



## What Did India Gain by Getting the Bomb?

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### Summary

*The utility of India's nuclear weapons is questionable on many grounds. Nuclear deterrence is dubious in general and especially dubious in the subcontinent. Nuclear weapons are not usable as weapons of compellence or defence. They failed to stop Pakistani incursion in Kargil in 1999 or the terrorist attack on Mumbai in 2008. They will not help India to shape the military calculations of likely enemies. And India's global status and profile will be determined far more crucially by its economic performance than nuclear weapons. Meanwhile, they do impose direct and opportunity costs economically, risk corrosion of democratic accountability, add to global concerns about nuclear terrorism, and have not helped the cause of global nuclear non-proliferation and disarmament.*

1. The short answer to the question addressed in this policy brief is: not much.<sup>1</sup> Nuclear weapons may or may not have kept the peace among various groups of rival states; they could be catastrophic for the world if ever used by both sides in a war between nuclear-armed rivals; and the prospects for their use have grown since the end of the Cold War. For nuclear peace to hold, deterrence and fail-safe mechanisms must work every single time. For nuclear Armageddon to break out, deterrence or fail safe mechanisms need to break down only once. This is not a comforting equation. It also explains why, unlike most situations where risk can be mitigated after disaster strikes, with nuclear weapons all risks must be

mitigated before any disaster.<sup>2</sup> Even a limited regional nuclear war in which India and Pakistan used 50 Hiroshima-size (15kt) bombs each, could, through climate and other "nuclear winter" effects that severely damage crop production and disrupt food distribution and markets, lead to a famine that kills up to a billion people.<sup>3</sup>

2. I do not contend that India should pursue unilateral nuclear disarmament. Rather, my central argument is that a denuclearized world that includes the destruction of India's nuclear stockpile would favourably affect the balance of India's security and other interests, national and international interests, and material interests and value goals.<sup>4</sup> The goal of an eventually denuclearized world is both necessary and feasible. As argued by the Canberra Commission, as long as any one country has nuclear weapons, others will want them; as long as nuclear weapons exist, they will be used again some day, whether by design, miscalculation, rogue launch, human error, or system malfunction; any nuclear war fought by any set of nuclear-armed states could have catastrophic consequences for the planet.<sup>5</sup>

<sup>2</sup> See Martin E. Hellman, "How Risky Is Nuclear Optimism?" *Bulletin of the Atomic Scientists* 67:2 (2011), pp. 47–56.

<sup>3</sup> Ira Helfand, *Nuclear Famine: A Billion People at Risk – Global Impacts of Limited Nuclear War on Agriculture, Food Supplies, and Human Nutrition* (Somerville, MA: International Physicians for the Prevention of Nuclear War, April 2012), <http://www.ippnw.org/nuclear-famine.html>.

<sup>4</sup> The concept of a balance of interests is discussed in Ramesh Thakur, "A Balance of Interests," in Andrew F. Cooper, Jorge Heine and Ramesh Thakur, eds., *The Oxford Handbook of Modern Diplomacy* (Oxford: Oxford University Press, 2013), pp. 70–87.

<sup>5</sup> *Report of the Canberra Commission on the Elimination of Nuclear Weapons* (Canberra: Department of Foreign Affairs and Trade, 1996), pp. 18–22.

<sup>1</sup> I am grateful for the many comments on an earlier draft of this paper from participants in a seminar at the Institute for Defence Studies and Analyses, New Delhi, 23 October 2013; and a second seminar at the Jinnah Institute, Islamabad, 25 October 2013.

3. A prerequisite for global nuclear disarmament is persuasive analysis with respect to all nine nuclear-armed states that nuclear weapons are not essential underpinnings of their national security. The security benefits of nuclear weaponization have proven to be as illusory, dubious and fragile for India as they are for all others, while the financial, developmental, political and even security costs, risks and dangers are only too real. The argument is not invalidated by the fact that India's tests may (or may not) have been understandable and justified at the time based on the history of territorial disputes and wars with China and Pakistan, the acquisition of nuclear weapons by China and its role in the proliferation of nuclear weapons capability to Pakistan,<sup>6</sup> the failure of the nuclear weapons states (NWS) to implement their Nuclear Non-Proliferation Treaty (NPT) Article 6 obligations to eliminate nuclear weapons, and the negotiation of a Comprehensive Test Ban Treaty (CTBT) that sought to close off India's open-ended nuclear weapons option by compelling it to sign the treaty.<sup>7</sup>

