

ORF OCCASIONAL PAPER #13
JANUARY 2010



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Wake Up Call For India**

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About the Author

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Abstract

US President Barak Obama's Prague speech in April 2009 on his vision of a nuclear weapon free world has established a new narrative for the nuclear disarmament discourse. While few doubt Obama's own sincerity, there is a widespread concern that, on the road ahead, the traditional nuclear establishment in Washington and elsewhere—with their nonproliferation agenda and aversion to abolition of nuclear weapons—may subvert the process. India stands at the crossroads in its engagement with the international community on nuclear issues. It has recently come in from the cold after having been excluded from interactions on this issue with the international community for over thirty years. India can now set behind it the ghosts of the past and situate itself in the mainstream. Alternatively, it could pursue a contrarian path involving a state of confrontation and tension with international mainstream thinking, in the process absorbing collateral damage in areas where international cooperation is essential for India's development. Over the next year or two, it will have to make a number of clear headed choices based on the principles of nuclear deterrence and the ambiguities and uncertainties involved in the application of these principles for optimizing Indian national security in a nuclear world. The implications over time of making any wrong choices now would be costly. The paper tries to analyse these issues. The conclusion that emerges is that promoting the concerted international movement towards minimum deterrence, supporting measures such as No First Use agreements, as also political and international legal norms to devalue and delegitimize the role of nuclear weapons would, at this juncture, be the best way for genuinely supporting the objective of a nuclear weapon free world, as well as for assuring the security of the nation.

India's record of nuclear diplomacy

India's international engagement on nuclear issues over the last half century is a story of misjudgments and mistiming. The scientists and engineers who shaped, built and nurtured the Indian nuclear programme, overcoming the long and determined external attempts to stifle it, have certainly done India proud. But the culture of excessive secrecy they fostered in their establishment and the oversized egos of some of their leaders have not always been conducive for the quality and objectivity of Indian nuclear decision making. It has also resulted in their undue and opaque exercise of influence in areas well beyond their scientific and technological writ, and in the shielding of major errors from objective scrutiny and accountability.

Obama's apparent embrace of the vision of a nuclear weapon free world has set off a chain of rapid developments in the field of nonproliferation and disarmament. A clear sighted approach at this stage, combining hard headed analysis with principle, is necessary to ensure that we do not again veer off the highway.

Having set up reactors and separated plutonium well before China, India led the charge for nuclear disarmament and campaigned for a nuclear nonproliferation treaty with this objective in mind. But when the NPT was eventually adopted in 1968, the five countries which had already conducted nuclear tests constituted themselves as the elite club and India, which had held back, became a nuclear outcaste.

We described our 1974 nuclear test disingenuously as a peaceful nuclear explosion (PNE), then took a long break from further consolidation and development of this capacity, as a high wall of material and technology denial was built up around us. We resumed work only in the 1980s, after seeing Pakistan rapidly moving ahead, incurring high costs and delays that could have been avoided if there had not been a break in the momentum.

We had a narrow shave 10 years ago, when an agreement was almost reached on a Fissile Material Cut-off Treaty (FMCT) at a time when our own plutonium stocks were not sufficient to support even a modest weapons programme. Pakistan clandestinely tested a bomb, for which both the test site and the blue print were Chinese. Finding ourselves backed into a corner by the Comprehensive Test Ban Treaty (CTBT), which would have permanently stopped us from testing, we finally declared ourselves a nuclear weapons state with the 1998 tests.

To dilute international outrage, India simultaneously declared a voluntary moratorium on further nuclear tests. The price we had to pay for the otherwise favourable India-US nuclear deal in 2005 was the reiteration of the moratorium in a bilateral agreement and a commitment to help to conclude the FMCT successfully. Now, however, there is talk of a “fizzle” of the thermonuclear test in 1998, requiring us to test again if we want to get fusion right.

India has consistently been in the forefront of the disarmament movement. The Rajiv Gandhi Action Plan for Nuclear Disarmament proposed by India in 1988—a decade before it weaponised—did not find acceptance among the nuclear weapon states and their allies, since Dr. Strangelove thinking still dominated their psyche. And yet, even today, the Plan remains contemporary, and provides an ideal conceptual methodology for achieving Obama's vision. Our declared doctrine of minimum deterrence and No First Use after weaponisation in 1998 has implicitly continued to indicate a readiness and preference for abolishing nuclear weapons.

But India now seems to be marching to a different drummer. An Indian Army chief has suggested that India's No First Use (NFU) policy, integral to its nuclear doctrine, may need to be reconsidered in the light of Pakistan's unexpectedly rapid expansion of its nuclear arsenal. He has also said that the sub-continent is fertile ground for a limited nuclear war. Another former Army chief has stated that the Indian armed forces were worried about the reliability of Indian nuclear warheads in the light of the “fizzle” controversy

(1). With this line of thinking, it has even been suggested (2) that there should be a serious debate on the question of whether or not a nuclear weapon free world would really be in our best security interest and if our commitment to disarmament should continue to be an axiom of India's nuclear doctrine.

Recent Developments on Nuclear Disarmament and Nonproliferation

Disarmament had been on the international backburner except on the platform of the nonaligned movement and of anti-nuclear NGOs, till the nineties. It has gradually come to the forefront of the global nuclear agenda after the end of the Cold War and was given a major fillip by the epiphany of the four US statesmen of Cold War fame in 2007. (3). This line of advocacy has picked up a fair head of steam, the high point being reached with Obama promising in his April 2009 Prague speech to take concrete steps towards a world without nuclear weapons. It is widely believed that the subsequent award of the Nobel Peace Prize to Obama was aimed at encouraging him to deliver on his promise. It is recognized that, unlike earlier NGO movements and advocacy, which were vulnerable to allegations of naiveté, it is now the political class itself, led by the US President himself, which is advocating “global zero”, providing much more gravitas to the idea.

Great hopes are being placed on the May 2010 NPT Review Conference for repairing the cracks and fractures that have developed in the global disarmament and nonproliferation regime over the last ten years. A balanced commitment by all parties to the three pillars of the NPT—disarmament, nonproliferation and the peaceful use of nuclear energy—is considered essential. The agreement at the 1995 NPT Review Conference to extend the NPT indefinitely, a great triumph for the five NPT nuclear weapon states, was reached only because these states managed to convince the non nuclear weapon states that their expressed commitment to nuclear disarmament was genuine.

