

**INDIA'S OPTIONS ON THE COMPREHENSIVE
TEST BAN TREATY**

**NIAS REPORT
ISSP (1996-1)**



***National Institute of Advanced Studies (NIAS)
Indian Institute of Science Campus
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PREFACE

This report entitled "India's Options on the Comprehensive Test Ban Treaty" emanated from a Workshop held at the National Institute of Advanced Studies on March 28, 1996. The Workshop was attended by a number of experts in the field holding a variety of perspectives. The format of this report follows the way in which the Workshop was structured.

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INDIA'S OPTIONS ON THE COMPREHENSIVE TEST BAN TREATY

India has reached a critical juncture in relation to the CTBT. Given that the CTBT has serious implications for India's nuclear policy, it is imperative that a thorough assessment be undertaken of India's CTBT options before a choice is made. The CTBT has been on the disarmament agenda since the 1950s, with hardly any progress until 1993. This lack of movement was almost entirely due to the unwillingness of the nuclear weapon powers, especially the U.S., to commit to non-testing. The reason for the shift in U.S. thinking after almost four decades is best captured by the statement of Ambassador Miguel Marin Bosch, who chaired the United Nation's Ad Hoc Committee on a Nuclear Test Ban in 1994.

*"What is occurring now with regard to nuclear testing is not very different from what has been happening in the disarmament field for years; the technologically more advanced nations reach a point where they can discard a certain weapon or weapon-related activity and then they move to ban that weapon or that activity for the rest of the world through a multilateral treaty."*¹ That the U.S. behavior is more consistent with its self interest rather than with genuine disarmament should come as no surprise. The French and Chinese nuclear weapons testing activity even as CTBT negotiations are proceeding likewise shows a strong concern with their respective national security interests. As such, it is incumbent on Indian policymakers to formulate India's CTBT option giving special attention to Indian national interest, both immediate and long term.

CTBT OPTIONS OVERVIEW

The specific CTBT options open to India are as follows:

1. Sign the CTBT as is
2. Sign the CTBT after time bound condition is met
3. Sign the CTBT with quid pro quo
4. Reject the CTBT and do not test
5. Test and then sign the CTBT
6. Reject the CTBT and Test

Each of the above options is taken up in detail in the next section, giving special attention to the following issues and questions.

1. What are the risks involved for India as well as benefits which might accrue ?
2. What are strategies India could utilize to maximize the benefits and minimize the risks ?
3. What are the implications of each CTBT option on India's national security options ?

DISCUSSION OF CTBT OPTIONS

OPTION ONE: Sign the CTBT As Is

The option of signing the CTBT without any conditions would be consistent with neither India's principle nor self interest. While at first glance, it would appear that it would serve India's long held stand of disarmament, without any commitment from the nuclear powers for eliminating nuclear weapons, it would at best amount to inhibiting prospects for vertical proliferation. Indeed, signing the CTBT as is would tend to perpetuate the unequal nuclear order, something which India has opposed in principle from the outset of the nuclear age.

Benefits of Option One

A major benefit that could be expected upon signing the CTBT would be the release of pressure on India by other states. Whether this will translate into anything tangible is doubtful given that existing embargo regimes may remain untouched. India could lay greater claim to leadership of future disarmament efforts by the developing countries once it gets on board the CTBT campaign. Currently, India is in a rather isolated position vis-à-vis other Third World countries on nonproliferation. Signing the CTBT would tend to strongly re-affirm India's commitment to disarmament and convincingly demonstrate that it has no hidden agenda. There is also the possibility that Pakistan's nuclear development will be restrained under a full CTBT regime. In

addition, the nuclear club's refinement and development of fourth generation weapons may be impeded. In general, the benefits for India are likely to be at the symbolic level.

Risks of Option One

If India adopts Option One, it will face a number of risks which could be expected to worsen over time without commensurate steps by nuclear weapon states to disarm in any meaningful way. The country's ability to deal with nuclear armed states will be weakened. India will be faced with increasing difficulty in handling China politically and militarily, particularly considering the economic dominance it is attempting to achieve in Asia. Given China's substantial military modernisation program which it is committed to, Indian investments in conventional defence will have to rise markedly in order to maintain adequate protection against a potential conventional threat. China's assertive military postures, demonstrated for example in the row over the Taiwan Straits in March 1996, would pose greater challenges for India.

Under this scenario, Pakistan will sign the CTBT as well and on face value, it would seem that its nuclear program is constrained. But India leaves itself exposed to possible transfer of nuclear technology and material to Pakistan from other states such as China which could be utilized to enhance Pakistan's nuclear weapon capability. Indeed, of the three generally recognised important threshold states which have not signed the Nuclear Non-proliferation Treaty (NPT) -- India, Pakistan and Israel -- the Indian nuclear program will be most hard pressed given that Israel can depend on the U.S. to a large extent for transfer of information. Existing verification measures of NPT have already proved to be ineffective in combating the danger of clandestine weapons capabilities development as revealed by the North Korean and Iraqi cases. Such a potential danger would continue even with a CTBT. Thus India might end up in a particularly precarious position.

As for the CTBT's power to constrain the nuclear weapon states' capabilities in the future, there is much evidence to suggest otherwise. Even as arms control is on the rise, U.S. weapon laboratories will remain intact. The next generation of directed energy weapons are those which are generated by nuclear explosion powered devices

which transform, select or direct their energy in a unique way. Such weapon systems research begun in 1985 (two years after Ronald Reagan's Star Wars speech) will give a considerable edge to American military in the future.² On August 11, 1995, President Clinton did concede to a zero yield CTBT despite previous efforts to retain the right to test at low threshold levels. At the same time, the President reserved the position of maintaining the American nuclear facilities and associated personnel.