### The State of India's Nuclear Weapons Capability<sup>8</sup>

4. India is currently estimated to possess some 90-110 warheads for delivery by missiles and aircraft,<sup>9</sup> and its nuclear arsenal is growing. On 19 April 2012, India successfully tested a new Agni-V missile whose 5,000-km ICBM capability puts Beijing, Shanghai and parts of Europe within range of Indian nuclear weapons. Indian plans to deploy nuclear weapons at sea are based on the development of a ballistic missile launched from a nuclear-powered submarine. Last year India commissioned the nuclear-powered attack submarine the *INS Chakra*. The launch in August 2013 of the indigenously developed aircraft carrier *INS Vikrant*, expected to be operational by 2018, makes India one of

only a handful of countries to have such capability. In the same month, the reactor on the nuclear-powered submarine *INS Arihant* with underwater ballistic launch capability went critical. On 7 October 2013, Prime Minister Manmohan Singh chaired a meeting of the Nuclear Command Authority which reviewed efforts to operationalize India's first ballistic missile submarine.<sup>10</sup>

5. India has had an ambivalent relationship with several multilateral nuclear arms control regimes. With the NPT and the CTBT, India was in the odd position of having been among the earliest initiators of the regimes in principle, but rejecting them resolutely and defiantly because the main players were not prepared to accommodate India's priorities in the key terms of the treaties. With respect to others like the Nuclear Suppliers Group and the Missile Technology Control Regime, India viewed them essentially as technology-denial regimes. Because so many have been perceived as direct threats to India's core national security interests, its posture towards them has been described as "wary, almost suspicious, of specific multilateral efforts on arms control, while supporting multilateralism in the abstract." The explanation for this strange disconnect is that India's initiatives typically "were more aspirational than programmatic."<sup>11</sup> The net result was to make India's nuclear diplomacy essentially defensive rather than entrepreneurial.

6. India has not signed the CTBT but has maintained a voluntary moratorium on testing since 1998 and is not generally believed to have the capability to substitute "subcritical" tests for full-scale tests. It produces highly enriched uranium and weapon-grade plutonium and is increasing fissile material production capacities at existing and planned unsafeguarded facilities. Its nuclear arsenal could be limited in the end more by fissile material production capacity than deterrence calculations.<sup>12</sup>

<sup>6</sup> See A. Levy and C. Scott-Clark, *Deception: Pakistan, the United States, and the Secret Trade in Nuclear Weapons* (New York: Walker, 2007), and T.C. Reed and D.B. Stillman, *The Nuclear Express: A Political History of the Bomb and Its Proliferation* (Minneapolis: Zenith Press, 2009).

<sup>7</sup> See Ramesh Thakur, "The South Asian Nuclear Challenge," in John Baylis and Robert O'Neill, eds., *Alternative Nuclear Futures: The Role of Nuclear Weapons in the Post-Cold War World* (Oxford: Oxford University Press, 2000), pp. 101-24.

<sup>8</sup> This section summarizes various extracts from Ramesh Thakur and Gareth Evans, eds., *Nuclear Weapons: The State of Play* (Canberra: Centre for Nuclear Non-Proliferation and Disarmament, March 2013).

<sup>9</sup> Tilman Brück, "Summary," *SIPRI Yearbook 2013: Armaments, Disarmament and International Security* (Oxford: Oxford University Press, 2013), p. 12.

<sup>10</sup> "Indian PM Examines Effort to Ready Nuclear-Armed Submarine," *Global Security Newswire*, 8 October 2013, <http://www.nti.org/gsn/article/indian-leader-reviews-efforts-acquire-nuclear-armed-submarines/?mgs1=069edldvtl>.

<sup>11</sup> Rajesh Rajagopalan, "From Defensive to Pragmatic Multilateralism and Back: India's Approach to Multilateral Arms Control and Disarmament," in Waheguru Pal Sidhu, Pratap Bhanu Mehta and Bruce Jones, eds., *Shaping the Emerging World: India and the Multilateral Order* (Washington DC: Brookings Institution Press, 2013), pp. 198, 201.

<sup>12</sup> David O. Smith, *The US Experience with Tactical Nuclear Weapons: Lessons for South Asia* (Washington DC: Stimson Center, 4 March 2013), p. 3.

## Credible Minimum Deterrent

7. India became the proud self-declared possessor of nuclear weapons in 1998, but projected little sophisticated sense of how to use them guided by strategic doctrines.<sup>13</sup> The sense of nuclear drift was gradually replaced with a stress on responsibility and restraint. India's nuclear arsenal is dispersed across different locations, with warheads separated from delivery systems. Different organizations have custody of weapons and delivery systems in peacetime, although the significance of this for operational purposes can be exaggerated.<sup>14</sup> The rudiments of its strategic posture marked an acknowledgment of the nuclear reality vis-à-vis Pakistan; a "minimum" deterrent against China; unilateral promises of no use of nuclear weapons against non-nuclear-armed states and no first use against nuclear adversaries; unilateral moratorium on any further testing; and a commitment to work towards a universal nuclear weapons convention.

