also focused on capacity building and the civil and scientific applications of CTBT monitoring data such as for tsunami warning purposes.

Status of CTBT signatures and ratifications in ASEAN member states

Country	Signature	Ratification
Brunei Darussalam	22 January 1997	10 January 2013
Cambodia	26 September 1996	10 November 2000
Indonesia	24 September 1996	6 February 2012
Laos	30 July 1997	05 October 2000
Malaysia	23 July 1998	17 January 2008
Myanmar	25 November 1996	
Philippines	24 September 1996	23 February 2001
Singapore	14 January 1999	10 November 2001
Thailand	12 November 1996	
Viet Nam	24 September 1996	10 March 2006

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