President Clinton secured the future of the Department of Energy (DOE)'s three nuclear weapons laboratories in October 1995 by proclaiming all three key to maintaining reliable nuclear weapons under the current Test Ban Treaty. Clinton took this position as the DOE and the U.S. Congress were engaged in a struggle over the fate of of government's 27 laboratories in the ostensibly post-cold war budget cutting era. The three weapons laboratories, Lawrence Livermore, Sandia and Los Alamos, also escaped the recommendation made earlier by the DOE Commission that all nuclear weapons work be consolidated at Sandia.³

In addition, the U.S. position allows for so called subcritical tests. The subcritical tests do not achieve a self sustaining chain reaction like nuclear tests but they do involve high explosive and fissile material. The content of the fissile material is kept sufficiently low so that it does not become critical upon explosion of the surrounding chemical explosive. Such an exemption provides a capability to the U.S. for refinement of nuclear weapons, which is not open to other less technologically advanced states. The U.S. has announced plans to conduct six of these sub-critical tests, code named REBOUND in 1996 and 1997 at the Nevada test site.⁴ None of the planned tests utilizes a nuclear warhead but the Department of Energy has retained the possibility of carrying out "bomb configuration" tests in the future.⁵

In a similar fashion, the U.S. would be able to continue a form of nuclear testing using computer simulations which are not governed by the current CTBT version and once again are not within the capacity of others except the U.S. at this point time. There is a strong potential that just as the Partial Test Ban Treaty of 1963 which prohibited atmospheric testing drove testing underground, the CTBT will drive testing into the laboratories by those with the capability to do so. In the current CTBT negotiations, the U.S. position is that an interpretation that nuclear weapons "critical to (our) deterrence could no longer be certified without testing" would permit

withdrawal from the Treaty if the President in consultation with the U.S. Congress reached such a consensus.

If India accepts the CTBT as is, it will be perceived as being a “soft” state by the advanced powers with a strong likelihood that instead of rewarding Indian restraint, there will be increased steps to constrain its nuclear and related programs. The CTBT would then be the beginning of a series of measures designed to curtail Indian options and India could find itself on a hard to reverse slippery slope. Apart from external perceptions, this option could negatively affect the morale of the Indian armed forces.

Strategies to Optimize Option One

It is difficult to formulate strategies which will maximize benefits and minimize costs under this scenario. One move would be to recognise and accept that by signing the CTBT as is, India has dramatically changed its traditional policy on methods to achieve its disarmament objectives and as such could sign not just the CTBT, but the NPT as well. This way India would be sending a strong message regarding its adherence to existing non-proliferation regimes and could reap maximum benefits possible.

OPTION TWO: Sign the CTBT After Time Bound Condition is Met

This is the option that India has currently put forward at the ongoing Conference on Disarmament (CD) in Geneva. On January 25, 1996, Indian Ambassador Arundhati Ghose stated in the CD's plenary meeting that “we must be able to start negotiations on a time-bound program for the elimination of nuclear weapons.”⁶ India is seeking a modification of the language in the preamble to the treaty which would incorporate the time bound condition for disarmament. Ambassador Ghose framed India's proposal for a time bound CTBT in the historical context of India's position on the CTBT by noting the tight linkage it has made between non-proliferation and comprehensive disarmament. India's position is that particularly in the aftermath of the indefinite extension of NPT in May 1995, a CTBT which extracts no concrete commitment from the nuclear weapon states toward disarmament will amount to a

perpetual discriminatory international system, which is moreover legitimized by these same treaties.

Benefits of Option Two

The benefits of India signing a time bound CTBT are similar to those for signing the CTBT as is. India will be seen to have acted on its long declared principle. External pressures on India on non-proliferation will most likely ease as a result. Most importantly, India would have laid the groundwork for holding the nuclear powers to a "deadline" in moving toward disarmament and thereby set an important precedent for international negotiations. If this agreement is secured, disarmament on the part of the nuclear powers will be forced to shift from rhetoric to measurable action.

Risks of Option Two

The risks for India under this scenario are similar to those for Option One. If serious negotiations do begin on a time-bound CTBT an issue for India will relate to the question of how much "time" in the framework is acceptable. Once such a process starts, India will have to guard against securing a meaningless timetable which would be a pyrrhic victory at best. The nuclear weapon states may be expected to yield on a concrete time frame only if its horizon is a distant one. Even if the weapon powers concede a time-bound CTBT, the benefits are more illusory than real since the actual verification of total disarmament and its implementation will not be guaranteed nor easy. While it is possible to monitor the reduction of arms, this task becomes much more difficult when the number ostensibly reaches zero weapons. India would have to relinquish its testing option now for a future promise by the nuclear powers, which provides wider latitude for the latter. In general, disarmament linkage to non-proliferation moves has been a non-starter in the past and therefore, India is attempting to achieve an objective which prima facie has proven to be unworkable in international negotiations so far. India then runs the risk of being perceived as either unrealistic or worse, disingenuous and having an unstated hidden agenda.

Strategies to Optimize Option Two

In one sense, the utility of Option Two seems to lie mostly in it being an “exit strategy.” This strategy is a convenient one if India plans to refuse to sign the CTBT all along since there is practically no chance that the nuclear weapon states will accept the time bound condition. This is especially true after the indefinite extension of the NPT unconditionally in 1995 which has shifted the momentum and bargaining power decisively to the weapon powers who have little to fear in terms of opposition. The pendulum appears to have swung substantially away from disarmament to non-proliferation within a fairly short period of time.

Strategies associated with Option Two would have to take into account the need to have credible disarmament implementation yardsticks in order to monitor the actions of weapon powers. One strategy would be to link the CTBT's entry into force for India (and others if agreeable) with specific disarmament progress. Or conversely, India could propose revised language such that the time bound CTBT would be signed now, but only with the addition of an exit clause in the event disarmament is not proceeding within an agreed upon specified time.