The 2005 Review Conference ended in failure as non-nuclear weapon states felt that the five NPT nuclear weapon states had not been serious in implementing their obligation under Article VI of the NPT to negotiate in good faith to achieve nuclear disarmament. Without concrete evidence of their seriousness, the non-weapons states were not prepared to assume the additional nonproliferation obligations which were being thrust on them on the premise that it was essential for preventing further breakout attempts, such as those by DPRK, Iran, Libya and Syria, particularly with the expected renaissance of nuclear power generation.

In the new atmosphere created by Obama's Prague speech, the decade old deadlock in the Conference on Disarmament (CD) at Geneva was broken in May 2009, giving rise to expectations that negotiations on a Fissile Material Cut-off Treaty (FMCT) could be launched soon and that it would help make the 2010 NPT Review a success.

Obama presided over a Summit level meeting of the UN Security Council in September 2009, which unanimously adopted a strongly worded Resolution 1887 that called for stringent nuclear nonproliferation norms and reinforced the centrality of the NPT for the global nonproliferation regime.

In September 2009, US Secretary of State Hillary Clinton led the US delegation in its first appearance at the biennial conference on measures to bring the Comprehensive Test Ban Treaty (CTBT) into effect. This was an earnest of Obama's undertaking at Prague to take aggressive steps to obtain US ratification of the CTBT.

Ongoing US - Russia negotiations to arrive at a follow-up agreement on further reduction of strategic weapons to 1500 apiece when START I expired in December 2009 are expected to be concluded successfully soon, thanks to the US decision to abandon plans to install Ballistic Missile Defence (BMD) facilities in Poland and the Czech Republic, which were strongly opposed by Russia.

A series of further high profile events in this area are planned over the next few months. The next US Nuclear Posture Review, due in early 2010, is expected to encompass parts of Obama's transformational agenda, including elements towards nuclear de-alerting, no first use, reduced emphasis on extended nuclear deterrence to allies, etc. Obama has called a summit level meeting of selected countries at Washington in April 2010 to tighten the security of nuclear materials.

Skeptics contend that the US administration is employing nuclear weapon free world rhetoric mainly to help create a political climate that is conducive to achieving substantial arms control measures including, inter alia, US-Russian reductions in strategic weapons, US ratification of the Comprehensive Test Ban Treaty (CTBT), and the launch of negotiations on a Fissile Material Cut-off Treaty (FMCT). The projection of the “global zero” vision could thus be purely tactical, that is, to ensure a successful outcome of the 2010 NPT Review Conference and to add to the tool kit for tackling the major challenges posed by Iran and North Korea.

US leaders and officials, including the US President himself, consistently emphasise the difficulties of achieving, let alone verifying, a nuclear weapons free world. Obama's own April 2009 speech indicated that he did not expect to see such a world in his lifetime. And he is still a relatively young man! His declaration that the US would continue to maintain robust nuclear deterrence capability as long as any nuclear weapon exists is also a circular argument which could ensure the continuance of nuclear weapons for ever.

Nuclear issues requiring decisions by India

Some of the following developments impacting on Indian nuclear assets and doctrine are likely to reach a decisive point during 2010, requiring appropriate and carefully considered responses from India:

- Pressure for signature and ratification of CTBT: Including the US, there are nine holdouts at present whose ratification is necessary for the CTBT

to come into effect. They are India, Pakistan, China, Indonesia, Egypt, Israel, Iran and DPRK. Obama has promised vigorous steps to obtain US Senate ratification, but is still short of several votes and is apparently having a hard time getting any Republican Senators on board. However, if the US ratifies the treaty and is followed by China, there would then be strong pressure on India and Pakistan to fall in line. India has taken a noncommittal position on its preconditions for ratification, but former Prime Minister Vajpayee had, at the 53rd UNGA, indicated that “India would not be among the last states standing in the way of the treaty's entry into force”. Pakistan, which had earlier adopted a fairly laid back position on the CTBT, appears to have changed its position after the Indo-US nuclear deal. They are now trying to link CTBT ratification with getting a similar nuclear dispensation like India and, more confusingly, for an agreement on negative security assurances. In any case, Pakistan will not ratify unless India does so and India will await the US and Chinese decisions.

India is already committed to maintaining a moratorium on testing till a CTBT comes into effect. It is also evident that the alleged “fizzle” of the 1998 thermonuclear test does not significantly compromise the effectiveness and credibility of India's nuclear deterrent. The determining factors in the reliability of the deterrent capability would be its survivability after a first strike (4), possible malfunctions in delivery vehicles (5), and their accuracy.

- The FMCT negotiations are likely to resume next year if Pakistan can be brought in line. In August 2009, Pakistan indicated its intention to be obstructive by questioning the basis for the schedule of work (including the FMCT) agreed in the 2009 CD. At the core of their concern is the perceived asymmetry of their fissile material stocks vis-à-vis India. The entire matter will have to be decided afresh in the CD next year.

India is committed under the Indo-US nuclear agreement to help in the successful conclusion of an FMCT. India has not declared the proposed

size of its minimum deterrent. But India's weapons grade plutonium stockpile at the beginning of 2008 was estimated to be adequate for 130 warheads. (6) In any case, we have had more than ten years to build up the stocks, since we were last in a similar position with the imminent conclusion of an FMCT and the fissile material stockpile by the time an FMCT is concluded should certainly be adequate for a minimum, credible deterrent.

