

INDIA AND THE COMPREHENSIVE NUCLEAR-TEST-BAN TREATY: TO SIGN OR NOT TO SIGN?

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INTRODUCTION

Although it was opened for signature in 1996, the Comprehensive Nuclear-Test-Ban Treaty (CTBT)—which would ban all types of nuclear explosion, including nuclear weapon tests—has yet to enter into force. One of the roadblocks that must first be overcome is achieving ratification by India, China and the United States (see box 1). With US President Barack Obama apparently ready to push the US Senate to ratify the treaty and China likely to follow or pre-empt this move, there is increased nervousness in India about the potential for international pressure for it to follow suit. This has coincided with one of the lead scientists in India's 1998 nuclear tests casting doubt on the tests' success.

This Policy Brief looks at the debate in India over nuclear testing and the development of its nuclear deterrent. It then offers an assessment of whether India will conduct further nuclear tests and concludes by considering the likelihood that India will sign the CTBT in the near future.

INDIA AND NUCLEAR TESTING: A SPECIAL RELATIONSHIP

Nuclear testing has a special place in the Indian nuclear discourse. As early as 1954, Indian Prime Minister Jawaharlal Nehru called for a treaty banning all nuclear test explosions. However, for many years India maintained that test explosions that help in the development of peaceful uses of nuclear technology should be distinguished from testing for purposes of building nuclear weapons. In order to keep its options open, India remained outside the 1968 Treaty on the Non-Proliferation of Nuclear Weapons (Non-Proliferation Treaty, NPT) and in 1974 it conducted its first nuclear test. Although termed a 'peaceful nuclear explosion', the test was a critical step on India's path to the development and maintenance of nuclear weapons.

Nuclear testing re-entered the national political consciousness after 1994 with the debate over India's participation in the CTBT. After two and a half years of intense engagement, India walked out of the negotiations at the Conference on Disarmament. This was perceived by the domestic audience as a legitimate step that was necessary

SUMMARY

● The 1996 Comprehensive Nuclear-Test-Ban Treaty (CTBT) has yet to enter into force because of the unwillingness of a number of states—including India—to ratify it. Although India initially participated in negotiating the CTBT, it subsequently walked out of the negotiations and has never signed the treaty.

There has been a long debate in India over the need for nuclear testing. This debate preceded the country's first nuclear test in 1974, was revived again with the 1998 tests and has entered a new phase since the 2005 India–United States deal on civil nuclear cooperation. This debate has developed alongside the growth of India's nuclear deterrent.

It is unlikely that India will ratify the CTBT in the foreseeable future—even if China or the United States do—given the present domestic and international circumstances. The most likely outcome is that India will continue to observe its voluntary moratorium on testing nuclear weapons, while keeping open in principle its option to resume testing.

**Box 1. The Comprehensive Nuclear-Test-Ban Treaty**

Opened for signature at New York on 24 September 1996; not in force as of 1 January 2010; depositary UN Secretary-General

The treaty would prohibit the carrying out of any nuclear weapon test explosion or any other nuclear explosion, and urges each party to prevent any such nuclear explosion at any place under its jurisdiction or control and refrain from causing, encouraging or in any way participating in the carrying out of any nuclear weapon test explosion or any other nuclear explosion.

As of 1 January 2010, 151 states have signed and ratified the treaty. A further 31 states have signed but not yet ratified the treaty.

The treaty will enter into force 180 days after the date of the deposit of the instruments of ratification of the 44 states listed in an annex to the treaty. All the 44 states possess nuclear power reactors or nuclear research reactors. Three of these states—India, North Korea and Pakistan—have neither signed nor ratified the treaty, and a further six—China, Egypt, Indonesia, Iran, Israel and the United States—have signed but not yet ratified the treaty.

Treaty text: United Nations Treaty Collection, <<http://treaties.un.org/Pages/CTCTreaties.aspx?id=26>>.

in order to preserve India's political and technical autonomy.

This debate over the CTBT also revived discussions on the national security dimension of India's nuclear policy. In the past these discussions had been episodic and largely reactive: a brief debate had taken place in the aftermath of China's first nuclear test explosion in 1964 and the issue had risen again in the mid-1980s, when substantive developments in Pakistan's nuclear weapon programme became difficult to ignore. Whereas during these periods the discussion was largely confined to a fairly small expert community, the 1994–96 debate marked the beginning of the democratization of the nuclear weapon debate in India. This period of debate also proved to be a precursor to India's nuclear tests of 1998, in defiance of the established nuclear order, and its subsequent search for a *modus vivendi* with that order.