8. K. Santhanam, director for the 1998 test sites preparations, and Ashok Parthasarathi, closely involved in the 1974 test as science adviser to Indira Gandhi, have claimed that the hydrogen bomb tests yielded less than half the amount of projected destructive energy: 15-20kt, not 45kt.<sup>15</sup> The reason for Santhanam's revelation may have been to put pressure on the government to conduct further tests for validating the design of India's hydrogen bomb: "Two things are clear; that India should not sign CTBT and that it needs more thermonuclear device tests."<sup>16</sup> Their claims were backed by some influential heavyweights, including P.K. Iyengar, former chief of the Atomic Energy Commission, and they agreed with the conclusions of some disinterested international observers who analysed the test data at the time.<sup>17</sup> But the claims were rejected by Prime Minister Manmohan Singh, former president and then-scientific adviser to the Ministry of Defence Abdul Kalam,

[http://www.stimson.org/images/uploads/research-pdfs/David\\_Smith\\_Tactical\\_Nuclear\\_Weapons.pdf](http://www.stimson.org/images/uploads/research-pdfs/David_Smith_Tactical_Nuclear_Weapons.pdf).

<sup>13</sup> See Shashank Joshi, "India's Military Instrument: A Doctrine Stillborn," *Journal of Strategic Studies* 36:4 (2013), pp. 512-40.

<sup>14</sup> Vipin Narang, "Five Myths about India's Nuclear Posture," *Washington Quarterly* 36:3 (2013), pp. 143-57.

<sup>15</sup> K. Santhanam and Ashok Parthasarathi, "Pokhran-II thermonuclear test, a failure," *Hindu*, 17 September 2009.

<sup>16</sup> Sachin Parashar, "Pokhran II not fully successful: Scientist," *Times of India*, 27 August 2009.

<sup>17</sup> Press Trust of India, "AEC ex-chief backs Santhanam on Pokhran-II," *Hindu*, 25 September 2009.

and Brajesh Mishra, the Bharatiya Janata Party (BJP) government's national security adviser.<sup>18</sup> In that case why not ratify the CTBT, instead of sheltering behind US recalcitrance? A future nationalist government could break the test moratorium, invite significant international cost, yet gain no technical dividend; why not foreclose that option by ratifying the CTBT now?

9. Doubts over the technical bases of credibility are reinforced by matching scepticism about the decision-making structure for authorizing the launch of nuclear weapons. Chari notes that there is a tension between the desire to assert civilian control until the last moment and the operational requirements of a quick military response in the midst of a crisis. The Nuclear Command Authority vests the ultimate decision-making power in the hands of the prime minister. The National Security Adviser links the political executive to the military command. But the chain of succession in the political and military leadership in the event of disruption contingencies is opaque, raising questions about decision-making authority if the top leadership was decapitated in a first strike.<sup>19</sup>

10. India's National Security Advisory Board published its draft report on nuclear doctrine in 1999 and it was officially adopted by the cabinet on 4 January 2003. Its declared aim is to "pursue a doctrine of credible minimum nuclear deterrence." While "credibility" is defined by retaliatory capability, command-control-communications survivability, and political will on the part of the Nuclear Command Authority, "minimum" defines size, cost, posture, doctrine and use. India will not be the first to use nuclear weapons but would "respond with punitive retaliation should deterrence fail."<sup>20</sup> Confusingly and inconsistently, the 2003 policy qualified the 1999 absolute no first use formulation by opening up the possibility of using nuclear weapons in response to a biological or chemical weapon attack.<sup>21</sup>

11. India's self-congratulatory tone notwithstanding, just what is a "credible minimum de-

<sup>18</sup> Siddharth Varadarajan, "'Fizzles' claim for thermonuclear test refuted," *Hindu*, 27 August 2009; Press Trust of India, "Pokhran II successful, insists Kalam," *Times of India*, 27 August 2009.

<sup>19</sup> P.R. Chari, "India's Nuclear Doctrine: A Critique," *Trishul* 16:1 (Wellington, India: Autumn 2003), pp. 54-60.

<sup>20</sup> Draft Report of the National Security Advisory Board on *Indian Nuclear Doctrine*, 17 August 1999; <http://www.fas.org/nuke/guide/india/doctrine/990817-indnuclid.htm>.

<sup>21</sup> <http://www.armscontrol.org/factsheets/indiaprofile>.

terrent” that would dissuade nuclear blackmail and coercion and permit second-strike nuclear retaliation? The requirements of numbers, deployment patterns and locations, distribution between land-based, air-launched and sea-borne assets, and reach, are mutually incompatible as between China and Pakistan: “what is credible toward China will likely not be minimum toward Pakistan; and what is minimum toward Pakistan cannot be credible toward China.”<sup>22</sup> The issue of credibility arises also with respect to the declared posture of “no first use.” This strengthens the requirement for second-strike retaliatory capability that can survive a surprise first strike. The credibility of such a retaliatory capability is weakened with a de-alerted arsenal and posture. Can Indians be confident and would the adversary be certain that India would be able to bring together the various components of its nuclear forces, and its top political and military leadership would survive intact and have the requisite cohesion and will to launch a punitive second strike?