OPTION THREE: Sign the CTBT with Quid Pro Quo

This option begins from the assumption that India should not give up its nuclear testing option without gaining something tangible in return. Unlike Israel and Pakistan, India has already tested a nuclear device and therefore, it would be tantamount to giving up an option it has already exercised. Indeed, apart from the nuclear weapon states, India is the only country in this peculiar situation. There are a variety of quid pro quo proposals Indian can make relating to both technical and political matters. A quid pro quo approach ironically may give rise to a more receptive west which tends to comprehend such realpolitik in contrast to principles. If recent American behaviour is any guide, its interaction with North Korea suggests that the nuclear issue is quite wide open to bargains being struck. (North Korea is receiving approximately \$5 billion worth of power reactors as a payoff for compromising on its nuclear programme).

Benefits of Option Three

One major area of possible benefits is the dismantling of the embargo regimes which operate against India. A number of leading edge technologies which are classified as dual use are off limits to India. With India's current liberalization and drive for global competitiveness, access to such technologies is highly desirable.

It should be pointed out that India's traditional stand of keeping the nuclear option and refraining from the NPT has not been without heavy costs. While a cumulative economy wide cost analysis is not available, some of the impacts on the nuclear sector can be identified to give a sense of the situation. For example, the global market price of natural uranium, the fuel for nuclear power reactors, has been low and available in plenty, but being a non-signatory to the NPT, access to this market is denied to India. This has resulted in India processing its very poor grade ore at a cost much higher than what prevails globally and exhausting its limited natural uranium resources.

To discourage France and China from continuing with further nuclear tests, the U.S. has offered to exchange information on nuclear tests and computer simulation data. A claim by India to a similar exchange of information with the U.S. can be made, and will be useful considering the fact that India is the only country that has tested a device apart from nuclear weapon states. In addition, in comparison to Pakistan and Israel, India cannot depend on transfer of such information from any nuclear power patron like the others.

Indigenisation of the type which has been forced on India rather than taken as the first preference is also instructive to look at. Development of cryogenic engines by the Indian Space Research Organisation (ISRO) is an example. While India has the capability to develop any sophisticated equipment, it should not be forgotten that such efforts have enormous cost and time impact which is unaffordable.

Apart from technology gains which may be bargained for, a political prize which may be extracted is a seat on the U.N. Security Council complete with veto power if possible. The enlargement of the Security Council seems inevitable, especially in the context of emerging power shifts in the world away from the western countries which occupy most of these seats. It would behoove India to be prominent in the line up for a larger membership.

Risks of Option Three

A quid pro quo agreement has the drawback that while it requires that India sign the CTBT immediately, the nuclear powers have to deliver on their promise only in the future. There is a certain asymmetry of obligation in this respect against India. As such, there is some risk that the nuclear weapon states or state may not live up to their commitments or honor the quid pro quo agreement once India has signed the Treaty. Most importantly, since India remains outside the NPT, its restrictions pertaining to nuclear related technology transfers without fullscope safeguards may be expected to pose a difficult problem for both sides in bargaining towards an acceptable agreement of quid pro quo.

Whatever the specific package might turn out to be, one consideration to keep in mind is the fact that while it will save costs of “indigenisation” of dual use technology, it will also result in some reduction of India’s long held goal of self reliance in vital sectors. In a related vein, any quid pro quo proposal runs the risk of being disproportionate from Indian view point. Thus it is important to reconcile the question of how much the “testing option” is worth to India so as to avoid possibly undervaluing it in the bargain being fashioned.

Strategies to Optimize Option Three

If serious quid pro quo negotiations are to take place, it would be in India’s interest to hold out the maximum time possible for maximum gains. This is especially so given the relatively short time left for completing the CTBT negotiations. India could begin with a “wish list” which it should be willing to pare down as the bargaining proceeds. Any final arrangement should include western milestones which have to be met before India ratifies the Treaty. This will safeguard India against the nuclear weapon states not delivering on their promises.

OPTION FOUR: Reject the CTBT and Do Not Test

Three variations on this Option may be differentiated. The first would be to reject the CTBT on principle; the second would be to withdraw from the CTBT with stated reasons; and the third would be to stay in the Conference on Disarmament until the

end of the round registering India's dissatisfaction, contributing to the drafting of Treaty language but opting not to sign the CTBT as it stands. It has been put forward in some quarters that India should withdraw from the CD citing "material" changes since the negotiations on the CTBT began in 1993. These include the indefinite extension of the NPT without any disarmament commitments; a breach of the NPT in the form of nuclear technology transfer by nuclear weapon states; as well as the latter's argument before the World Court regarding their right to possess and use nuclear weapons. Under all three variations, India would continue to retain its nuclear option but without exercising its option in the form of nuclear testing or weaponization. As such, Option Four amounts to a continuation of the status quo and would mirror India's position on the NPT.

Benefits of Option Four

This option has the benefit of consistency with India's past declared policies. It underlines India's commitment to constructing non-discriminatory international regimes and emphasizes its tenacity despite the fragmentation of the non-aligned movement on this issue. It also shows that while India will not compromise on disarmament, it will abide by the principled position of not climbing up the nuclear ladder any further than it already has -- hence the decision against testing. In light of its threshold status and the generally accepted nuclear weapons capability, India will be able to maintain its nuclear deterrent image, at least in the form of what has been referred to as non-weaponised or recessed deterrence. In defying the international trend towards signing the CTBT specifically or more generally the American-led non-proliferation drive since the end of the cold war, India could be perceived as shoring up its deterrence with strong symbolic power even without tangible action to follow.

Theoretically at least India would retain its bargaining power for quid pro quo negotiations which may be taken up at a later date. India's political will in not conceding to a much trumpeted CTBT is likely to demonstrate its resolve in the nuclear field and therefore, buy greater currency for its bargaining position in future negotiations. One other benefit of this option is that India avoids being subjected to intrusive measures which are likely to be applied in a discriminatory fashion.

Risks of Option Four

Rejecting the CTBT outright at this stage or withdrawing from the CD with stated reasons or participating in the CD until the end without intent to sign are progressively softer versions of the same option. Despite the nuances of difference between them, any of these courses of action could well be perceived as being simply obstructionist. Withdrawing may be equated with rejection and thus the option of “walking out” of the negotiations at this stage as a more cooperative gesture may not be viewed with any greater equanimity by the nuclear weapon powers.