- Related to this is the frequently expressed proposal for a moratorium on fissile material production, pending the conclusion of an FMCT. The five NPT nuclear weapon states have already discontinued production as they have more than enough. The moratorium is therefore purely a nonproliferation measure aimed at hobbling the new nuclear weapon states. As such, it would be appropriate to insist on being paid back in diplomatic coin instead of empty praise, balancing this nonproliferation measure with a concrete disarmament step, such as some variant of a NFU declaration by the nuclear weapon states.
- The question of universality of the NPT is also on the table. India, Pakistan and Israel have not signed the NPT, while the DPRK walked out of it. The prevailing orthodoxy is that all of them should fall in line as non nuclear weapon states in the NPT, and this stand was reiterated in the recent resolution at the summit level UN Security Council session, presided over by Obama. This stand is obviously not to be taken at its word. That India will not give up its nuclear weapons programme has been implicitly acknowledged by the US, the NSG and the IAEA. How the international community can achieve universality without being prepared to amend the NPT remains to be worked out. In the case of the ASEAN-sponsored South East Asia Nuclear Weapon Free Zone, which provides for the five NPT nuclear weapon states to sign a protocol agreeing to respect the Zone, Vietnam and the Philippines have suggested a separate protocol providing for other nuclear-armed states to make a similar commitment. If the ASEAN countries as a whole adopt this route, this could lead to a way out for resolving the NPT

universality dilemma. The Australia–Japan led International Commission on Nonproliferation and Disarmament in their December 15, 2009 report, has proposed the participation of the new nuclear armed, non-NPT states in the parallel instruments and arrangements which apply NPT-equivalent non-proliferation and disarmament obligations. The non-NPT states would gain the same access as NPT members to nuclear materials and technology for civilian purposes, participate in multilateral disarmament negotiations on the same basis and would not be expected to accept any different treatment because they are non-NPT states.

- It had also been suggested that India might consider attending the NPT Review Conferences as an observer. India had dismissed such suggestions out of hand in the past. This time, however, India would be going in as a country whose possession of nuclear weapons is formally acknowledged by more than a third of the delegations attending the Review Conference. It has also voluntarily taken on the responsibility of abiding by the nonproliferation obligations of NPT parties and may eventually be interested in the safeguarded reprocessing and enrichment facility/ies (to be built under the Indo-US agreement) being made a part of the regional network of such facilities under discussion in the IAEA. India would also be in a position to offer expertise, services and equipment to countries setting up power generation facilities under the expected nuclear renaissance.

France, which had stayed outside the NPT initially, had also attended a Review Conference when it was getting ready to join the treaty. The situation of France, as a nuclear weapon state under the NPT, even when it stayed outside, was of course quite different from that of India. The advantages for India may be more limited. It would, however, be a gesture of goodwill after exchanges of hard words for many years. It would allow India to highlight its continuing proactive commitment to more creative approach to nuclear disarmament, an issue that will determine the success of the 2010 Review. It could also catalyze a

process for resolution of the vexed universality issue, thus opening the way for India to rejoin the nuclear mainstream, a journey only half completed by the Indo-US nuclear deal and its endorsement by the NSG and the IAEA.

- Apart from these essentially tactical issues, the basic strategic question of **whether or not the traditional Indian commitment to and advocacy for a nuclear weapon free world should be maintained** requires to be answered convincingly. This requires a broad consensus on the optimal stance to promote India's security and international standing in our nuclearised environment.

Principles of nuclear deterrence

The surfacing of doubts in India at this stage is probably because of the persisting misconceptions about the meaning of nuclear deterrence and its logical implications, its distinction from nuclear war fighting, and the assumptions underlying a No First Use policy. Despite the writings by several Indian analysts aiming to make some sense out of the boffin talk and jargon, the basic issues bear some elaboration of first principles

The costliest way to achieve political objectives is through the use of brute force. States prefer, instead, to achieve their policy goals through diplomacy backed by the threat of use of force. It is called compellence if the intention, backed up by ability, is to threaten another actor with unacceptable harm if they do not change or retract certain actions or behavior. If, on the other hand, the intention is to prevent a state from taking a certain action, such as use of nuclear weapons, the concept is called deterrence. This is the one with which we are most concerned.

Obviously, both compellence and deterrence are without specific association with nuclear weapons and apply equally to threats involving conventional arms. But though the nuclear bomb initially seemed to have the potential for war fighting, compellence and deterrence, its special characteristics soon effectively reduced the three options to only one—deterrence.

War fighting in a nuclear environment, or “flexible response” as it is codenamed in nuclear jargon, assumes a determination to press for a decisive result by responding to any challenge with a measured riposte, extending seamlessly from the conventional to graduated nuclear escalation. It envisages a capacity for exquisitely calibrated progression through successive rungs of increasing nuclear violence with the objective of maintaining escalation dominance at each rung over the entire spectrum.

The calculation was that this would force the adversary to back down or to escalate to the next rung. Escalation dominance was considered the Holy Grail that would allow nuclear war to be controlled short of Armageddon and, therefore, to be used against a rational adversary for political ends. This concept presumed that the adversary would be rational enough to avoid suicidal action, such as by escalating to a spasm and, instead, to adhere to the designated path of step-by-step, controlled escalation, or to back down to survive and fight another day.

The objective of nuclear deterrence, in contrast to nuclear war fighting, is never to need to use nuclear weapons against a nuclear adversary possessing the capability to cause unacceptable damage. The purpose of nuclear deterrence is defeated if there is no other option but to initiate a nuclear exchange which carries the risk of mutual devastation. The whole point of deterrence is to convince the adversary that the cost of initiating a nuclear strike is far more than the damages it would suffer by not doing so.

Paradoxically, this requires the state's capacity and preparedness to use nuclear weapons in specific contingencies to be credible to the adversary. And this is where confusion arises, unless the distinction between deterrence and a war fighting posture are kept constantly in mind.

The principal objective of the former is to avoid use of nuclear weapons; that of the latter is to force a decisive result.

Nuclear deterrence during the Cold War

All nuclear doctrines recognize that avoidance of unacceptable damage can be a reliable basis for rational action in a situation of nuclear stand-off. But what is 'rational' and what is 'unacceptable'? In the sixties, the US assumed, for no particularly rational reason, that destruction of 30% of the USSR population and 50% of its industrial infrastructure was sufficient to deter. The USSR's calculations of the US threshold of pain are not known, but were probably similar. The capacity for such 'mutually assured destruction' (MAD) was considered the foundation of strategic stability and mutual deterrence between the two Super Powers through much of the Cold War.

But the US and Soviet Union realized early enough, even at the time of the Cuban crisis in 1962, that it was literally quite 'MAD' that their nuclear doctrines should be aimed at seeking to deter limited losses in conventional conflict by risking mutual destruction of major centres of population and hubs of industry. They then decided to talk and explore the limits to conventional use of force that deterrence imposed for each other. The understanding that grew out of these talks about each other's nuclear calculations and red lines was crucial for the mutual credibility of their respective deterrents.