After the 1998 tests: political and technical debates

Although India perceived the 1998 tests as being inevitable in order to keep its political and technical options open, its involvement in the negotiation of the CTBT proved that

it was willing to limit its right to conduct nuclear tests. Indeed, on 11 May 1998, immediately after the first three in the series of five nuclear tests conducted in that year, the Indian Government stated that 'India would be prepared to consider being an adherent to some of the undertakings in the Comprehensive Test Ban Treaty. But this cannot obviously be done in a vacuum. It would necessarily be an evolutionary process from concept to commitment and would depend on a number of reciprocal activities.'

The post-1998 debate took place at two levels: political and military-technical. The political aspects mainly revolved around the nature of the international non-proliferation regime, including the CTBT—which was seen by most as an adjunct to the NPT—and India's relationship to it. The military-technical debate was about whether the six tests conducted to date were sufficient to allow India to field a credible deterrent well into the future.

Some sections of the Indian media argued for a full-blown megaton-scale thermonuclear test, much larger than the estimated 45 kiloton yield of the two-stage thermonuclear weapon tested on 11 May 1998. This was a new element



in the Indian national debate on nuclear issues: defiance not by standing apart from disarmament and arms control frameworks but by the unrestrained and overt development of nuclear weapons. At the other end of the spectrum, some argued for the signature and ratification of the CTBT, which would have signalled a radical departure from India's stance of opting out of the nuclear non-proliferation regime.

Finding a place for India in the non-proliferation architecture

As the India–United States dialogue led by Jaswant Singh, Indian Minister for External Affairs, and Strobe Talbott, US Deputy Secretary of State, progressed, the Indian Government began to explore the extent to which a national consensus could be built on India's future place in the non-proliferation architecture. Having already made the radical shift from recessed to overt deterrence, the government was understandably cautious. Chatham House style debates involving scientists, officials, key journalists, strategic analysts and diplomats were part of this exploration. There were also two important debates in the Indian Parliament, even though the debates proved inconclusive.

During the first of these parliamentary debates, on 27 May 1998 the Prime Minister, Atal Bihari Vajpayee, presented a paper, *Evolution of India's Nuclear Policy*, elaborating India's future approach to the CTBT and nuclear testing:

Subsequent to the tests [the] Government has already stated that India will now observe a voluntary moratorium and refrain from conducting underground nuclear test

explosions. It has also indicated willingness to move towards a de-jure formalisation of this declaration. The basic obligation[s] of the CTBT are thus met; to refrain from undertaking nuclear test explosions. This voluntary declaration is intended to convey to the international community the seriousness[s] of our intent for meaningful engagement. Subsequent decisions will be taken after assuring ourselves of the security needs of the country.

During the second debate in the Parliament, on 15 December 1998, Vajpayee stated: 'India is now engaged in discussions with our key interlocutors on a range of issues including the CTBT. We are prepared to bring these discussions to a successful conclusion so that the entry into force of the CTBT is not delayed beyond September, 1999. We expect that other countries . . . will also adhere to this Treaty without condition.'

Coming close to a deal

This attempt at crafting a national consensus reached its peak at the end of 1999. In a set of interviews in *The Hindu*, Singh and Talbott described a possible deal under which India would sign, but not ratify, the CTBT and maintain small nuclear forces. In exchange, the USA would acknowledge, but not acquiesce in, India's possession of a minimum nuclear deterrent. It would also promise a qualitatively better relationship with India, beginning with the ending of sanctions imposed after India's nuclear tests. However, the areas of agreement proved to be inadequate for a complete rapprochement. The

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sanctions that India wanted removed went back to 1974, while the measures that the USA was willing to reconsider were those put in place 1998, which India had more or less taken in its stride. Jaswant Singh's idea of distinguishing signature from ratification also found little support in India, given its constitutional practice of the executive, not the Parliament, deciding on the ratification of treaties.