An Indian posture of rejection would likely lead to immediate condemnation and raise the ire of the nuclear states. The option of continuing to talk but refusing to sign, will bring ill will as well. This negative reaction will be multiplied if it is accompanied by Indian action to confound a consensus vote under which the CD is operating now. India will be perceived as a “spoiler” which may lead to an even more negative image of India than if it had just rejected the CTBT or withdrawn before the CD reached the voting stage.

In terms of future bargaining position, India’s power can be expected to dissipate quite dramatically after the CTBT is signed and internationally accepted. Thus the potential retention of power for quid pro quo bargaining should not be overestimated. Similarly, while not signing the CTBT keeps open India’s nuclear weapon option, a perception that interminably keeping an option “open” is tantamount to indecision could be costly. This detracts from the positive nuclear deterrent image India is trying to cultivate at the same time. Moreover, as the international norm against nuclear weaponization becomes stronger through measures such as the indefinitely extended NPT and CTBT, India’s position becomes weaker as time passes.

Strategies to Optimize Option Four

A strategy of dual track diplomacy by which India maintains its deterrent posture, but also participates in the non-proliferation dialogue at the CD in good faith might alleviate the repercussions of rejection of the CTBT. Staying in the CD allows the opportunity for India to make its position heard and quite possibly even appreciated.

This would avoid the perception of India as a challenger to the formation of new non-proliferation regimes.

If the option of withdrawing from the CTBT negotiations is taken, it needs to be staged with care and without acrimony. Rather than effecting a precipitous political break, it should be done within the framework of legal principles thereby softening the character of India's action as well as probable external reactions. India could point to so-called "material changes" in the international situation justifying a shift in India's past pro-CTBT stand. These include the indefinite extension of the NPT and its lack of disarmament teeth; the nuclear powers' argument regarding the right to use of nuclear weapons before the International Court of Justice; and an ostensible breach of the NPT by a nuclear weapon signatory. This last point referring to China's co-operation with Pakistan in providing ring magnets is particularly relevant for Indian security. With the attendant lack of response by the other nuclear weapon states, it could be argued that circumstances are forcing India to take this unilateral step of withdrawing from the CD in the interest of its national security.

A stronger strategy on India's part would be to hold out the threat of conducting further nuclear tests in order to extract concessions or hammer out a quid pro quo agreement. This would be premised on the assumption that opting out of the CTBT is bound to create tensions with the nuclear powers anyway, and thus it would be sensible to go one step further and up the ante. Otherwise, simply staying out of the process without exercising its testing option, may mitigate negative effects only marginally.

OPTION FIVE: Test and Then Sign the CTBT

The option of conducting one or more nuclear tests with the accompanying proviso that the CTBT will be signed and adhered to subsequently, attempts to respond to both principle and pragmatism. On the face of it, it might seem that Option Four which envisages India abstaining from the CTBT preserves greater freedom of action for India, but one critical question to consider is whether India will have the political will to actually carry out any stronger measures once a CTBT comes into force internationally, even though the country theoretically has reserved the right to do so. If

India has refrained from testing in a world without CTBT, it would be well worth considering how much more difficulty there would be to test in a world with CTBT. Of all the options considered in this report, Option Five and Six are likely to bring about the greatest costs in the immediate term in light of international reaction. One issue to keep in mind in this connection is the tradeoff to be made between short term costs versus probable long term benefits.

Benefits of Option Five

It may be assumed that nuclear testing as such has deterrence value, even without the development of nuclear weapons. Testing by India can be expected to increase strategic credibility which is the cornerstone of deterrence thinking. It is not clear what India has lost or gained with its restraint of not testing for 22 years in terms of its strategic image. Testing is bound to give a refurbished image for India. Testing provides deterrence value in two ways: it increases the country's technical proficiency and reliability; and it demonstrates resolve and political will. Thus deterrence is boosted at both political and technical levels.

This option would send a message to the U.S. and others of concern that external pressure will not work anymore. At the same time, it promotes a pro-active perception of India and removes a perception of India as being obstructionist and "preachy" without any teeth. It should also give rise to a certain grudging respect for India. In addition, it would begin to correct certain existing asymmetries against India. In Indo-U.S. relations, there has been no commensurate rewards for Indian restraint in testing and weaponization for 22 years, and rather has left India with the costs of technology denials and pressures against missile development. In the group of countries including India, Israel and Pakistan, arguably it is only India which requires its own testing for information given the relationship of the latter two to the U.S. and China respectively. This option would also correct an unstated bias against India vis-à-vis these other two countries. Israel and Pakistan have never tested a nuclear device (at least openly and on the record) so they would be pursuing a status quo condition with the CTBT whereas India has already crossed the testing line and would have to accept a status quo ante. Thus in one sense, India is being asked to forgo more than the others.

Another possible benefit of Option Five is that an Indian test would either call Pakistan's "bluff" or confirm its capability since it has declared that it would follow suit. Since there is genuine conflict of opinion regarding the exact nature of Pakistan's nuclear capability in this country, a positive side effect for India would be gaining greater information regarding its neighbour.

Risks of Option Five

Implementing Option Five would heavily damage India's traditionally held principle of abjuring the nuclear route. But if coupled with a strong commitment to adhere to the CTBT, it should mitigate India's seemingly inconsistent behaviour. This should also soften external pressures or sanctions since it would become more important than ever for the proponents of CTBT to get India on board. It would be disastrous from their point of view to have the most important threshold state test and then become so isolated that it amounts to flagrant flouting of the CTBT just as the Treaty is getting off the ground. But India will no doubt at minimum feel the pain of diplomatic and political isolation. It is also quite likely that it will face sanctions from key international players and given the importance of such action, it is worth discussing such repercussions at some length.

