

NUCLEAR TESTS

“Now we have this problem of what we call ‘jelly-fish babies’. These babies are born like jelly-fish. They have no eyes. They have no heads. They have no arms. They have no legs. They do not shape like human beings at all. When they die they are buried right away. A lot of times they don’t allow the mother to see this kind of baby because she will go crazy. It is too inhumane.”

Darlene Keju-Johnson, Director of Family Planning 1987-1992, Marshall Islands, on the impact of US nuclear testing in the Marshall Islands

The more than 2,000 nuclear tests that have been conducted worldwide by the nuclear powers since 1945 have not been without consequences. Many areas that served as test sites continue to suffer from the horrific health and environmental effects of nuclear explosions. For example, in the Semipalatinsk region in Eastern Kazakhstan, which served as the prime test site for Soviet nuclear testing, the average life expectancy is less than 50 years, the death rate is extremely high, and cancer rates have reached critical levels. Moreover, serious birth defects are common, with incidences of mental retardation three to five times higher than average. Some of the nuclear-weapon States have introduced compensation schemes for victims of their nuclear tests.

Parliaments of nuclear-weapon States are thus faced with issues of compensation to cover health costs (including income lost) and land lost to nuclear tests.

The CTBT is intended to ban all nuclear explosions in all environments, whether for military or civilian purposes, and establishes a global system for detecting and deterring clandestine test explosions.⁷⁰ (See **Chapter 7. Verification, compliance and enforcement.**)

The CTBT is one of the building blocks for the legal and technical framework for a nuclear-weapon-free world, as it will establish a comprehensive ban on nuclear testing when it enters into force. The Preparatory Commission for the CTBTO was established by CTBT States Signatories to develop a verification regime, including a global

monitoring system and on-site inspection capability. The monitoring system is nearly complete and is in provisional operation, pending entry into force of the Treaty.



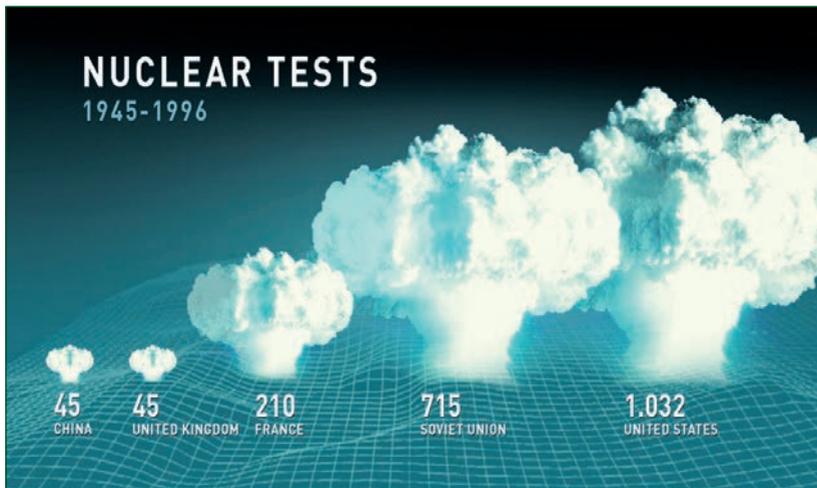
The "Baker" explosion, part of Operation Crossroads, a nuclear weapon test by the United States at Bikini Atoll, Micronesia, 25 July 1946.

The CTBT was negotiated in the Conference on Disarmament between 1993 and 1996, and adopted by the United Nations General Assembly on 10 September 1996. Although it has achieved near universal adherence (at the time of writing, 183 States had signed the treaty, and 157 had ratified it), it has not yet entered into force. Article XIV of the treaty requires ratification by the 44 States listed in Annex 2 before it can enter into force. These Annex 2 States participated in the CTBT negotiations between 1994 and 1996 and possessed nuclear reactors or research reactors at the time. Of these 44 States, three have not signed the CTBT – the Democratic People's Republic of Korea, India and Pakistan. A further five have signed but not ratified the treaty – China, Egypt, the Islamic Republic of Iran, Israel and the United States.