It was recognized that local conventional superiority could, in principle, be exploited up to a point under the umbrella of nuclear deterrence. But how could these limits, short of nuclear escalation, be clearly determined? The flat answer is that they could not, and this is where nuclear deterrence becomes a mind game, a game of “chicken”.

The US and USSR eventually decided that any direct conflict between their forces was too dangerous and had to be avoided at all cost. Thus MAD prevented war between the Super Powers during the Cold War. “Proxy wars” between their allies or protégées—the further away the better—were the norm. With Armageddon between the Super Powers ruled out, the

prestige of theoreticians and modelers of scenarios of escalating nuclear destruction declined and their ranks started thinning out.

Nuclear deterrence after the Cold War

The nuclear war fighting school, however, got something of a second wind in the US after the Cold War. The emergence of new states with nuclear weapons, some of which had major conflicts of interest with the US, made a direct US confrontation with one of them probable, sooner or later.

The MAD stand off between the two Super Powers evidently did not apply between the US and the new nuclear armed states, since their much smaller nuclear arsenals could be taken out with a first strike. The US nuclear primacy, which has emerged over the last 15 years, has virtually provided the US with first strike capability even against Russia and China. There is therefore no logic, it is felt among some, for US self-deterrence when confronted by a new nuclear armed state with a much smaller arsenal. Compellence would appear quite achievable in such circumstances.

While some US nuclear theoreticians are still attracted to this view, mainstream thinking among nuclear planners, particularly outside the US, has veered round to the conviction that playing chicken with the survival of mankind by the threat or use of nuclear weapons to achieve a political goal incurs risks out of all proportion to whatever may be the gain, besides utterly lacking in any sense of responsibility. A policy of “minimum deterrence” is increasingly gaining adherents, even among Washington's nuclear theorists.

Minimum deterrence

Minimum deterrence, in its essence, has only the one narrowly limited purpose--to prevent a nuclear attack by a State's adversary. It is not intended for deterring conventional weapons, chemical and biological weapons, or the promotion of terrorism or insurgency. Minimum deterrence posits that if the adversary is convinced that it would suffer a retaliatory nuclear strike by a

handful of nuclear weapons on major population centers and infrastructure, it would be adequate to dissuade it from initiating a nuclear strike, since the cost will be out of all proportion to any possible gains.

The size of a minimum deterrent, as long as its second strike capability, including its command and control system, has assured survival from a first strike, is not dependent on the increase in the arsenal of the adversary. There is also no requirement for megaton warheads. The smaller fission Hiroshima – size bombs would suffice.

No First Use

No First Use (NFU) posture is inherent in the logic of minimum deterrence, which shuns the threat or use of nuclear weapons for political gain. Though NFU is a purely declaratory posture in the absence of a negotiated agreement among a group of countries, the weight and value of a solemn national commitment should not be underestimated.

It is argued that a voluntary declaration can always be reversed, as Russia did with its 1982 NFU after the end of the Cold War. But even a party to the NPT can withdraw, though it is a formal treaty and not a declaration, just as the DPRK did. Countries that have been of principal proliferation concern in the last few years have all been NPT signatories. It has not been suggested that, due to this, the NPT is useless.

An NFU posture is not dependent on the nuclear doctrine of an adversary or, indeed, the size and nature of its arsenal.

China has an unconditional NFU, reiterated regularly, and has not commented on the persistent speculation that its doctrine is being revised.

India's NFU declaration is not unconditional and allows for the use of nuclear weapons in retaliation against a chemical or biological attack. (7)

Russia reversed its earlier NFU after its conventional capabilities became degraded in the face of US technological advances after the end of the Cold War. Russia also hopes by this action to constrain US ballistic missile defences or space based interdiction systems that could make Russia's second strike capability vulnerable.

Pakistan, which has an India focused minimum deterrent, openly says it would resort to first strike if it is confronted with catastrophic losses in the face of India's superior military might. During the Cold War, the NATO doctrine also envisaged first use of nuclear weapons to halt or slow down a Soviet conventional offensive.

The US could readily have had a NFU posture, given its overwhelming conventional superiority over any of its adversaries. But it is constrained by its commitment to provide extended nuclear deterrence to NATO members, as also countries like Japan and the Republic of Korea, which are uncomfortable about the effect of an US NFU on their security.

Referring to this issue, the December.2009 Report of the International Commission referred to above proposed that every nuclear-armed state should declare unequivocally as soon as possible, and no later than 2025, its commitment to a no first use policy. Any state not prepared for an explicit NFU declaration should at least accept the principle that the “sole purpose” of possessing nuclear weapons is to deter others from using such weapons against that state or its allies.

The Indian nuclear doctrine

India's nuclear doctrine of 2003 (Annexure I) is based on maintaining a “credible minimum deterrent” with an assured second strike capacity and a no first use declaration, together with a strong, consistent commitment to and advocacy for abolishing nuclear weapons. It is principally designed to deter Pakistan and China from the use of nuclear weapons against India. Its delivery is to be based on an air-land-sea triad.

The 2003 doctrine is slightly different from the earlier published draft of 1999 (Annexure II). It now retains the option to use nuclear weapons in the event of a major chemical or biological weapons attack.⁽⁸⁾ This weakens, in this writer's view, India's credibility in advocating the NFU and its call for a multilateral agreement on the issue by all nuclear states.

There are some nuclear theoreticians, albeit a small minority, in India who advocate a much more variegated and powerful nuclear force to deter even the US ⁽⁹⁾. India's reluctance to indicate any upper limits to the size of its nuclear arsenal and fissile material has led many to conclude that the eventual Indian nuclear force will go considerably beyond the needs of “minimum credible deterrent”, as it is understood today.

It is important to appreciate the implications of India's NFU, particularly in the context of the perceived threat from China and Pakistan. It is also necessary to evaluate the validity of the concerns being expressed over the rapid expansion of the Pakistani nuclear programme, as also the reliability of our own fusion warheads derived from the 1998 tests.

The Indian NFU assumes political and military preparedness to hold our own in the event of a conventional conflict. Our armed forces would be expected to prevent sustained catastrophic conventional losses in conflicts with China & Pakistan, and to reverse such losses through conventional means. This should not be an insuperable task even in a conflict with China, given that India's shorter lines of communication are finally being developed, and that its nuclear deterrence capability would empower it to deploy air power and other advanced conventional weapons to establish local superiority.