Sanctions on India may be bilateral or multilateral. If we consider the role of the most important player, the U.S. it is possible to gain some insight into its potential reaction by observing its behaviour in the wake of purported Indian preparations for nuclear testing in late 1995. According to the U.S. State Department, a 1994 law known as the Glenn Amendment requires the U.S. to suspend economic and military aid as well as loans and export licenses to any country besides the five declared nuclear powers that tests a nuclear weapon. Under this, the U.S. would oppose loans from the World Bank and other multilateral lending agencies. Regarding warnings by the U.S. to India in 1995, however, the State Department refused to confirm that the U.S. Ambassador to India Frank Wisner had warned India that any nuclear test would in fact activate the Glenn Amendment.⁷

The impact of any type of outside sanction depends on the extent of India's external dependence and vulnerabilities. To get a full picture, this dependency has to be juxtaposed against Indian strengths vis-à-vis external powers as well.

Indian Vulnerabilities

There are several areas in which India may suffer if subject to sanctions. These include: external aid, external debt, trade balances and vital commodity imports (e.g. oil and fertilizers.) Data for the following discussion may be found in the Appendix.

External Aid

The first step of international sanctions is likely to be bilateral aid, over which each country has the greatest control. For India, the U.S. is the most important, with Russia and Japan making up the top three donors. (See Table 1 in the Appendix). If we take the countries providing substantial aid (for e.g. over Rs.1000 crore), six countries fall into this group – U.S., Russia, Japan, Germany, France and U.K. in order of the level of assistance. Together they provide about 44% of India's aid. Countries most likely to follow U.S. cut-off of aid on the nuclear issue are the U.K., Germany and Japan, which would account for one half of aid from the key six donors identified above.

The most important single source of aid for India is the World Bank which makes up nearly 54% of total assistance. Out of this, 60% of funding is received from the World Bank's soft loan window or the International Development Association which disburses funds with little or no interest. Thus between the six top donor countries and the World Bank, India receives up to 98% of its aid. Given the advantageous position of the U.S. within the World Bank's weighted voting structure and its political influence, World Bank behavior can be expected to mirror that of the U.S. It is likely given past experience that the U.S. will find it easier to block World Bank funds than to coordinate an international aid cut-off by other donors in their bilateral commitments to India.

India's Debt

Another dimension of vulnerability is the Indian debt position. (See Tables 2 and 3 in the Appendix). If the debt and debt service indicators for India and other major developing countries are taken into account, India's indicators compare favourably with others and show that India does not stand out as particularly vulnerable, though that in itself is not necessarily re-assuring when sanctions against

India alone are considered. India has a relatively higher grant element in its external debt implying that the present value of the debt is much lower than the nominal value of the debt. This is in sharp contrast to other developing countries for which there is very little change in the ratio regardless of whether present value or nominal figures are used.

India has a massive debt burden of nearly \$ 100 billion. Going by the absolute size of India's debt, the country is the third highest debtor among the developing countries with only Brazil and Mexico surpassing it. But experts note that the real cause for worry should be the debt service burden (i.e., interest and repayments liability).

India's debt service payments as a percentage of exports of goods and services improved from 35.25% in 1990-91 to 26.65% in 1994-95, but remains high by international standards. One positive feature of the debt burden is that the maturity composition of the debt portfolio has changed substantially over the last few years. Since the 1991 crisis, longer term maturity loans have been encouraged and short term ones weeded out. Currently, short term loans are as low as 4.31% of the total debt. Short term loans had a peak share of 10.20% in 1991. This shift gives India some relief in repayments which would thereby buy time in case of short run sanctions. India's external debt management has led to a sharp deceleration in the rate of growth of debt from 10.5% (excluding the increase in debt in U.S. dollar terms due to exchange rate fluctuations) in 1994-95. During the first six months of 1995-96, external debt in U.S. dollar terms declined by approximately 5% relative to the level in March 1995.

Apart from the value of debt, the debt service ratio has shown secular improvement. After registering a decline in the dollar value of exports in 1991-92, India has experienced an upswing of 3.8% growth rate in 1993-94, 18.4% in 1994-95 and 24.2% during April-December of 1995-96. As a result, the coverage of import payments through export earnings (one measure of autonomy) has improved. The ratio of exports to imports which had averaged 52% at the beginning of the 1980's and slightly over 60% in the latter half of the 1980s, has been averaging nearly 90% since 1992-93. However, during 1995-96, there has been an upsurge in imports by 29%, though the export-import ratio is expected to be close to 85%. Favourable trends in

invisible transactions have contributed to India's current account deficit in the balance of payments declining from an unsustainable peak of 3.2% of GDP in 1990-91 to a projected 1.5% of GDP in 1995-96 year.⁸

India's foreign currency reserves which faced a crisis in 1991, with an equivalent of hardly a fortnight's expenditure on imports have substantially increased. By January 31, 1996 reserves stood at US \$16 billion equivalent to approximately five months of import coverage. This is a critical factor in assessing India's ability to withstand external sanctions. It should be noted however that at the end of December 1995, all the major developing countries, barring Indonesia with a foreign exchange reserve of US \$ 13.3 billion, were holding far greater reserves than India.

Potential Indian Strengths

The post 1991 liberalization move is having two rather contradictory results in terms of external vulnerability -- on the one hand, increasing integration into the global trading and financial system makes India more vulnerable to shocks to its balance of payments and debt position. On the other hand, foreign direct investment (FDI) provides India with some bargaining power as a counterbalance. Those foreign companies which are doing business in India or are contemplating such, may be counted on to act as a lobby for India in their respective countries. Transnational corporations tend to be among the most well heeled and politically influential of the domestic interest groups, especially in the U.S. Since they tend to be large conglomerates and concentrated in number, their interest in keeping an open and sanction free international economic order tends to be reflected in U.S. government policy, whether under Democratic or Republican regimes. Most recently, this has become abundantly clear in the intervention of American businesses against withholding most favoured nation trade status for China which is being considered by the Clinton administration. Host countries for foreign direct investors tend to increase their leverage over the MNCs in proportion to the commitment of the latter's resources into the country, especially if it is in the form of plant and equipment (immovable property). Once the MNC is established in this way, a very high priority is to maintain a reliable and stable politico-economic relationship with the host country in which the funds are tied up.