The 2009 IPU resolution on nuclear non-proliferation and disarmament “stresses the vital importance and urgency of signature and ratification, without delay and without conditions, to achieve the earliest entry into force of the CTBT”.

The 2009 IPU resolution calls upon “the parliaments of all States that have not yet signed and ratified the CTBT to exert pressure on their governments to do so, [and] [e]specially urges parliaments of all remaining States listed in Annex 2 of the CTBT, whose ratification is required to bring the treaty into force, to urge their governments to immediately sign and ratify the treaty”. In addition, the resolution calls on “all nuclear-armed States to continue to observe their moratoria on nuclear-weapon testing, on all States that have not already done so to proceed, on a voluntary basis, to dismantle their nuclear test sites, and on all States to maintain support for the CTBT Organization verification system until the CTBT enters into force”.⁷¹

Figure 4: Breakdown of nuclear tests conducted by China, United Kingdom, France, the Soviet Union and the United States from 1945 to 1996, the year the CTBT was signed. This graph does not include the nuclear tests conducted by India (one in 1974, two in 1998), Pakistan (two in 1998) and DPRK (one in 2006, one in 2009).



Source: The Official CTBTO Photostream, Flickr

Good Practice**ALL STATES****Examples****A. Ratification of the Comprehensive Nuclear-Test-Ban Treaty (CTBT)**

Moving towards entry into force

B. CTBT national implementing legislation

Model legislation – Australia shows how it can be done

C. CTBT capacity development

Indonesian MPs utilizing the CTBTO Capacity Development Initiative

A**Ratification of the CTBT****Moving towards entry into force**

On 6 April 1998, the United Kingdom and France became the first nuclear-weapon-possessing States to deposit their respective instruments of ratification of the CTBT. The UK Parliament had earlier passed the 1998 Nuclear Explosions (Prohibition and Inspections) Act, which makes it a crime to cause a nuclear explosion, to provide the legal framework for inspections and prosecutions under the terms of the CTBT and enable the United Kingdom to ratify it.

On 21 April 2000, the Lower House of the Russian Parliament, the Duma, voted by 298 votes to 74 to approve the ratification of the CTBT, which occurred on 20 November of the same year, and to adopt a Federal Act enabling the government to cooperate with the CTBTO Preparatory Commission.

The unanimous approval of the ratification of the CTBT by the House of Representatives of Indonesia – an Annex 2 State – in December 2011 brought the Treaty's entry into force one step closer.⁷² Following the ratification vote, Ismet Ahmad, a lawmaker from the National Mandate Party, called on the nuclear-weapon-possessing States to follow in Indonesia's steps, noting that "Indonesia's ratification has no significance

unless other nuclear States take the same step”.⁷³ (Indonesia officially ratified the CTBT in February 2012, when it deposited the instrument of ratification.⁷⁴)

Although all countries have their own responsibility with regard to ratifying the CTBT, few would deny that ratification by the United States would be a critical development in bringing the historic treaty into full legal effect. As former UN Chief Weapons Inspector and head of the Weapons of Mass Destruction Commission, Dr. Hans Blix, has noted:

“If there were to be ratification by governments of the CTBT (...), including the United States where it was turned down in the Senate a number of years ago, then this would change the atmosphere very considerably. (...) [T]he reality is probably that if the US were to ratify, then China would, and if China did, India would, if India did, Pakistan would, and if Pakistan did, then Iran would; it would set in motion a good domino effect.”⁷⁵

The Obama Administration has made CTBT ratification a high priority. In a statement welcoming Indonesia’s decision, President Obama said, “The United States remains fully committed to pursuing ratification of the Test Ban Treaty and will continue to engage members of the Senate on the importance of this Treaty.”⁷⁶

Since the early 1990s, legislators in nuclear-weapon States have been instrumental in introducing and extending nuclear-test moratorium legislation. Enlightened, bipartisan leadership from parliamentarians is once again needed to help bring the CTBT into force.

