

Entrance-Into-Force of CTBT

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The Comprehensive Nuclear Test Ban Treaty (CTBT) bans all nuclear explosions of any yield in all places for all time. The United States signed the CTBT in 1996, but the US Senate denied advice and consent to CTBT ratification in 1999. Article XIV of CTBT requires a meeting about every two years until CTBT Enters Into Force, alternating between Vienna and the UN. The September 2007 Article XIV conference was attended by delegations from Iraq, Iran, Pakistan, China, Russia and 101 other nations, but the US, DPRK and India did not attend. This paper gives the views of key member states on the purpose and direction of CTBT, an analysis of funding and regional acceptance, an analysis of advantages of CTBT over NPT, and a suggested path for entrance into force. Official proceedings were adjourned for a special two-hour session with Ambassador Jaap Ramaker (UN-CD Chief CTBT Negotiator) and three non-diplomats (Andreas Persbo, Daryl Kimball, and David Hafemeister). The technical results on monitoring were published in *Science and Global Security*.

Senate rejection of CTBT does not mean that the United States is free to test since it is bound as a CTBT signatory *by custom* to the Vienna Convention on the Law of Treaties. For the US to resume testing, the Senate must vote to take the CTBT from the Executive Calendar, followed with a presidential statement that the CTBT is “jeopardizing its supreme interests.” A two-step process was not needed when the US withdrew from the Antiballistic Missile Treaty since the ABMT resided in the Executive Branch.

A world without the Nuclear Non-Proliferation Treaty (NPT) would be much less stable since there would not be an international norm on nuclear proliferation. The five nuclear weapon states (NWS; China, France, Russia, US, UK) realized this danger when the NPT was going to expire in 1995. In order to extend the treaty for all time, the five weapon states agreed to a key condition by the 180 non-nuclear weapon states (NNWS), which required a promise to join the CTBT by the five NWSs, or else they would not extend the NPT for all time. Because of this, the NWSs all agreed to comply with a universal test ban. Three of the five weapon states (UK, France, Russia) have ratified the CTBT, while China awaits US ratification before it will ratify.

CTBT Indicators

The global nonproliferation regime is in under attack because of actions by other countries and because of US actions. The so-called *axis of evil* (Iraq, Iran, and North Korea were Clinton’s “rogue states”) cheated, but the successes of the NPT far surpass its losses. Thus far, only North Korea has built a couple of nuclear weapons (0.6 kton test on October 9, 2006), but many other nations that started nuclear weapon programs subsequently changed their minds (S. Africa, S. Korea, Taiwan, Libya, Brazil, Sweden, Belarus/Ukraine/Kazakhstan, and more). India, Israel, N. Korea and Pakistan are not NPT parties. Because NPT is a weakened treaty, CTBT is needed to add an additional barrier and to energize the global norm against proliferation.

NNWSs believe that CTBT is a pivotal litmus test to determine a nation’s “walking-the-walk” consistency on nonproliferation matters. The UN General Assembly has passed four resolutions that “urges all nations to maintain their moratorium on nuclear-weapons test explosions....urges all nations that have not yet signed the Treaty to sign and ratify it as soon as possible....and urges all nations that had signed but not yet ratified....to accelerate their ratification process.” The four UN General Assembly votes total to 694 in favor, 6 against (DPRK, Palau, 4 US votes) and 16 abstentions (4 votes each by Colombia, India, Mauritius, and Syria).

As of December 2007, 141 of the 177 signatories ratified CTBT. The main non-signatories are North Korea, Iraq, India, Saudi Arabia, Syria, and Pakistan. Since the last EIF meeting in 2005, 15 states ratified and 1 signed.

Beyond ratification, dues payments and delegation strengths are two *CTBT indicators* that directly measure the intent to support the CTBT regime, and *indirectly* to support the NPT regime (Table 1). The total assessed budget for 2007 is \$110 million, with a funding deficit of \$22 million (November 2007, 20%). The total funding deficit over the years is \$50 million. CTBT Annex 2 contains a list of 44 states that must ratify CTBT for it to enter into force. Of the 10 states that have failed to ratify, three did not attend the EIF conference: India, North Korea and

US. Three have not signed CTBT: North Korea, India and Pakistan. Four are fully paid: China, Egypt, Indonesia and Israel. Three have not fully paid their dues: Columbia, Iran, and US.

Table 1. Delegate Numbers and Funding Deficits. This table includes the 5 nuclear weapon states (NWS), the 3 Axis Powers from World War II, and the *defacto* NWSs, where Iran is listed for convenience only. The first number in the parentheses is the number of delegates that attended the 2007 EIF conference and the second number is the total national funding deficit in millions of dollars.