FDI doubled from US \$ 620 million in 1993-94 to US \$ 1.31 billion in 1994-95. During April-November 1995, it grew by 110% over the corresponding period in 1994-95. The Indian government's declared policy is to allow FDI mostly in priority areas like power, oil refining, electronics and electronic equipments, chemicals, telecommunications, industrial machinery and food processing. Many of them are expected to have export linkages. Of external investors, non-resident Indian (NRI) comprises the largest block of funds so approved by the Government of India. Among individual countries, the U.S. remains the largest investor by far. (See Table 4 in the Appendix).

The U.S. accounted for 34.2% of the total top 14 investors (i.e. with Rs.10,000 million or more) or 36.5% when NRI investment is excluded. Current evidence suggests that the critical role of the U.S. will continue. Some of the biggest western corporations have already set up base in India.

The following table gives a sense of who these corporations are and what their areas of business are.

TABLE 5 - MULTINATIONAL COMPANIES IN INDIA

<i>Civil aviation</i>	<i>Oil, natural gas and lubricants</i>	<i>Auto</i>
Lufthansa Malaysian Airlines	Mobil Caltex Shell Elf Total Pennzoil Motoroil	General Motors Peugeot Chrysler Daewoo Ford Motor Company Daimler Benz
<i>Consumer durables</i>	<i>Telecommunications</i>	<i>Consumer products</i>
Whirlpool Electrolux Sony Sanyo Braun Philips	Alcatel Motorola Siemens Sprint AT&T Ericsson	Pepsi Coca-Cola Heinz Kellogg's Revlon Wrigley's

Despite negative publicity India received over the Kentucky Fried Chicken and Enron episodes, foreign investment continued to flow in. From the foreign investors' point of view, both cases had reasonably satisfactory endings. Enron's power project was renegotiated after the company agreed to reduce costs from 2.8 billion dollars to 2.5 billion and is now back on stream. In the other case, an Indian High Court ordered the re-opening of the KFC restaurant, and Pepsi Foods, KFC's parent company, is going ahead with its plans to invest \$ 1 million in Indian soft drinks and foods over the next five years. In fact, these controversies have demonstrated that foreign investors have legal recourse against arbitrary political action, something not available for example in a competitor for FDI, China. It is believed that once India publishes clear rules for FDI in infrastructure (which it has not yet done), the money will come easily.⁹

The importance accorded to India by the U.S. may be gleaned from the fact that since the late U.S. Commerce Secretary, Ron Brown visited India in January 1995, nearly 7 billion dollars worth of contracts and memoranda of understanding reached during his visit have been realized until now. Recently, Assistant Secretary of Commerce, Raymond Vickery, Jr, testified before the U.S. Congress that the deals struck during the visit were "a record of any presidential business mission and indicative of the enormous potential of the Indian market." He stated that the mission was part of a broader effort to begin a dialogue providing "new momentum to building commercial ties, addressing impediments to trade and investment, and paving the way for job creating opportunities in the United States."¹⁰ Toward this end, the U.S.-India Commercial Alliance was established.

As a point of FDI comparison, it can be noted that the flow of external capital to China remains massive compared to India. For every \$1 million of FDI inflow to India, China received \$94.5 million (1993 figures). This is in large part due to the fact that China has no restrictions on export oriented investment, especially in "special economic zones."¹¹ This also attests to the tremendous appetite of foreign investors and that they most likely view current FDI in India as only the tip of the iceberg. Under such conditions, there is a low likelihood that the U.S. government would precipitate action against India which would hurt its business

interests in the medium to long term. At the most, it would countenance such for the very short run. Thus the presence of MNCs in India in a big way since 1991 and the lure of future prospects for them should give India a certain amount of confidence when contemplating any sort of bold action on the nuclear front.

Strategies to Maximise Option Five

If this Option is taken, the main objective will be to mute the inevitable negative reaction from outside. Given the critical role of the U.S., it is most important to focus attention on Indo-U.S. relations. In opting to test, proper groundwork has to be laid regarding its timing, sequence and nature of test. Chances are practically zero that India could carry out a clandestine test and therefore, like the established nuclear powers, it could simply announce its intention to engage in testing (as close to actual testing date as possible). India could first announce a series of tests greater than what is required or desirable and then as external pressure mounts, unilaterally reduce the number. This would follow the classic example set by France to mitigate pressure.

Timing could also be played to India's advantage by testing during a "window of opportunity." For example, if it is assumed that the U.S. does not want to alienate two giant Asian markets simultaneously, India could act when the U.S. is already pre-occupied with China. Two examples of such "windows" would be the March 1996 Taiwan straits crisis and the June 1996 debate in the U.S. over MFN status for China.

India would have to decide what kind of test best serves its security interests. Additional fission bomb testing without it being designed with the ultimate purpose of coupling with a thermo-nuclear part will bring only marginal political, technical and strategic advantage. Testing of a hydrogen device would provide much greater advantage in all aspects. A limited number of tests of these types would be in keeping with India's past penchant for "technology demonstrators."

Moreover, a few tests in conjunction with the offer to sign the CTBT would more quickly close off opportunity for concerted external reaction. India could buy time by signing the CTBT but not ratifying the Treaty until the Indian testing is deemed complete. This would follow the Chinese example.

Indeed, the China-U.S. relations offer a model that India can emulate to its advantage, now or later. China has ensured that the cost of sanctions by the U.S. is a two-way street not to be borne only by China. This is analogous to the adage regarding a debtor country/creditor country relationship which says that if a country owes international banks \$10 billion and defaults, the country is in trouble, but if a country owes \$100 billion and defaults, the banks are in trouble. (Apart from its analogy here, India can take some comfort from its actual high level of external debt under this logic).