B

CTBT national implementing legislation

Model legislation – Australia shows how it can be done

Article III of the CTBT requires each State Party to take, in accordance with its constitutional processes, any necessary measures to implement its obligations under the Treaty. Even in States having a legal system where treaties automatically form part of national law, the government may need to adopt at least some measures, legislative and/or administrative, to implement the CTBT. It is for each State Party to decide what measures, in accordance with its constitutional processes, would be necessary or appropriate and how to carry them out.

In 1998, when ratifying the CTBT, the Australian Parliament adopted the Comprehensive Nuclear Test Ban Treaty Act, which includes a number of aspects relating to Australia's obligations, commitments and other actions to implement the CTBT. The Act governs general prohibitions, procedures for inspections, criminal offences and penalties, establishment and management of monitoring facilities, and establishment of a national implementing authority.

The Act also includes information for Parliament about the CTBTO global monitoring system, including the list of seismological, hydroacoustic, infrasound and radionuclide stations and laboratories that comprise the network.

The Australian legislation can serve as a model for other parliaments preparing for ratification. However, each State will differ to some degree in the legislative requirements that are appropriate for its legal system and circumstances, including which existing legislation may need to be amended, what contribution it will be making to the CTBTO and its global monitoring system, and how to deal with non-nuclear (chemical) explosive tests and on-site inspections.

The CTBTO Preparatory Commission provides assistance and advice upon request, including a *Guide for CTBT National Implementing Legislation*, model legislation, a legislation database and documentary assistance (all available at www.ctbto.org) and individualized legal technical support from CTBTO staff.

C	CTBT Capacity development
	Indonesian MPs utilizing the CTBTO Capacity Development Initiative

The CTBTO Preparatory Commission has launched a Capacity Development Initiative, the aim of which is to build the necessary capacity in States Signatories so that they can meet their Treaty obligations more effectively and contribute to the verification regime. As part of this initiative, the Commission has developed introductory and advanced courses dealing with various aspects of the CTBT and the verification regime. The issues addressed in the courses include the political, legal, technical and scientific challenges facing the CTBT. Courses held so

far have attracted several hundred participants from over 100 countries, including International Monitoring System station operators, staff of national data centres, diplomats, academics and members of civil society. In this way, the Capacity Development Initiative aims to increase awareness and stimulate understanding of the CTBT in order to promote universal adherence to it and its entry into force.

Parliamentarians can take advantage of this education and training support from the CTBTO by publicizing it to appropriate government agencies, academics and civil society. Parliamentarians can also participate in courses themselves, or arrange specific parliamentary education, information and training from the CTBTO.

In 2011, prior to the Indonesian ratification of the CTBT, a delegation from the Indonesian House of Representatives visited the CTBTO headquarters in Vienna to learn about the CTBT global monitoring network and its capacity to verify the Treaty and its civilian benefits, including real-time data input for tsunami warning centres, a service very relevant to earthquake-prone South-East Asia. The group, consisting of members of the House's Foreign Policy Commission and officials from the Ministry of Foreign Affairs, met with the CTBTO's Executive Secretary Tibor Tóth and senior staff. They also visited the CTBTO's International Data Centre and a radionuclide monitoring station installed on the rooftop of the organization's headquarters.

The visit assisted the parliamentarians in their action to ratify and implement the CTBT, and also to promote the Treaty among other MPs from countries which have yet to ratify.



Recommendations for Parliamentarians

- Act for ratification of the CTBT if your country has not ratified, and advance draft implementing legislation for ratification (with assistance from the CTBTO).
- Make use of the CTBTO Capacity Development Initiative to build knowledge, skills and capacity in your country to implement CTBT legislation and to contribute to the verification regime.
- Encourage parliamentary colleagues from countries that have not yet ratified the CTBT, especially those in Annex 2 countries, to advance such ratification in their legislatures.