In the unlikely event of China launching a nuclear riposte despite their declared NFU, they should expect inevitable nuclear retaliation and damages far beyond the worth of any initial territorial gains. The chances of a nuclear war with China are, therefore, minimal. The Indian armed forces are not expected to have their fingers on the nuclear trigger except to implement political decisions in a worst case scenario.

In relation to Pakistan, things are more complex. Pakistan has shown a propensity for risk-taking despite the acknowledged possession of nuclear weapons on both sides. It should have learnt from its Kargil fiasco that their nuclear weapons do not provide cover for conventional adventurism. Pakistan projects a trigger-happy first strike posture to enhance the credibility of its nuclear deterrent. All the same, it has indicated a fairly high threshold of pain in avoiding the use of nuclear weapons. Gen Khalid Kidwai, head of the Strategic Plans Division (SPD) that manages Pakistan's nuclear operations, spelt out four distinct thresholds for nuclear weapons use: loss of large parts of territory (space threshold); destruction of a large part of land or air forces (military threshold); economic strangulation (economic threshold); and political destabilization or large scale internal subversion (domestic destabilization threshold). Thus India has fairly strong conventional leverage to discourage Pakistan from promoting terrorist attacks from Pakistani territory without resorting to any nuclear conflict.

A Pakistani nuclear strike against Indian forces in Indian or Pakistani territory would probably first attract a counter force strike against Pakistani military concentrations or bases, despite our current, somewhat unconvincing doctrine of immediate massive retaliation causing unacceptable damage. The expectation would probably be that Pakistan would stand down from further nuclear escalation. If this did not happen, we would very likely start a slide towards uncontrolled escalation targeting cities. Preventing this is in the highest interest of both countries. It is, therefore, imperative that an intensive bilateral nuclear dialogue is undertaken to work out understandings and arrangements to avoid such a situation.

Security implications for India in a nuclear weapon-free world

Writing on the “how” of reaching global zero in nuclear weapons has now become more prolific than the “why”. But this does not mean that there is general consensus that nuclear abolition is desirable for all or that it would result in a safer world, or that it is at all feasible in present circumstances. To achieve a total elimination of nuclear weapons, it would be necessary for the

nuclear armed states and the 30 or so countries, which base their security on “extended (nuclear) deterrence” provided by the US to be convinced that their security and other aspirations would be achieved as well or even better in a nuclear weapon-free world.

The biggest obstacle to abolishing nuclear weapons is the notion that they can compensate for the state's inferiority in conventional capability. Pakistan has made no secret of its intention to resort to the use of nuclear weapons in the face of defeat or catastrophic reverses in a conflict with India. The Russian withdrawal of its earlier No First Use declaration and its large holding of tactical nuclear warheads are also because it fell far behind the US in conventional capacity. For most of the Cold War period, NATO doctrine envisaged the use of nuclear weapons in the face of Warsaw pact superiority in conventional forces.

The credibility of these postures envisaging first use of nuclear weapons to counter the exploitation of conventional superiority is always open to question. Such action is likely to be suicidal in any meaningful sense by provoking nuclear retaliation. But a residual uncertainty does of course remain, since even rational people do commit suicide and history provides examples of groups and communities who have chosen death over defeat or even dishonour.

The actual behaviour of state leaderships in situations of extreme stress would of course differ from state to state, and one of the major weaknesses of nuclear deterrence theory is its assumption that leaders of all countries will act in accordance with a subjective model of rationality. Calculations of the costs and benefits of moving from a nuclear deterrence to nuclear abolition stance will, therefore, need to be carried out on a country to country basis or on specific sets of countries which consider nuclear weapons an essential part of their security calculus.

It would be sensible to move away from basing nuclear deterrence calculations on the facile but irrational assumption that a disparity in

conventional power between two countries will inevitably lead to a Manichean struggle to finish each other off. It is surely preferable to examine the concerns that motivate such extreme calculations and see if they can be met at least as adequately without nuclear weapons under a globally accepted international arrangement.

For India, the only two countries of real concern in this context are China and Pakistan. India's NFU and minimum deterrent postures are intended to keep nuclear weapons out of play, whatever be the contingency. In a situation where neither the armed forces of India-Pakistan, nor India-China, have shown the capacity for overwhelming the other in a conventional conflict, the security situation between India and these countries should not be adversely affected to any major degree by the absence of nuclear weapons. Needless to say, the three countries would be much safer if nuclear weapons were removed from their security calculations vis-à-vis each other.

The road to Global Zero

Even among those who genuinely believe in nuclear disarmament, there is a wide gap in views on how it should be implemented. In the field of nuclear disarmament, arms control and nonproliferation, there have always been heated debates over how to strike a balance between the primary responsibility of the nuclear-weapon states, particularly those with the largest nuclear arsenals, and a broad participation by the non-nuclear-weapon states. It is generally accepted that disarmament, nonproliferation and the peaceful use of nuclear technology are the three pillars of the NPT. But, from this to argue that disarmament and nonproliferation should proceed simultaneously is virtually to make nuclear disarmament conditional on the progress of nuclear nonproliferation and to obscure or even justify the nuclear-weapon states' contravention of their primary responsibility to disarm.

It is highly unlikely that complete nuclear disarmament would even become a practical issue until all nuclear-armed states have reduced their arsenals to

quite low levels, say 100 weapons each. The five NPT nuclear weapon states appear deeply divided on the road to disarmament when talk of a distant vision is sought to be converted to action. The US and Russia want all the five NWS to start reducing their arsenals together after the proposed START follow up reductions. France, the UK and China feel that the US and Russia must go much further and that they should only be asked to join in when the sizes of the US and Russia's arsenal come down closer to their own levels.

The road to nuclear abolition does not lie in numbers. A world free of nuclear weapons would continue to remain an unachievable dream as long as states are bogged down in debates as to who should do what first in the name of protecting their security interests. Nuclear weapons cannot be abolished unless we stop regarding them as legitimate weapons, and treat them instead as the equivalent of chemical and biological weapons—inhumane weapons that must be banned by the international community. The current pathway would then be reversed. The prohibition would come first, with bean-counting, reduction and destruction of arsenals to follow. If chemical and biological weapons have been successfully dealt with in this way, why not nuclear weapons?