On 13 October 1999 the US Senate voted against ratification of the CTBT. This dramatically changed the context for the debate in India. On the following day, the Indian

Ministry of External Affairs reiterated India's position on the CTBT as stated by Vajpayee in December 1998, adding: 'The situation regarding

ratification of the CTBT, as well as the debate in the US Senate, clearly indicates that the CTBT is not a simple, uncomplicated issue. Among other things, it requires building a national consensus in the countries concerned, including India.'

Domestic critics questioned the urgency of taking a position on the CTBT when the US Administration itself was struggling to get it ratified.

After the India-US nuclear deal

The most recent phase in India's continuing debate on the CTBT and nuclear testing surfaced almost immediately after the 18 July 2005 joint statement issued by Indian Prime Minister Manmohan Singh and US President George W. Bush on an India-US Civil Nuclear Cooperation Initiative. The statement—which aimed at the resumption of 'full civil nuclear

cooperation' between India and the USA—represented a reversal of three decades of US non-proliferation policy, which had been aimed at preventing India from obtaining nuclear fuel and reactors from the USA and other suppliers following the 'peaceful nuclear explosion' in 1974.

Under the agreement, India agreed to separate its civil and nuclear facilities and place all its civil nuclear facilities under International Atomic Energy Agency (IAEA) safeguards. In exchange, the USA agreed to work towards cooperation in the civil nuclear field. The final India-USA nuclear deal took more than three years to materialize, having had to await the amendment of US law on foreign nuclear energy cooperation, a civil-military separation plan from India, an India-specific safeguards agreement with the IAEA and the granting of an exemption from Nuclear Suppliers Group (NSG) transfer restrictions.

India's right to test; other countries' right to react

In opposition to the Indian-US nuclear deal, of the Bharatiya Janata Party (BJP) has argued that it restricts India's freedom to conduct further nuclear tests. Counter arguments have either emphasized the futility of further testing or the sovereign right of India to test in the future regardless of the consequences. This political debate was laid to rest by the Indian External Affairs Minister, Pranab Mukherjee, in October 2008 when he stated that India has the right to test while other countries have the right to react.

In the USA, supporters of the deal stressed the consequences of any

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future Indian testing. One of the conditions of the US Congress's approval of the nuclear deal was that not only would US nuclear cooperation be terminated if India conducted new tests—meaning the cessation of US fuel supplies for Indian nuclear reactors—but that India would also be required to return all US-origin equipment and materials that it may have received under the deal as well as any material produced by India with these US-origin items.

The central focus of the technical debate in India was once again the two-stage thermonuclear device, although no consensus emerged around the need to field such a weapon. This debate resurfaced in August 2009 when Dr Krishnamurthy Santhanam, one of the key scientists associated with the 1998 nuclear tests, declared that the hydrogen bomb test had been a fizzle (i.e. had failed to achieve the explosive yield that could be expected from the theoretical calculations). Santhanam's revelations cast doubt not only on the 1998 tests but also on the 1974 test, since the latter was used as a comparative baseline in the seismic estimates of the 1998 tests.

The reality of India's nuclear deterrent

In the midst of this ongoing technical controversy one fact remains certain: India has a credible nuclear deterrent consisting of deuterium–tritium boosted fission weapons that can generate a yield of 200–500 kilotons. India's nuclear policy was spelled out in a draft nuclear doctrine of 1999, which was subsequently formalized with some modifications in 2003, and is 'based on the principle of a minimum

credible deterrent and no-first-use'. As made explicit in the nuclear doctrine, India—unlike the weapon developers in the USA and the Soviet Union during the cold war—conceived nuclear weapons as an instrument of minimal nuclear deterrence and never foresaw a role for them in war fighting or for use in a massive first strike.

The question of how many nuclear weapons and of what type are needed to achieve minimum deterrence is imprecise and can only be clarified by reaching an understanding with the potential adversary—an objective that was sought through arms control during the cold war. Nevertheless, some aspects of minimum deterrence are clear. For example, it does not call for an unlimited arsenal. It does not even require that India's offensive weapons match in number or strength those of its adversaries. It only demands the capability, in a second strike, to inflict unacceptable damage to the other side. Keeping this in mind, it is appropriate to note that a 15–20 kiloton bomb could kill up to 1 million people in Shanghai or in Islamabad.

TO TEST OR NOT TO TEST?