## Mix-motive Causes of Nuclear Proliferation

12. Prime Minister Atal Behari Vajpayee’s letter to President Bill Clinton, released to the press by the Americans, justified the 1998 tests by pointing to China as an overt NWS that had committed aggression against India in 1962 and materially helped Pakistan, guilty of three acts of aggression against India, “to become a covert nuclear weapons state.”<sup>23</sup> Beyond the highly particularized local security dynamics and the precipitating factors that led to the twin series of tests by India and Pakistan in May 1998, nuclear weapons can be sought for one or more of five reasons:<sup>24</sup> compellence; defence; deterrence; leverage; and status.

### Compellence

13. “Compellence” means the use of coercion, by threat or action, to force an adversary to stop or reverse something already being done, or to do something he would not otherwise

<sup>22</sup> Narang, “Five Myths about India’s Nuclear Posture,” p. 144.

<sup>23</sup> The text of the letter was published in *The Hindu*, 14 May 1998.

<sup>24</sup> Ramesh Thakur, “Arms Control, Disarmament, and Non-Proliferation: A Political Perspective,” in Jeffrey A. Larsen and Thomas D. Miller, eds., *Arms Control in the Asia-Pacific Region* (Colorado Springs: USAF Institute for National Security Studies, US Air Force Academy, 1999), pp. 39–61.

do.<sup>25</sup> The belief that nuclear weapons permit a state to deploy coercive bargaining power that would not otherwise be available has little evidence in history. There is no demonstrable instance of a non-nuclear state having been cowed into changing its behaviour by the threat of being bombed with nuclear weapons.

14. The normative taboo against this most indiscriminately inhumane weapon ever invented is so comprehensive and robust that under no conceivable circumstance will its use against a non-nuclear-armed state compensate for the political costs. NWS have accepted defeat at the hands of non-NWS (US in Vietnam, Soviet Union in Afghanistan) rather than escalate armed conflict to the nuclear level. Some recent research suggests that the normative taboo against nuclear weapons use may be weakening among the American public.<sup>26</sup> But there remains a strong belief amongst those regularly engaged with the world’s nuclear policymakers that the taboo has maintained its robustness.<sup>27</sup> More importantly for present purposes, as noted above, Indian nuclear doctrine, backed by deployment patterns, explicitly disavows any intent to use nuclear weapons as tools of coercion.

### Defence

15. By “defence” I mean responses to an actual armed attack, conventional or nuclear, by a foreign power. It is hard to see any role for India’s nuclear armaments as instruments of defence. Its doctrine disavows any intention to use nuclear weapons in response to conventional attacks. The use of nuclear weapons would almost certainly be a violation of international humanitarian law, regardless of the type of attack and possibly even when the state was facing an existential threat.<sup>28</sup>

<sup>25</sup> The concept is associated with Thomas Schelling, *The Strategy of Conflict* (Cambridge MA: Harvard University Press, 1963).

<sup>26</sup> Daryl G. Press, Scott D. Sagan and Benjamin A. Valentino, “Atomic Aversion: Experimental Evidence on Taboos, Traditions and the Non-Use of Nuclear Weapons,” *American Political Science Review* 107:1 (2013), pp. 188–206.

<sup>27</sup> See, for example, Gareth Evans, “Nuclear Deterrence in Asia and the Pacific,” *Asia & the Pacific Policy Studies* 1:1 (2013), pp. 1–21, <http://onlinelibrary.wiley.com/doi/10.1002/app5.11/pdf>. For another study of the continuing good health of the anti-nuclear norm, see Maria Rost Rublee, *Nonproliferation Norms: Why States Choose Nuclear Restraint* (Athens GA: University of Georgia Press, 2009).

<sup>28</sup> Advisory Opinions and Orders of the International Court of Justice, *Legality of the Threat or Use of Nuclear Weapons*



16. Given India's geographical position, size, weight and military capability, few countries could contemplate a military attack on it. Nuclear weapons cannot be used for defence by nuclear-armed rivals whose mutual vulnerability to second strike retaliatory capability is so robust that any escalation through the nuclear threshold would be mutual national suicide. India's nuclear arsenal offers no defence against a major conventional attack by China, Russia or the US – the only three countries with the *capability* to do so. As for *intent*, Russia is a diplomatic ally and friend of long standing. Relations with the US have warmed to a greater degree than anyone could have anticipated during the Cold War.