Transition to minimum nuclear deterrence

The main hurdle in the path to nuclear disarmament continues to be the attitude of the two major nuclear powers toward taking concrete steps beyond deep cuts in their nuclear arsenals. Using security interests as the primary variable for nuclear arms reductions, even without deliberate disingenuousness by unconvinced abolitionists, can lead to endless arguments on the details and mechanics of verification and enforcement along the long and forbidding road. The suspicion that this bean counting is a deliberate attempt to derail the progress towards genuine disarmament is justifiable. There is extensive literature putting forward one obstacle after another, based on the premise that any imbalance caused by miscalculation or cheating will be immediately exploited, leading to a catastrophic collapse of the entire process. Much of this is probably the result of the rearguard activities of the legions of weapons scientists, analysts and seminar circuit

regulars trying to preserve their careers and budgets. Even if the intentions were sincere, such an approach will result in pushing disarmament far beyond the distant horizon.

Short of full nuclear disarmament, the nuclearized international security environment could become immeasurably safer if there was a change of the concept of security, the role of nuclear weapons in security strategy and the thinking on how to deal with nuclear proliferation. This would involve a transition to the adoption of the principles and assumptions of minimum deterrence doctrine, as also the measures to decrease the salience of nuclear weapons in national security, ultimately leading to their delegitimation.

The road to nuclear disarmament begins with No First Use. Its acceptance by all nuclear armed states will put in place a powerful norm of non-use, progressively making nuclear arsenals irrelevant. The principal approach to NFU would be to take successive steps to depreciate the perceived value of nuclear weapons and to delegitimize their use and possession. The current negotiation process of tedious bargaining over the number of missiles and warheads and verification would be put on the backburner. The steps that follow could be an outright ban and later, a complete elimination of nuclear arms.

Some of the following measures could be considered as part of this road map for nuclear weapon states to demonstrate their sincerity:

- 1) Review military plans and redefine security strategies to substantially lower the number of nuclear weapons.
- 2) Take off nuclear weapons from hair-trigger alert.
- 3) Refrain from upgrading existing weapons and manufacturing new nuclear weapons of any type. and avoid systems or doctrines that narrow the firewall between nuclear and conventional weapons or lower the nuclear threshold.

- 4) Refrain from unilateral deployment of strategic missile defenses.
- 5) Provide legally binding negative security assurances to non–nuclear-weapon states.
- 6) Support international legal norms against nuclear weapons such as a declaration by the UN Security Council under the mandatory provisions of Chapter 7 of the UN Charter that use of nuclear weapons would be contrary to international law and including the initiation of the use of nuclear weapons as a crime within the jurisdiction of the International Criminal Court

Conclusions

Certain broad conclusions can be drawn from the foregoing discussion regarding President Obama's global zero vision, his roadmap to the goal, and the appropriate Indian responses to the nuclear issues that will emerge over the coming years. Some of these are set out below:

- Obama may well be sincere in his vision of a nuclear weapon free world, but there is, so far, very little that indicates US preparedness to take the necessary transformational steps.
- Indian security can readily be safeguarded in a nuclear weapon-free world in all foreseeable contingencies just as well as under the current Indian nuclear doctrine. Indeed, the absence of nuclear weapons would provide a substantial margin of added safety.
- Continued advocacy of nuclear weapons' abolition, therefore, would be both in accordance with consistent policy as well as expediency.
- The current disarmament route of negotiated, gradual reductions with foolproof verification will inevitably lead to a dead end. It also provides the opening for the NPT nuclear weapon states to avoid genuine steps to implement their disarmament obligations, allowing them to preserve

their privileged position and to simultaneously pursue tighter nonproliferation measures to “disarm the unarmed”.

- The preferred disarmament roadmap should thus be reoriented towards primary emphasis on devaluing the role of nuclear weapons, constricting their currency with NFU agreements, delegitimisation and outright ban on use and possession. NFU should be the first step. The slogan of the abolitionists could well be: “The road to disarmament lies through No First Use.”
- Provided assured second strike capacity is maintained, Chinese and Pakistani nuclear advances have no relevance for India's NFU doctrine, whose purpose is purely to prevent the use of nuclear weapons.
- If India is to make NFU central to progress towards elimination in the current situation, our nuclear doctrine will need to revert to an unconditional NFU (10)
- India is comfortably situated for the CTBT and FMCT negotiations. Besides, crucial decisions regarding the FMCT are quite far away.
- A multilateral moratorium on fissile material production pending the finalization of an FMCT, even if it does not seriously inconvenience us, is a measure directed exclusively at India (and Pakistan), though China also opposes it. Pakistan will almost certainly reject it. But if this proposal gets seriously into play, a disarmament quid pro quo should be demanded from the NPT nuclear weapon states.
- Attending the 2010 NPT Review Conference as an observer in our present circumstances has some advantages. It would mean rejoining the international nuclear mainstream which, in turn would enhance India's profile as a country whose special status would have to be accommodated within the global nonproliferation regime as a non-signatory of the NPT with an internationally acknowledged nuclear weapons programme.

Endnotes

- 1) Reports suggest that an early test of the W76, the most common warhead on U.S. SSBNs, had also “fizzled,” meaning that it produced far below the expected yield. (William J. Broad, “Aging Warheads Ignite a Debate among Scientists,” *New York Times*, April 3, 2005; and Fred Kaplan, “Nuclear Options,” *Slate.com*, April 15, 2005.) According to unclassified sources, there was a minor design flaw in the prototype of the W76. The warhead design was modified before production began. More than eight tests of the modified warhead, before the US ceased all testing in 1992, were successful, according to the *Jane's Intelligence Review*, July 2005. There is, therefore, no reason to doubt the assertion by the Indian nuclear establishment about its ability to produce reliable 200 kiloton warheads despite the alleged 1998 'fizzle'.
- (2) This has been suggested by various analysts including Ambassador Arundhati Ghose, formerly India's Permanent Representative to the Conference on Disarmament.
- (3) George P. Shultz, William J. Perry, Henry A. Kissinger and Sam Nunn, 'A World Free of Nuclear Weapons', *Wall Street Journal*, 4 January 2007, p. A15; Shultz, Perry, Kissinger and Nunn, 'Toward a Nuclear-Free World', *Wall Street Journal*, 15 January 2008
- (4) Sharply increased US missile accuracy and target tracking capabilities over the last 15 years has provided the US virtually assured first strike capability against current Russian and Chinese strategic forces. A detailed modeling in 2004 of an US first strike showed that none of the several hundred Russian long range weapons in silos, mobile launchers or SSBNs would survive. China, with a total of 18 ICBMs and no currently operational SSBNs is of course much more vulnerable. (Keir A. Lieber & Daryl G. Press, *The End of MAD: The nuclear dimension of US primacy*; 2007) Chinese capabilities in missile accuracy and tracking will take a long time to approach such levels, but it would be

prudent to assume that a Chinese first strike would cause heavy damage to Indian missile assets and build in adequate redundancy for an assured second strike.