Political and technical factors argue against the need for immediate nuclear testing by India; a higher priority is the development of a variety of accurate, survivable and long-range delivery systems in order to establish the credibility of India's minimum nuclear deterrent. The option of renewed explosive testing should only be available as a demonstration of India's current capability and intent to maintain the

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credibility of its deterrent if that was ever challenged. It is in India's interest to explain the conditions in which testing might become

necessary and to make these explanations public.

Based on discussions by Indian analysts the triggers for further testing could include:

- evidence that an adversary is not convinced that India's nuclear arsenal would perform as expected;
- a serious deterioration in relations with China escalating to the level of border skirmishes or a second Sino-Indian border war;
- the development of a fourth generation of nuclear weapons based on new principles by one or more of the other nuclear weapon states with or without explosive testing;
- the realization or discovery that China's nuclear forces are more extensive and more capable than currently believed;
- the development by Pakistan of miniaturized warheads on accurate and hard to intercept cruise missiles for possible use as first-strike weapons;
- the acquisition of a submarine-based strategic nuclear weapon delivery capability by Pakistan; or
- the use (which would invite retaliation under the current doctrine) or credible threat to use nuclear weapons against India by any nuclear weapon state.

The underlying thinking reflected in these conditions is probably not exclusive to India and it is likely that

nuclear weapon states which have already signed and ratified the CTBT also share this kind of analysis. For example, speaking on 31 July 2003 at Sarov—one of Russia's two nuclear weapon laboratory complexes—President Vladimir Putin said that Russia would continue to fulfil its obligation not to conduct nuclear tests subject 'to mandatory requirements, one of the most important of which is the relation to obligations that other nuclear powers have taken on'.

TO SIGN OR NOT TO SIGN?

In the final analysis the debates on military-technical aspects of nuclear testing may be important but not decisive in determining India's approach to joining the CTBT. It is likely that political issues will have a greater influence. One critical issue will be the attitudes of other countries that have nuclear weapons, in particular China and the United States. If US President Barack Obama were to succeed in his stated objective of achieving ratification of the CTBT, then many observers believe that China would follow suit. If that were to happen, then India's policy would come under renewed international scrutiny. There would be a degree of expectation that India would make good the commitment given in December 1998 by Vajpayee that it would not stand in the way of entry into force of the CTBT.

A new international focus on the CTBT could place the Indian Government in an awkward situation and would represent a delicate matter in bilateral relations with India's important partners, perhaps first and foremost the United States. India has always had



reservations about Article XIV of the CTBT, which specifies the conditions under which the treaty will enter into force. The CTBT is unusual because it will enter into force once 44 specified countries (of which India is one) have ratified it (see box 1). India has felt that this approach to entry into force was designed to pressure certain countries into signing the treaty and as such discriminated among the parties.

In the USA many treaty proponents see the CTBT as an important intermediate step towards disarmament. Indian analysts and officials on the other hand do not believe that the CTBT will stop the development of new nuclear weapons. In addition, given the recent technical controversies surrounding the results of past nuclear weapon tests, India will monitor other countries for evidence of doubt about the effectiveness of India's nuclear deterrent. In that light, the Indian Government would probably prefer to keep its options open with regard to testing at present.

Developments in China and Pakistan will have an important bearing on the debate in India. In particular, India will watch closely for signs that these countries are continuing to modernize their arsenals and for evidence of technical collaboration in nuclear weapon-related fields.

Indian experts have compared and contrasted the debate in India with decision making on nuclear testing in China. There are some parallels. For example, China denounced the embryonic global regime for nuclear governance at the time that the Partial Test-Ban Treaty was finalized in 1963 and then carried out its first nuclear test

in 1964. However, as C. Raja Mohan has argued, China reconciled itself with and found its place in the global nuclear order over the following three decades. For India this process has been somewhat faster in that, only a decade after the May 1998 tests, India was able to take a major step towards integration into the civil part of global nuclear governance with the decision of the NSG in September 2008 to reopen cooperation with India on nuclear energy projects.

In conclusion, an open-ended moratorium on nuclear testing is probably the best that the international community can expect from India. However, although the lack of a legally binding proscription of nuclear testing from India may be frustrating for important partners of India, this outcome is much better than some of the imaginable alternatives.

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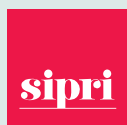
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