- Hold public education events, including in your parliament and especially on the International Day against Nuclear Tests (29 August), and invite to such events officials from countries that have not yet ratified the CTBT.
- Highlight the value of the CTBT and the CTBTO for nuclear non-proliferation and environmental protection, along with other global civilian benefits, including tsunami early warning from earthquakes and radionuclide monitoring from nuclear accidents.
- Encourage your government to contribute stations to the CTBTO international monitoring system, and to support the Treaty by promoting its full ratification and entry into force, as well as the building-up and implementation of the verification regime.

Good Practice

NWPS

Examples

A. United States Radiation Exposure Compensation Act

An effective mechanism

B. Law on Compensation for Victims of French Nuclear Testing

A step in the right direction

A

United States Radiation Exposure Compensation Act

An effective mechanism

The 1990 United States Radiation Exposure Compensation Act (RECA) is a federal statute providing an apology and monetary compensation to individuals who contracted certain cancers and other serious diseases following their exposure to radiation released during US atmospheric nuclear-weapon tests, or following their occupational exposure to radiation while employed in the uranium industry during the Cold War arsenal build-up.⁷⁷

The Act is designed to serve as an expeditious, low-cost alternative to litigation. It provides compensation to individuals who contracted one of 27 identified medical conditions.

Notably, RECA does not require claimants to establish causation. Rather, claimants qualify for compensation by establishing the diagnosis of a listed compensable disease after working or residing in a designated location for a specific period of time. RECA has been criticized, however, on the grounds that the compensation provided is grossly insufficient to cover real health costs, lost income and loss of quality of life arising from nuclear tests.

RECA provides the following compensation:

- uranium miners, millers and ore transporters – US\$ 100,000;
- on-site participants at atmospheric nuclear-weapon tests – US\$ 75,000;
- individuals who lived downwind of the Nevada Test Site (“downwinders”) – US\$ 50,000.

So far, more than 22,000 claims have been approved under the Act, and over US\$ 1.5 billion have been disbursed.

B

Law on Compensation for Victims of French Nuclear Testing

A step in the right direction

On 5 January 2010, the French National Assembly adopted legislation authorizing the payment of compensation to victims of nuclear tests France had carried out in Algeria and French Polynesia from 1960 to 1996.⁷⁸

The compensation scheme applies to former soldiers and civilians who worked at the test sites and who subsequently developed cancers and other illnesses from exposure to radiation.

The French Ministry of Defence indicated that some 150,000 civilian and military workers took part in the 201 tests conducted. Residents living near the test sites are also eligible to apply for compensation.

A special compensation committee examines complaints on a case-by-case basis to determine whether the claimant’s symptoms are indeed

related to the 18 ailments identified by the UN Scientific Committee on the Effects of Atomic Radiation, which include leukaemia, thyroid cancer and other diseases. In comparison, US law regarding nuclear tests in the Marshall Islands allows compensation for 27 ailments.

Victims of radiation had for years campaigned for recognition from the State. Several legislators from opposition parties played a key role in prompting the government to agree to compensate nuclear test victims, and also in persuading it to improve its original compensation proposal. The government had proposed that claimants would have to prove that their ailment was caused by the nuclear testing, even if it was one of the 18 listed. Pressure by opposition parliamentarians led to the adoption of an approach similar to that of the United States, whereby compensation is provided unless it is proven that the ailment is definitely not caused by the nuclear tests.

Yet both parliamentarians and victims' rights groups have criticized the legislation for being too narrow and the compensation system for not working properly. Hundreds of compensation applications have been filed, but only a few granted.⁷⁹ Legislators from all political parties have called for changes to be made to the compensation law.



Ed Ou/Reportage by Getty Images

Two-year-old Adil Zhilyaev in a Kazakh orphanage in 2008. Born blind and with Infantile Cerebral Paralysis (ICP) and hydrocephalia due to his mother's radiation exposure from Cold War nuclear testing, he was abandoned by his parents.

Recommendations for Parliamentarians

- Extend nuclear test moratoria, particularly through legislation.
- Urge your government to sign and ratify the CTBT if it has not already done so.
- Initiate and strengthen compensation legislation for nuclear test veterans, communities and downwinders.