- (5) An example was the recent failure of the night time Agni test.
- (6) R. Rajaraman “Prospects of a fissile materials treaty and its implications for India” September 2009.
- (7) Chemical and biological weapons are already prohibited under international law. The remaining stockpiles are being destroyed under international supervision (the US is reviewing its position against an inspection protocol for the BWC). In any case, CB weapons do not come anywhere near the catastrophic destructiveness of nuclear weapons. Besides, most of the significant armed forces, including India's have developed a doctrine for such warfare and undergone extensive training in fighting through CB weapon contaminated battlefields. It has, therefore, been argued that the potentially powerful instrument of NFU should not be unnecessarily weakened by reserving the right of first (nuclear) use in case of a chemical or biological weapons attack.
- (8) Scott Sagan has pointed out that India had followed the U.S. example when it declared that it would use nuclear weapons in response to a chemical or biological attack. Sagan's [article](#) on “The Case for No First Use” appeared in *Survival*, vol. 51, no. 3, June-July 2009 (pp.163-182). A subsequent issue carried a [follow-up exchange](#) by four experts and Sagan's rebuttal.
- (9) Such as by Bharat Karnad in India's Nuclear Policy in Oct 2008 or Brahma Chellaney. In *Securing India's Future in the New Millennium* published 1999.

- (10) Declassified records show that, during the Iraq war, despite their threats, US leaders had decided not to use nuclear weapons in the event of Saddam Hussein's use of CBW, and to deal with it through conventional means. Use of nuclear weapons would invite nuclear retaliation in a nuclearised environment. There is no conclusive evidence that use of CBW can be deterred by nuclear weapons or that their use cannot be handled adequately by widely accessible conventional means.

Annexure I

Statement issued on January 4, 2003 following review of the operationalization of India's Nuclear Doctrine by the Cabinet Committee on Security

The Cabinet Committee on Security (CCS) met today to review the progress in operationalizing of India's nuclear doctrine. The Committee decided that the following information, regarding the nuclear doctrine and operational arrangements governing India's nuclear assets, should be shared with the public.

1. India's nuclear doctrine can be summarized as follows:
 - i. Building and maintaining a credible minimum deterrent;
 - ii. A posture of "No First Use": nuclear weapons will only be used in retaliation against a nuclear attack on Indian territory or on Indian forces anywhere;
 - iii. Nuclear retaliation to a first strike will be massive and designed to inflict unacceptable damage.
 - iv. Nuclear retaliatory attacks can only be authorised by the civilian political leadership through the Nuclear Command Authority.
 - v. Non-use of nuclear weapons against non-nuclear weapon states;
 - vi. However, in the event of a major attack against India, or Indian forces anywhere, by biological or chemical weapons, India will retain the option of retaliating with nuclear weapons;

- vii. A continuance of strict controls on export of nuclear and missile related materials and technologies, participation in the Fissile Material Cutoff Treaty negotiations, and continued observance of the moratorium on nuclear tests.
 - viii. Continued commitment to the goal of a nuclear weapon free world, through global, verifiable and non-discriminatory nuclear disarmament.
2. The Nuclear Command Authority comprises a Political Council and an Executive Council. The Political Council is chaired by the Prime Minister. It is the sole body which can authorize the use of nuclear weapons.
 3. The Executive Council is chaired by the National Security Advisor. It provides inputs for decision making by the Nuclear Command Authority and executes the directives given to it by the Political Council.
 - . The Executive Council is chaired by the National Security Advisor. It provides inputs for decision making by the Nuclear Command Authority and executes the directives given to it by the Political Council.
 4. The CCS reviewed the existing command and control structures, the state of readiness, the targetting strategy for a retaliatory attack, and operating procedures for various stages of alert and launch. The Committee expressed satisfaction with the overall preparedness. The CCS approved the appointment of a Commander-in-Chief, Strategic Forces Command, to manage and administer all Strategic Forces.
 5. The CCS also reviewed and approved the arrangements for alternate chains of command for retaliatory nuclear strikes in all eventualities.

New Delhi
January 4, 2003

Annexure II

Draft Report of the National Security Advisory Board on Indian Nuclear Doctrine

August 17, 1999

Preamble

- 1.1. The use of nuclear weapons in particular as well as other weapons of mass destruction constitutes the gravest threat to humanity and to peace and stability in the international system. Unlike the other two categories of weapons of mass destruction, biological and chemical weapons which have been outlawed by international treaties, nuclear weapons remain instruments for national and collective security, the possession of which on a selective basis has been sought to be legitimised through permanent extension of the Nuclear Non-proliferation Treaty (NPT) in May 1995. Nuclear weapon states have asserted that they will continue to rely on nuclear weapons with some of them adopting policies to use them even in a non-nuclear context. These developments amount to virtual abandonment of nuclear disarmament. This is a serious setback to the struggle of the international community to abolish weapons of mass destruction.

- 1.2. India's primary objective is to achieve economic, political, social, scientific and technological development within a peaceful and democratic framework. This requires an environment of durable peace and insurance against potential risks to peace and stability. It will be India's endeavour to proceed towards this overall objective in cooperation with the global democratic trends and to play a constructive role in advancing the international system toward a just, peaceful and equitable order.