17. China's nuclear weapons, declared doctrine and force posture and deployment patterns are designed neither to coerce others nor to fight a nuclear war with the expectation of winning, but to counter any attempt at nuclear blackmail.<sup>29</sup> Indians may still suffer from the 1962 China syndrome when they were militarily humiliated by the People's Republic and their territorial dispute remains unresolved. But deepening and broadening bilateral Sino-Indian relations, and cooperation on several major international issues based on converging interests, provide considerable substance, texture and ballast to the relationship today.

### Deterrence

18. "Deterrence" refers to a threat intended to dissuade an adversary from starting hostilities or launching an attack that may be being contemplated but has not yet been initiated. With nuclear weapons being unusable for defence, their sole operational purpose and role is mutual deterrence. The dominant belief among the nine nuclear-armed states is that nuclear-armed rivals cannot be deterred from the threat and use of nuclear weapons by conventional arms. This may be true, but the reverse does not follow. The acquisition of nuclear weapons may raise the bar for the threat or use of nuclear weapons by the adversary, but does not rule it out.

19. Deterrence stability depends on rational decision-makers being always in office on all sides: a dubious and not very reassuring precondition. It depends equally critically on there being no rogue launch, human error or system malfunction: an impossibly high bar. In a closely argued article, Gareth Evans systematically demonstrates the fallacy or extraordinary weakness of the deterrence-based arguments.<sup>30</sup> Nuclear weapons have failed to stop wars between nuclear and non-nuclear rivals (Korea, Afghanistan, Falklands, Vietnam, the 1990–91 Gulf War). Their deterrent utility is severely qualified by the belief among potential target regimes that they are essentially unusable because of the powerful normative taboo. And the security needs of allies could be adequately met through robust conventional extended deterrence.

20. The utility of nuclear deterrence is questionable in shaping relations between (a) major nuclear rivals, (b) middle power nuclear rivals, and (c) a small-major power nuclear pairs of countries. On the first, the role of nuclear weapons in having preserved the peace during the Cold War is debatable. How do we assess the relative weight and potency of nuclear weapons, West European integration, and West European democratization as explanatory variables in that long peace? Nor has there been any evidence produced to show that either side had the intention to attack the other at any time during the Cold War, but was deterred from doing so because of nuclear weapons held by the other side.<sup>31</sup> Conversely, the Soviet Union's territorial expansion across Eastern and Central Europe behind Red Army lines took place in the years of US atomic monopoly, 1945–49; and it imploded after, although not because of, gaining strategic parity.

21. With middle power nuclear rivals too national security strategists face a fundamental and unresolvable paradox. In order to deter a conventional attack by a more powerful nuclear adversary, each nuclear-armed state must convince its stronger opponent of the ability and will to use nuclear weapons if attacked. But if the attack does occur, escalating to nuclear weapons will worsen the scale of military devastation even for the side initiating nuclear strikes. Because the stronger party believes

(8 July 1996).

<sup>29</sup> *China's National Defense in 2010* (Defence White Paper) (Beijing: Government of the People's Republic of China, Information Office of the State Council, 31 March 2010), chapter X, "Arms Control and Disarmament," [http://www1.china.org.cn/government/whitepaper/2011-03/31/content\\_22263885.htm](http://www1.china.org.cn/government/whitepaper/2011-03/31/content_22263885.htm).

<sup>30</sup> Evans, "Nuclear Deterrence in Asia and the Pacific."

<sup>31</sup> See Ward Wilson, *Five Myths about Nuclear Weapons* (New York: Houghton Mifflin Harcourt, 2013); James E. Doyle, "Why Eliminate Nuclear Weapons?" *Survival* 55:1 (2013), pp. 7–34.

this, the existence of nuclear weapons may add an extra element of caution, but does not guarantee complete and indefinite immunity for the weaker party. If, for example, Mumbai or Delhi was to be hit by another major terrorist attack which India believed had Pakistan connections, the pressure for some form of retaliation across the border might well prove stronger than the caution induced by Pakistan having nuclear weapons. To those who nonetheless profess faith in the essential logic of nuclear deterrence, let me pose a simple question: would they, following Waltz,<sup>32</sup> prove their faith by supporting the acquisition of nuclear weapons by Iran in order to contribute to the peace and stability of the Middle East which at present has only one nuclear-armed state?

22. It is equally contestable that nuclear weapons buy immunity for small states against attack by the powerful. The biggest elements of caution in attacking North Korea in response to its serial provocations lies in uncertainty about how China would respond, followed by worries about the DPRK's conventional capacity to devastate Seoul and other parts of South Korea. Pyongyang's puny present and prospective arsenal of nuclear weapons and the rudimentary capacity to deploy and use them credibly is a distant third factor in the deterrence calculus.

23. Meanwhile, India's nuclear weapons did not stop Pakistan from occupying Kargil in 1999.<sup>33</sup> The two countries came perilously close to a full-blown war in 2002, after the terrorist attack on India's Parliament in December 2001. Nuclear weapons have been doubly damaging to India vis-à-vis Pakistan. They have encouraged Pakistani provocations, be it incursions in Kargil in 1999 or cover for terrorist attacks as in Mumbai in November 2008. And the fear of a nuclear war with catastrophic global consequences has increased international interest and involvement, something that suits Pakistan but agitates India.