China has also successfully divided and played off industrial powers against each other with strong economic and military incentive packages such that the Chinese can rest assured that coordinated sanctions against it are highly unlikely. The April 1996 trip to France by Chinese premier Li Peng and the ensuing drama over human rights admonitions versus correct political behavior on the part of the French hosts holds a valuable lesson for India on diplomacy. The Chinese refused to attend the Prime Minister's banquet unless offending references to China's human rights record were removed from his speech and in turn got what they wanted. In doing so, China has made it clear that they will not tolerate being chastised by those who want to benefit from the Chinese market. As the U.S. considers whether to sanction China over clandestine nuclear technology transfer, China is signing an agreement with France to buy \$1.5 billion worth of airbus A-320 aircraft. This is a warning that China will distribute its favors on the basis of reciprocity, not merely in the economic sphere, but as quid pro quo for political and strategic objectives. Moreover, the Chinese announced their intention to buy Boeing aircraft worth \$2 billion while in the middle of arguments with the U.S. on human and intellectual property rights. In the process, they obtained the influential Boeing Company as a lobbyist for them.

In Indo-U.S relations, rather than looking at the aggregate numbers relating to trade and investment which are not high by international standards, foreign policy should be to target large and important American economic players and/or specific economic sectors and bring them into a position which is effectively one of “strategic alliance” with India. Especially in an election year such as this one, President Clinton cannot afford to exact a domestic cost for his foreign security policy. American polls in the post-cold war period show that international security matters have receded dramatically in importance, with the number one concern becoming the domestic economy and jobs.

Should India choose Option Five, Clinton is likely to come under pressure from the U.S. Congress to act against India, in large part for political partisan reasons. In preparing to counteract that pressure, India needs to tap into the way American domestic politics is played. An “iron triangle” model of politics operates for Congress wherein Congressional members occupying key committee chairmanships are allied with powerful lobby groups who in turn represent particular industrial sectors. If the concerned Senators and Representatives happen to be from important states then the importance of this nexus is multiplied.

A strategy with high payoffs would be to identify so-called iron triangles which satisfy the following conditions and then to provide incentives for them to be supportive of India:

- powerful corporate lobby
- industry location in key states (i.e. large population and high number of electoral college members who actually elect the American President)
- allied with important Senators and Representatives

Two sectors which meet all these conditions in the U.S. are the defence industry (California based) and the power industry (Texas based). Self consciously creating linkages through diversifying India’s arms purchases and attracting FDI in the power sector respectively could be a strategy to be utilised. Even the prospects of future profits for these sectors should give pause for severe sanctions.

As such, India could with great fanfare host a high level meeting between an Indian delegation and American defense companies, which are in particularly dire straits since the decline of the U.S.-Russian arms race. Many frontline weapons in American companies now remain open for business only to export abroad. Examples include F-15 and F-16 aircraft, Apache attack helicopter and M-1A2 tanks. The bottom line would be the creation of an Indian incentive package, perhaps as part of broader liberalisation efforts, which would be hard to resist.

Of course, the most straightforward strategy for India would be to simply absorb the pain of sanctions. This again would require a great deal of political will on the part of Indian leadership. One factor favouring this is that according to public opinion polls in India, a majority seem to be in favor of testing and even exercising India's nuclear option, even if it means strong retaliation. This sense of nationalism may be expected to tide over the short run costs without political effects on the ruling party. If anything, political effects should be positive.

OPTION SIX: Reject the CTBT and Test

This is one of the strongest steps that India can take at this juncture and the one with the most serious repercussions. This Option can be taken one step further with India declaring itself a nuclear weapon state along with the testing. The logic for this is that since a non-CTBT posture and testing is likely to bring enormous costs, it may make sense to suffer the marginal additional costs and use the opportunity to exercise the nuclear option. A benefit of this Option is that India avoids intrusive measures which are likely to be discriminatory.

Option Six shares many similarities with Option Five in terms of risks as well as the type of strategies for India to employ and thus merits only a brief discussion. In terms of additional strategies, India could launch a public relations campaign emphasizing its democratic tradition in an effort to forestall any attempt at labelling it a "rogue" state.

Option Six with weaponization could bring a number of benefits over and above what may be gained from testing alone. First of all, it would enhance strategic

credibility against China while the deterrent effect of tests alone are not entirely clear. India would gain entry into the nuclear club at least de facto, if not de jure in the short run. No country has become a nuclear declared state after the official cutoff year of 1967 for nuclear weapon status, but one mitigating factor for India is that it remains the only one to test a nuclear device openly after 1967. As such, it has already crossed the line and broken the code of conduct once in 1974 without unsustainable repercussions. As a weaponised country, India could engage China in nuclear arms talks which could be critical to India's security. At the moment, China is willing to discuss its own nuclear weapons only with other nuclear weapon states. In terms of defence costs, nuclear weapons based security could be less expensive than conventional arms.

Finally at the symbolic level, India would no longer be seen by many as having a hypocritical or sanctimonious and holier than thou attitude about disarmament. Such an external perception of India is fueled by India's 1974 test, stockpile of fissile material, its missile development and the long held nuclear option.

CTBT OPTIONS AND INDIA'S FUTURE SECURITY OPTIONS

A key disjuncture between Indian security perceptions and external perceptions of India's strategic situation has been the tendency of others to draw the security perimeter in Indo-Pakistani terms and for India to draw it wider to include China. Yet if one looks at Indian behavior, it would not be surprising to come to the externally held conclusion given the pre-occupation with Pakistan and the deployment of Indian military power. The CTBT may be seen as a sort of litmus test for India in that the type of option selected will send a strong signal regarding both its threat perceptions and intended security preparedness in the future.