NWS = WW2–Allies	Defacto NWS	Other
China (7, 0)	Signatories	Afghanistan (1, 0)
France (10, 0)	?Iran (3, 1.5M)	Argentina (2, 6.6M)
Russia (10, 0)	Israel (2, 0)	Brazil (4, 12M)
UK (7, 0)	Non-Signatories	Columbia (3, 1.3M)
US (0, 24M)	DPRK (0)	Egypt (4, 0)
	India (0)	Holy See (4, 0)
WW2-Axis	Iraq (2)	Indonesia (5, 0)
Italy (7, 0)	Pakistan (2)	Libya (2, 0.2M)
Japan (14, 0)		Venezuela (6, 0.2M)
Germany (5, 0)	Former D-NWS	UN (3)
	Belarus (4, 0)	IAEA (13)
	Kazakhstan (6, 0)	OPCW (1)
	S Africa (3, 0)	ngo speakers (4)
	Ukraine (5, 0)	

Delegation Statements at EIF–CTBT

Brazil (Amb. Antonio Guerreiro): “Brazil is deeply concerned with the fact that eleven years after the CTBT was opened for signature, the prohibition to conduct nuclear tests is not yet a legal obligation....Brazil there reaffirms its deep concerns with the fact that some Nuclear Weapon States have been consistently trying to renege and back down on those commitments....In addition, it would allow States that have not ratified the Treaty, in particular those among them which are Nuclear–Weapon States, to enjoy nearly all of the benefits of the system without the need to abide by the legal obligations that provide the foundations of the CTBT regime....This situation is unacceptable and unsustainable, and if unchanged it will inexorably erode support to the CTBT and may ultimately lead to its demise.”

China (Amb. Guoqiang Tang): “CTBT has served as pillar of the international system of arms control, disarmament and nonproliferation....The development of new type nuclear weapons and the accelerated development and deployment of the missile defense systems have brought negative effects on the global strategic balance and stability....The Chinese Government has by far submitted the Treaty to the National People’s Congress for its review.”

France (Amb. Francois Deniau): “nothing justifies that this simple and powerful gesture in favor of nuclear non–proliferation should be postponed until tomorrow.”

Holy See (Rev. Msgr. Michael Banach): “The Holy See resolutely promotes the widest possible accession to the CTBT and its ratification....Sometimes States justify nuclear tests by appeal to the requirements of security and the protection of peoples. This argument fails to convince.”

Israel (Amb. Itzhak Lederman): “Israel considers the prohibition of nuclear testing as pivotal to global nuclear non–proliferation regimes....Israel calls upon all states....[to] sustain the commitment not to carry out any nuclear weapon test explosion.... [and to] redouble the efforts to complete the verification regime.”

Iran (Amb. Ali Soltanich): “In the 1995 NPT Review Conference, the Non-Nuclear Weapon States again showed their commitments and optimism toward this very important goal and agreed to the unlimited extension of the NPT, while still waiting for the positive response from the other side....[T]he rejection of the CTBT by the United States has damaged the prospect of the entry into force of the Treaty....[R]ejection of the On–Site Inspection and at the same time using advantages of receiving data from the International Monitoring System....has raised grave concerns as well....The NWSs bear the main responsibility in entry into force of the CTBT and they should take the lead in this regard.”

Japan (Senior Vice-Minister for Foreign Affairs): “The maintenance of the moratorium on nuclear testing is imperative. As the only nation ever to have suffered nuclear devastation, Japan calls on the international community to ensure that nuclear testing is never carried out by any country ever again.”

Pakistan (Amb. Shahbaz): “despite being a non–signatory State, we are not opposed to the objectives and purposes of the Treaty....We were not the first to introduce nuclear weapons in South Asia and our nuclear tests in 1998 were meant to restore the strategic balance in the region.”

Russia (Amb. Alexander Zmeyerovskiy): “We consider the CTBT as one of the key elements of the nuclear weapon non–proliferation regime and an important instrument for the maintenance of international security.” Russia would maintain its position of a voluntary nuclear testing moratorium “as long as other Nuclear Weapons States do the same.”

South Africa (Amb. L.M. Gumbi): “Recent pronouncements by some nuclear–weapon States...seem to suggest that the unspecific terms of Article VI of the NPT do not bind them to any specific timeframe to undertake their obligations under the Treaty....The CTBT is not an instrument standing on its own, but forms part of a Treaty Regime that encompasses an interlinking network of obligations, commitments and undertakings that are focused on preventing the proliferation of nuclear weapons....”

United Nations (UN Secretary–General Ban Ki-moon, former Chairman of the CTBTO Preparatory Commission) “I see emerging in the world today, a ‘zero tolerance’ of any further tests of nuclear explosive devices. I hope to see the day when this expectation is made legally binding and remain convinced that the CTBT is the way that this goal will ultimately be achieved.” (High Representative for Disarmament Affairs Sergio Duarte) “The key to accelerate the progress remains the leadership role of the United States would be ready to assume.”