24. The geostrategic environment of the sub-continent had no parallel in the Cold War. Because of the lack of survivable forces and command centres in 1998, both countries were vulnerable to a pre-emptive first strike. Pro-

pinquity and the pattern of population distribution would leave both India and Pakistan vulnerable to fallout from their own weapons used against the other, thereby producing a measure of self-deterrence. India and Pakistan share a long border; the US-USSR did not.<sup>34</sup> Contiguity permits India and Pakistan to meddle inside each other's territory in numbers and on a scale that was not an option during the Cold War. It also dramatically shortens the timeframe within which either country would have to decide, in the midst of a tense crisis or war, whether or not to use nuclear weapons. The entire province of Kashmir is in dispute; the US-USSR had no direct territorial dispute. India and Pakistan have fought three and a half wars (1947, 1965, 1971 and 1999 [Kargil as the half-war]); Moscow and Washington fought none. India shares a long border with nuclear-armed China which too is disputed. This introduces a three-way territorial conflict into the strategic equation which was never the case during the Cold War. All these worries are exacerbated by political volatility and instability in both countries, even though there is no equivalence between the two.

25. The risks and potentially dangerous consequences of strategic signalling being 'lost in transmission' across the India-Pakistan border can be seen in the development of tactical missiles and battlefield nuclear weapons by both sides.<sup>35</sup> India's 300km supersonic Brahmos cruise missile could give it the capability to carry out prompt strikes inside Pakistan. Islamabad argues that its 60km Nasr/Hatf-9 ballistic missile serves three purposes: it counters India's superior and growing conventional capability financed by an escalating defence budget; it provides a riposte to India's offensive doctrines such as "Cold Start" which postulate a rapid if limited conventional invasion of Pakistani territory;<sup>36</sup> and it counters the devel-

<sup>32</sup> Kenneth N. Waltz, *The Spread of Nuclear Weapons: More May Be Better* (London: International Institute for Strategic Studies, Adelphi Paper 171, 1981).

<sup>33</sup> See Peter R. Lavoy, ed., *Asymmetric Warfare in South Asia: the Causes and Consequences of the Kargil Conflict* (Cambridge: Cambridge University Press, 2009).

<sup>34</sup> However, NATO and the Warsaw Pact alliances were face to face over a number of borders. Nevertheless and notwithstanding the Warsaw Pact's conventional superiority, NATO conventional forces would have been strong enough to resist a surprise Warsaw Pact attack for some days, allowing NATO time to consider whether or not to use tactical nuclear weapons. In the India-Pakistan case, Pakistan's forces could possibly be quickly overrun with consequent shortening of the decision making time on nuclear weapons use.

<sup>35</sup> See Shashank Joshi, "Pakistan's Tactical Nuclear Nightmare: Déjà Vu?," *Washington Quarterly* 36:3 (2013), pp. 159-72; Rajuram Nagappa, Arun Vishwanathan, and Aditi Malhotra, *Hatf- IX/Nasr - Pakistan's Tactical Nuclear Weapon: Implications for Indo- Pak Deterrence* (Bangalore: National Institute for Advanced Studies, July 2013).

<sup>36</sup> Walter C. Ladwig, "A Cold Start for Hot Wars? The Indian

opment of India's ballistic missile defence. The chair of India's National Security Advisory Board, former Foreign Secretary Shyam Saran, responds that India would not be held to such nuclear blackmail: "The label on a nuclear weapon used for attacking India, strategic or tactical, is irrelevant from the Indian perspective." If attacked by such weapons India would hit back with massive retaliation.<sup>37</sup> This substantiates the argument by US intelligence expert Rob Williams that "regardless of size, delivery system or yield... [or] the concept of employment," these tactical weapons "carry strategic implications."<sup>38</sup>

26. In the meantime, India continues to suffer serial terror attacks that originate, by its own account, from across the border in Pakistan. The challenging imperatives of proving credibility in relation to serial terrorist attacks have been highlighted by Professor Rajaraman.<sup>39</sup> He notes that many Indian and foreign observers remain sceptical about the credibility of India's nuclear deterrent. If Pakistan were to use a small battlefield nuclear weapon delivered on its Hatf-9 missile, would India, a "soft state,"<sup>40</sup> carry through on its threat of massive nuclear retaliation knowing that this guaranteed mutual annihilation? Or would it simply absorb Pakistan's gamble of 'mini-escalation' (my words) that doesn't lead to mass casualties?