In thinking about India's security vis-a-vis China, it is instructive to consider U.S. Defence Secretary William Perry's "First Annual Report to the President and Congress" in March 1995. In it, he listed three rationales for continuing to hold nuclear weapons:

1. Uncertainty regarding Russia

2. Potentially hostile countries could obtain long range delivery capability of nuclear weapons.
3. China's growth in military and economic terms in the next decade

The third reason was a new one which his predecessor had not cited. This increasing concern is related to the fact that within the next ten years, China will be a formidable power. Indian relations with China have been clearly on the upswing. However, one important question for Indian defence planners is whether to chart India's future long term security based on the intentions or capabilities of potential adversaries.

Note: This Report is based on the views expressed by the experts who participated in a Workshop held at NIAS and does not necessarily reflect the views of NIAS. NIAS acknowledges with thanks the support received from the Rockefeller Foundation for the International and Strategic Studies Program.

APPENDIX

TABLE 1 - EXTERNAL AID TO INDIA AS ON MARCH 1994

Sl.No	Source	Commitment up to 31.3.94 at IMF Rate (Rs. in Crores)
1	I.D.A	15916.05
2	World Bank	10238.03
3	I.F.A.D	200.18
4	Abudhabi Fund	12.18
5	Austria	50.93
6	Bahrain	10.60
7	Bulgaria	--
8	Belgium	78.90
9	Canada	641.66
10	Denmark	121.36
11	France	1549.16
12	Hungary	162.26
13	I.M.F Trust	571.33
14	Iraq	137.06
15	Italy	207.55
16	Japan	2851.25
17	Kuwait Fund	192.86
18	Netherlands	541.97
19	O.P.E.C.	142.35
20	Poland	36.64
21	Qatar	12.88
22	Saudi Fund	128.03
23	Sweden	217.33
24	Switzerland	57.24
25	U.A.E	52.50
26	United Kingdom	1339.35
27	U.S.A	3861.02
28	Yugoslavia	26.70
29	Germany	2392.74
30	Rep. of Czech & Slovak	156.99
31	Iran	846.33
32	I.S.O.	4.28
33	Romania	5.33
34	E.E.C (S.A.C)	54.60
35	Asian Development Bank	2319.28
36	Australia	9.82
37	Spain	34.50
38	Russian Federation	2972.54

	Total	48154.50

Source: Ministry of Finance, Government of India

TABLE 2 - EXTERNAL DEBT AND DEBT INDICATORS, 1993
INTERNATIONAL COMPARISON

(US \$ Billion)

Country	Total (EDT)	EDT /GNP (%)	PV of Debt US \$ Bn.	PV/ GNP (%)	PV/ XGS (%)	TDS/ XGS (%)	Concessional EDT (%)
India	92.68	36.3	60.52	24.6	183.0	25.1	46.7
Argentina	74.47	29.6	72.08	28.6	431.9	47.6	0.7
Brazil	132.75	24.0	130.08	23.5	295.8	24.4	1.9
China	83.80	21.4	76.59	19.6	81.3	10.7	16.1
Indonesia	89.50	65.9	81.50	60.0	199.7	32.7	27.9
S.Korea	47.20	14.4	45.86	14.0	46.2	9.2	10.0
Malaysia	23.34	37.8	22.70	36.7	42.6	7.9	12.3
Mexico	118.03	35.5	116.46	35.0	182.1	32.7	1.2
Philippines	35.27	63.7	33.23	60.0	173.0	24.9	29.5
Thailand	45.82	37.7	44.70	36.7	91.0	18.6	13.0
Turkey	67.86	55.3	63.74	52.0	209.9	28.3	10.3

EDT = External Debt Total TDS = Total Debt Service Payments
PV = Present Value of Debt XGS = Export of Goods and Services

TABLE 3 - DEBT SERVICE PAYMENT

(US \$ Million)

	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95
1 External Assistance	2214	2315	2447	2541	3024	3202
Repayments	1193	1187	1329	1443	1618	1817
Interest payments	1021	1128	1118	1098	1406	1385
2 External Commercial						
borrowing	2244	3514	2830	2707	3232	4273
Repayments	1158	2004	1677	1525	1978	2795
Interest payments	1086	1410	1153	1182	1254	1478
3 IMF	1043	778	697	614	387	1368
Repayments	874	644	459	335	134	1146
Interest payments	169	134	238	279	253	222
4 NRI Deposits						
Interest payments	936	1282	1036	918	905	1045
5 Rupee Debt						
Service	983	1193	1240	878	745	1050
Total Debt service	7420	8982	8250	7658	8293	10938
Repayments	4208	5028	4705	4131	4475	6808
Interest payments	3122	3954	3545	3477	3818	4130
As percent of						
current receipts	30.90	35.25	30.21	28.63	25.07	26.65

Source: Compiled from data provided in World Debt Tables, 1994-95,
The World Bank.

TABLE 4 - MAJOR FOREIGN DIRECT INVESTMENT APPROVED BY INDIA, 1991-1995
(Rs. in Million)

Source	1991	1992	1993	1994	1995	Total 1991-1995
NRI	197.0	4391.3	10433.2	4908.8	6922.7	26853.0
U.S.A	1858.5	12315.0	34618.5	34880.9	63430.7	147103.9
Israel	-	12.7	14.6	85.2	41295.6	41408.1
U.K.	321.0	1176.7	6227.3	12991.5	17090.1	37806.6
Japan	527.1	6102.3	2574.3	4009.0	14992.5	28205.2
Mauritius	-	-	1242.4	5347.4	17545.4	24135.2
Thailand	-	25.2	3684.2	99.8	19680.9	23490.1
Germany	418.0	862.7	1759.3	5693.6	12087.1	20820.7
Netherlands	559.2	967.9	3216.5	2069.6	9471.7	16284.9
Switzerland	355.0	6897.6	4268.0	483.0	2050.0	14053.6
Italy	178.1	893.9	1173.5	3909.4	4144.2	10299.1
Singapur	13.7	602.1	667.4	2655.0	9556.2	13494.4
Australia	26.1	776.2	295.6	3884.5	7661.6	12644.0
Malaysia	1.8	744.3	84.8	252.2	11440.6	12523.7

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