CTBTO (Special Representative for Ratification Jaap Ramaker): “The world needs a complete ban on nuclear weapon test explosions....This Treaty will cap the development of ever more destructive weapons. It constitutes the last barrier against a nuclear programme turning in a nuclear *weapons* programme.”

CTBT vs. NPT

Constraining the proliferation of nuclear weapons is complicated since it requires the cooperation of 50–100 larger nations. The US Office of Technology Assessment (1977) produced the first serious study on proliferation, with this key conclusion: “In the long run two general rules apply: (a) Solutions to the proliferation problem will have to be found primarily, though not exclusively, through multilateral actions, and (b) the extent of US influence will vary from country to country.” Since NPT Article IV does not block enrichment and reprocessing for peaceful purposes, it is necessary to have a further constraint on proliferation from a viable CTBT. CTBT is easier to enforce than the NPT for the following seven reasons:

1. CTBT has one class of nations. There is no distinction between NWS and NNWS. North equals South, and East equals West.

2. CTBT has no distinction between military and commercial uses.
3. CTBT is more narrowly defined. NPT Article IV allows enrichment, reprocessing, fuel fabrication, storage, reactor operation and more. CTBT bans only nuclear tests of all yields, while NPT constrains the entire fuel cycle. Brazil is allowed to enrich uranium, while Iran is not allowed to enrich. Because of the narrow definition of a nuclear test, sanctions against CTBT-violating states are more likely than against NPT violators.
4. CTBT can be better monitored. CTBT can be monitored to 0.1 kt (1-2 kt in a cavity, with difficulty). Cooperative monitoring at test sites can significantly lower this without the loss of secrets. NPT violations are not so clearly defined.
5. CTBT undetected violations are less serious. A successful violation by a NWS of 0.1 kt (1–2 kt in a cavity with difficulty) does not greatly affect the situation between NWSs. A successful violation by a NNWS is quite difficult to accomplish since NNWSs lack the experience of testing under 0.1 kt, and NNWS would have a difficult time preventing radionuclide venting, an issue that plagued the NWSs for decades. These small tests are less dangerous to the national security, and that threat exists without a CTBT. Violations of the NPT include the entire weapon and fuel cycles.
6. CTBT is less contentious. NPT five-year review conferences have had great difficulty obtaining consensus documents, which is not a problem with CTBT conferences.
7. CTBT has much more political support. The total of the four votes in the UN General Assembly (2003–2006) is 694 in favor, 6 opposed and 16 abstentions. Only the US, DPRK, and India failed to attend the 2007 CTBT-EIF conference. CTBT is needed to strengthen a weakened NPT, according to UN Secretary–General Ban Ki–moon, Chair of the Mass Destruction Commission Hans Blix, Former US Secretaries of State Henry Kissinger and George Schultz, Former US Defense Secretary William Perry, and Former Chair of the Senate Arms Services Committee Sam Nunn.

Path to Ratification in the US

The Senate ratification process in 1999 was deeply flawed. There were no questions for the record, and the Senate Foreign Relations Committee did not produce a CTBT Ratification Report for Senate floor debate. This is in contrast to SFRC's over 1000 questions for the record and 14 days of hearings after CTBT submission to the Senate. It is imperative that technical, legal and political questions be fully aired before the Senate re-considers CTBT ratification. In 2009, almost half the Senate (40–45 senators) will have been elected since the 1999 CTBT defeat. This process is manageable if the SFRC conducts a thorough review of CTBT. The CTBT Resolution of Ratification should address the concerns of Senators. General Shalikhvili's CTBT report suggests a mechanism for this by recommending that the government

“should commit to conducting an intensive joint review of the Test Ban Treaty's net value for national security ten years after US ratification, and at ten-year intervals thereafter....If, after these steps, grave doubts remain about the Treaty's net value for US national security, the President, in consultation with Congress, would be prepared to withdraw from the Test Ban Treaty under the 'supreme national interests' clause.”

Path to Global Entrance Into Force

There is no unique path towards obtaining the 10 necessary ratifications from the Annex 2 states to obtain CTBT Entrance into Force. It is generally assumed that the process begins with the United States. If the US ratifies, it is generally assumed that China will follow. With China and the US acting together, it is generally assumed that North Korea will ratify. Columbia generally supports CTBT, but is trying to avoid \$1.3 million in late payments; these modest funds can be obtained from other nations. Indonesia, a significant CTBT player will probably ratify. The next step would be the most difficult, as it necessitates a Middle-East Grand Bargain, which would obtain ratifications from Israel first and then Egypt and Iran. With China committed to a test ban, India could follow China. Pakistan has stated that it would ratify if India did.

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