- 1.3. Autonomy of decision making in the developmental process and in strategic matters is an inalienable democratic right of the Indian people. India will strenuously guard this right in a world where nuclear weapons for a select few are sought to be legitimised for an indefinite future, and where there is growing complexity and frequency in the use of force for political purposes.
- 1.4. India's security is an integral component of its development process. India continuously aims at promoting an ever-expanding area of peace and stability around it so that developmental priorities can be pursued without disruption.
- 1.5. However, the very existence of offensive doctrine pertaining to the first use of nuclear weapons and the insistence of some nuclear weapons states on the legitimacy of their use even against non-nuclear weapon countries constitute a threat to peace, stability and
- 1.6. This document outlines the broad principles for the development, deployment and employment of India's nuclear forces. Details of policy and strategy concerning force structures, deployment and employment of nuclear forces will flow from this framework and will be laid down separately and kept under constant review.

2. Objectives

- 2.1. In the absence of global nuclear disarmament India's strategic interests require effective, credible nuclear deterrence and adequate retaliatory capability should deterrence fail. This is consistent with the UN Charter, which sanctions the right of self-defence.
- 2.2. The requirements of deterrence should be carefully weighed in the design of Indian nuclear forces and in the strategy to provide for a level of capability consistent with maximum credibility, survivability, effectiveness, safety and security.

- 2.3. India shall pursue a doctrine of credible minimum nuclear deterrence. In this policy of "retaliation only", the survivability of our arsenal is critical. This is a dynamic concept related to the strategic environment, technological imperatives and the needs of national security. The actual size components, deployment and employment of nuclear forces will be decided in the light of these factors. India's peacetime posture aims at convincing any potential aggressor that:
- (a) any threat of use of nuclear weapons against India shall invoke measures to counter the threat: and
 - (b) any nuclear attack on India and its forces shall result in punitive retaliation with nuclear weapons to inflict damage unacceptable to the aggressor.
- 2.4. The fundamental purpose of Indian nuclear weapons is to deter the use and threat of use of nuclear weapons by any State or entity against India and its forces. India will not be the first to initiate a nuclear strike, but will respond with punitive retaliation should deterrence fail.
- 2.5. India will not resort to the use or threat of use of nuclear weapons against States which do not possess nuclear weapons, or are not aligned with nuclear weapon powers.
- 2.6. Deterrence requires that India maintain:
- (a) Sufficient, survivable and operationally prepared nuclear forces,
 - (b) a robust command and control system,
 - (c) effective intelligence and early warning capabilities, and
 - (d) comprehensive planning and training for operations in line with the strategy, and
 - (e) the will to employ nuclear forces and weapons
- 2.7. Highly effective conventional military capabilities shall be maintained to raise the threshold of outbreak both of conventional military conflict as well as that of threat or use of nuclear weapons.

3. Nuclear Forces

- 3.1. India's nuclear forces will be effective, enduring, diverse, flexible, and responsive to the requirements in accordance with the concept of credible minimum deterrence. These forces will be based on a triad of aircraft, mobile land-based missiles and sea-based assets in keeping with the objectives outlined above.
Survivability of the forces will be enhanced by a combination of multiple redundant systems, mobility, dispersion and deception.
- 3.2. The doctrine envisages assured capability to shift from peacetime deployment to fully employable forces in the shortest possible time, and the ability to retaliate effectively even in a case of significant degradation by hostile strikes.

4. Credibility and Survivability

The following principles are central to India's nuclear deterrent

- 4.1. **Credibility:** Any adversary must know that India can and will retaliate with sufficient nuclear weapons to inflict destruction and punishment that the aggressor will find unacceptable if nuclear weapons are used against India and its forces.
- 4.2. **Effectiveness:** The efficacy of India's nuclear deterrent be maximised through synergy among all elements involving reliability, timeliness, accuracy and weight of the attack.
- 4.3 **Survivability:**
- (i) India's nuclear forces and their command and control shall be organised for very high survivability against surprise attacks and for rapid punitive response. They shall be designed and deployed to ensure survival against a first strike and to endure repetitive attrition attempts with adequate retaliatory capabilities for a punishing strike which would be unacceptable to the aggressor.
 - (ii) Procedures for the continuity of nuclear command and control shall ensure a continuing capability to effectively employ nuclear weapons.

5. Command and Control

- 5.1. Nuclear weapons shall be tightly controlled and released for use at the highest political level. the authority to release nuclear weapons for use resides in the person of the Prime Minister of India, or the designated successor(s).
- 5.2. An effective and survivable command and control system with requisite flexibility and responsiveness shall be in place. An integrated operational plan, or a series of sequential plans, predicated on strategic objectives and a targetting policy shall form part of the system.
- 5.3. For effective employment the unity of command and control of nuclear forces including dual capable delivery systems shall be ensured.
- 5.4. The survivability of the nuclear arsenal and effective command, control, communications, computing, intelligence and information (C4I2) systems shall be assured.
- 5.5. The Indian defence forces shall be in a position to, execute operations in an NBC environment with minimal degradation;
- 5.6. Space based and other assets shall be created to provide early warning, communications, damage/detonation assessment.

6. Security and Safety

- 6.1. Security: Extraordinary precautions shall be taken to ensure that nuclear weapons, their manufacture, transportation and storage are fully guarded against possible theft, loss, sabotage, damage or unauthorised access or use.
- 6.2. Safety is an absolute requirement and tamper proof procedures and systems shall be instituted to ensure that unauthorised or inadvertent activation/use of nuclear weapons does not take place and risks of accident are avoided.

- 6.3. Disaster control: India shall develop an appropriate disaster control system capable of handling the unique requirements of potential incidents involving nuclear weapons and materials;

7. Research and Development

- 7.1. India should step up efforts in research and development to keep up with technological advances in this field.
- 7.2. While India is committed to maintain the deployment of a deterrent which is both minimum and credible, it will not accept any restraints on building its R&D capability.

8. Disarmament and Arms Control

- 8.1. Global, verifiable and non-discriminatory nuclear disarmament is a national security objective. India shall continue its efforts to achieve the goal of a nuclear weapon-free world at an early date.
- 8.2. Since no-first use of nuclear weapons is India's basic commitment, every effort shall be made to persuade other States possessing nuclear weapons to join an international treaty banning first use.
- 8.3. Having provided unqualified negative security assurances, India shall work for internationally binding unconditional negative security assurances by nuclear weapon states to non-nuclear weapon states.
- 8.4. Nuclear arms control measures shall be sought as part of national security policy to reduce potential threats and to protect our own capability and its effectiveness.
- 8.5. In view of the very high destructive potential of nuclear weapons, appropriate nuclear risk reduction and confidence building measures shall be sought, negotiated and instituted

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