27. To prove the credibility of its nuclear deterrent, Rajaraman argues, India will have to respond to a terrorist attack with "a quick, focussed [conventional] strike on selected terrorist hideouts or support facilities in Pakistan."<sup>41</sup> Perversely, then, the need to prove the credibility of its nuclear deterrent is increasing the pressure on India's policy-makers to launch a conventional military strike on Pakistan. This is a far cry from the naïve belief that the acqui-

sition of nuclear weapons would deter Pakistani aggression.

28. India must also live with the nightmare possibility of jihadists getting their hands on Pakistan's nuclear weapons. The threat is obviously more grave for the state of Pakistan than India; it is still a threat to India as well. Terrorist groups have shown a capacity to evolve in their targets and tactics of choice in attacking military bases, missile and weapons storage facilities and bunkers. Some of these incidents indicate a worrying element of insider collusion in a context in which Islamist sympathies are believed to exist within the armed forces. The weapons and weapon-related materials are not quite as secure during transportation as when they are within hardened military facilities.<sup>42</sup> And terrorists could seize weapons during a crisis, when they have been assembled for possible use – in fact terrorists could initiate a crisis with exactly this aim.

### Leverage

29. Weaker and poorer countries may seek to use nuclear weapons to shape the perceptions and alter the decision calculus of diplomacy and war of advanced military powers. Washington could have been the object of such a leveraging calculation as part of India's complex mix of motives in acquiring nuclear weapons. One of the most important incidents driving the symbolic politics of keeping the nuclear option open in India was the dispatch of the *USS Enterprise* to the Bay of Bengal during the 1971 Bangladesh War. That embedded fear of US military intervention against India has become obsolete after the Bush administration's policy of forging an entirely new, broad-based and deep relationship with India, in pursuit of which Washington negotiated a bilateral civil nuclear cooperation deal and used its considerable diplomatic weight to sway the Nuclear Suppliers Group to endorse it.<sup>43</sup> In 2010 the US defence establishment welcomed India's rising

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Army's New Limited War Doctrine," *International Security* 32:3 (Winter 2008), pp. 158–90.

<sup>37</sup> Quoted in Rachel Oswald, "South Asian Tactical Missiles Risk Dangerous Miscalculation, U.S. Intel Officer Says," *Global Security Newswire*, 6 June 2013, <http://www.nti.org/gsn/article/work-s-asia-tactical-missiles-threatens-dangerous-miscalculation-intelligence-official/>.

<sup>38</sup> Quoted in Oswald, "South Asian Tactical Missiles Risk Dangerous Miscalculation."

<sup>39</sup> R. Rajaraman, "Decisive action against any Pakistani misadventure is best way to establish nuclear credibility," *Times of India*, 20 September 2013.

<sup>40</sup> Gunnar Myrdal, *Asian Drama: An Inquiry into the Poverty of Nations*, 3 vols. (New York: Pantheon Books, 1968).

<sup>41</sup> Rajaraman, "Decisive action against Pakistani misadventure."

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<sup>42</sup> Shaun Gregory, "The Terrorist Threat to Nuclear Weapons in Pakistan," European Leadership Network, 4 June 2013, [http://www.europeanleadershipnetwork.org/the-terrorist-threat-to-nuclear-weapons-in-pakistan\\_613.html](http://www.europeanleadershipnetwork.org/the-terrorist-threat-to-nuclear-weapons-in-pakistan_613.html).

<sup>43</sup> Raja Mohan notes the irony that India worked hard for a decade to get the 2008 country-specific exemption deal. It then tied itself up in such knots of liability laws for reactor suppliers that five years later, Delhi was yet to sign a single commercial agreement for the supply of a nuclear reactor from any country. Meanwhile the India-specific NSG waiver was used by China to sell two additional nuclear reactors to Pakistan on the barely plausible claim that the sales were "grandfathered." C. Raja Mohan, "Don't blame it on China," *Indian Express*, 17 October 2013.

military profile “as a net provider of security in the Indian Ocean and beyond.”<sup>44</sup>

### Status

30. Too many Indians (but not the security elite) were seduced by their own perception of nuclear weapons as the modern currency of power, prestige and influence. India could aspire to enhanced status like Germany through economic prowess and market power. Few analysts would take issue with the claim that currently, non-nuclear-armed Germany has a higher status, weight and clout in Europe and the world than nuclear-armed Britain and France. Tellingly, nuclear brinkmanship earns North Korea neither prestige, power nor friends; an unambiguous non-nuclear-armed status has not prevented South Korea from doing better on all three counts. India does have a higher international profile today than in 1998. This is despite, not because of nuclear weapons, and rooted in its economic and information technology credentials. Pakistan’s profile has *not* arisen alongside India’s, despite Islamabad’s more focussed efforts on expanding, deepening and broadening its nuclear weapons capability.

