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The CTBT Remains Fatally Flawed

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In 1999 the U.S. Senate considered whether to give its advice and consent to the Comprehensive Test Ban Treaty. The Senate found the treaty flawed and rejected it on a 51 to 48 vote (one Senator voted present). The reasons for rejection then remain valid today: the treaty would not achieve its nonproliferation objectives, it contains serious deficiencies, and ratification would entail significant risks to US national security.¹

The CTBT Won't Prevent Nuclear Proliferation

Treaty proponents argue that if states are prohibited from conducting nuclear tests, non-nuclear powers will be unable to develop new nuclear weapons and existing nuclear powers will be unable to improve their nuclear arsenals. Both points are demonstrably false. Non-nuclear countries do not need nuclear testing to develop simple nuclear weapons or to produce nuclear weapons using designs and materials obtained from the black market. And, despite their pledges not to test nuclear weapons, Russia and China continue to significantly improve their nuclear weapon capabilities and add new warheads without high-yield nuclear testing.

The CTBT is not Adequately Verifiable

States can cheat in numerous ways with very low risk of detection. For example, a nuclear explosion can be decoupled by conducting it in an underground cavity and/or in a special container to reduce the seismic signal. Even CTBT proponents concede that militarily significant nuclear tests may be

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undetected. For example, the 2002 study by the National Academy of Sciences on CTBT verification reported that Russia could develop and test new tactical weapons in the range of 10 to 100 tons with little or no risk of detection. Indeed, Russia could develop a 10-ton nuclear weapon using only hydronuclear tests in the kilogram-yield range, and be reasonably confident of its performance.

The CTBT has Serious Inherent Deficiencies

The treaty fails to define a “nuclear test,” the very action it is supposed to prohibit. Consequently, states may decide for themselves what constitutes a test. The US interprets the treaty as prohibiting tests that produce *any* nuclear yield. Russia apparently has a different interpretation; it reportedly conducts hydronuclear tests that produce some nuclear yield. Such tests can be highly useful in assuring the safety and reliability of nuclear weapons, and in their modernization.

The treaty also has weak verification and enforcement measures. For example, on-site inspections under the treaty are governed by an Executive Council of state members – essentially a mini-UN (without a guaranteed seat for the US). Authorization to conduct an on-site inspection requires an affirmative vote of 30 of the 51 votes on the Council. But even if the inspection authorization proceeded smoothly, getting a team to a suspect site before any telltale emissions dissipate would be exceedingly difficult.

The US May Need to Conduct Nuclear Tests

The US has not conducted a nuclear test since 1992. Yet, the US may need to return to some level of testing for at least two reasons.

First, history shows us that a problem with the current stockpile could arise that requires testing to resolve. During the 1958-1961 U.S.-Soviet nuclear test moratorium serious problems in our stockpile went undetected until the US resumed testing. The Stockpile Stewardship Program (SSP), designed to prevent such problems during the current moratorium, has had some successes, but important programs have been scaled back and funding reduced. It is possible that stockpile problems could again occur, requiring testing to resolve.

Second, testing may be required to shape the nuclear deterrent to better meet the challenges of the changed threat environment. Recently there have been significant upgrades in the nuclear arsenals of both Russia and China along with troubling changes in their nuclear doctrines. Russia has developed a new intercontinental ballistic missile capable of carrying multiple warheads, a new ballistic missile submarine with an associated new missile and warhead, a new short-range ballistic missile, and low-yield tactical nuclear weapons including an earth penetrator. China is diversifying its nuclear missile force by fielding a new set of road-mobile missiles, a small force of strategic missile submarines, and is expanding its ICBM force.

Large-yield US nuclear weapons designed during the Cold War to destroy entire cities are less-than-optimal weapons for many of today’s threat scenarios. It is possible that further weapons developments or doctrinal changes by Russia and/or China will necessitate a reevaluation of whether the US should



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develop new nuclear warheads to bolster the US deterrent.

The CTBT Would Hobble Only Those That Comply

The US complies with arms control treaties whereas others often don't. Russia has violated several arms agreements, including most recently the Intermediate Nuclear Forces Treaty, and it has expanded its arsenal under New Start. The Chemical Weapons Convention and the Biological and Toxin Weapons Convention have not deterred some parties from cheating nor inspired the international community to confront those suspected of noncompliance.

Conclusion

Ratification of the CTBT wouldn't prevent nuclear proliferation and would be detrimental to US national security.

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1. For an expanded discussion of the issues on CTBT, see *The Comprehensive Test Ban Treaty: An Assessment of the Benefits, Costs, and Risks* (Fairfax, VA: National Institute Press, 2011) available at <http://www.nipp.org/wp-content/uploads/2014/12/CTBT-3.11.11-electronic-version.pdf>.