31. Conversely, recently Brand India has suffered a steady loss of global market value as the economy stuttered and stalled, mega-corruptions mushroomed and social ills (dowry deaths, caste and communal violence, gang rapes, stunted and malnourished children) festered. The net impression abroad was of a corrupt super-elite looting the state’s assets under the guise of a sclerotic shell of democracy. If India’s economic future is mortgaged to bad governance rooted in populist politics, other countries will return India to the basket of benign neglect while offering ritual but empty praise for its rich civilization and culture.

### Risks and Costs

32. Against the contestable claims of utility, there is considerable historical evidence that we averted a nuclear catastrophe during the Cold War as much owing to good luck as wise management. The 1962 Cuban missile crisis is the most graphic example of this. The US strategy was based on the best available intelligence which indicated that there were no nu-

clear warheads in Cuba. In fact there were 162 warheads already stationed there, including 90 tactical warheads, and the local Soviet commander had taken them out of storage to deployed positions for use against an American invasion.<sup>45</sup> Recently declassified documents show that in November 1983, in response to NATO war games exercise Able Archer, Moscow came close to launching a full-scale nuclear attack against the West under the misapprehension that a NATO nuclear attack was imminent.<sup>46</sup> As for near-miss in an accident, it has now been confirmed that on 21 January 1961, a four-megaton bomb (that is, 260 times more powerful than Hiroshima) was just one ordinary switch away from detonating over North Carolina whose effects would have covered Washington, Baltimore, Philadelphia and even New York City.<sup>47</sup>

33. Nuclear weapons do not help to buy defence on the cheap:<sup>48</sup> hence India’s investment both in nuclear submarines and conventional aircraft carriers. In terms of opportunity costs, heavy military expenditure amounts to stealing from the poor. India’s US \$40bn defence budget has doubled over the past decade and continues to rise sharply each year. In 2011 India’s core expenditure on nuclear weapons was US \$3.8bn and the full nuclear costs amounted to US \$4.9bn.<sup>49</sup> Indian weapon scientists are working on a successor Agni-VI missile with a

<sup>45</sup> Robert McNamara, “The Conference on Disarmament should focus on steps to move toward a ‘Nuclear Free World’,” *Disarmament Diplomacy*, No. 4 (April 1996), <http://www.acronym.org.uk/dd/dd04/index.htm#T-0023>.

<sup>46</sup> “How Nato war games took the world to the brink of nuclear holocaust in 1983,” *Mail on Sunday*, 3 November 2013, <http://www.dailymail.co.uk/news/article-2485714/How-Nato-war-games-took-world-brink-nuclear-holocaust-1983.html>.

<sup>47</sup> Ed Pilkington, “US nearly detonated atomic bomb over North Carolina – secret document,” *Guardian*, 21 September 2013.

<sup>48</sup> See John Page and Ramesh Thakur, “Nuclear Weapons: The Opportunity Costs,” *Policy Brief 1* (Canberra: Asia-Pacific Leadership Network and Centre for Nuclear Non-Proliferation and Disarmament, June 2013), <http://cnnd.anu.edu.au/policy-briefs/>.

<sup>49</sup> Bruce Blair and Matthew A. Brown, “World Spending on Nuclear Weapons Surpasses \$1 Trillion Per Decade” (Washington DC: Global Zero, June 2011), <http://www.globalzero.org/en/page/cost-of-nukes>. Core costs refer to researching, developing, testing, operating, maintaining and upgrading the nuclear arsenal (weapons and delivery vehicles) and the nuclear command-control-communications and early warning infrastructure. Full costs add unpaid/deferred health and environmental costs, missile defences assigned to defend against nuclear weapons, and nuclear threat reduction and incident management. Air defences, anti-submarine warfare and nuclear weapons-related intelligence and surveillance expenses are not included.

<sup>44</sup> Secretary of Defense, *Quadrennial Defense Review Report* (Washington DC: Department of Defense, February 2010), p. 60.



10,000km range.<sup>50</sup> It would also have MIRV capability, which could motivate China into equipping its strategic missiles with MIRV warheads. In other words, India is caught in an escalating cycle of increased nuclear and conventional military expenditures with no net gain in defence capability against the most likely threat contingencies. Nuclear weapons do not help to combat India's real threats of Maoist insurgency, terrorism, pandemics, mass poverty, illiteracy, widespread malnutrition and massive corruption.

34. There is the added risk of proliferation to extremist elements through leakage and theft. To strengthen nuclear safety and security and reduce risks of accidents, India maintains its nuclear forces in a disassembled state in dispersed locations across the country, with warheads physically separated from delivery vehicles. But to buttress the "credible" part of its posture of assured retaliation, India must somehow increase its baseline readiness. The potential contradiction could intensify as India's nuclear arsenal grows. In July 2013 Dr. Avinash Chander, head of the Defence Research and Development Organization said that DRDO is "working on canisterized systems that can launch from anywhere at any time" and "making much more agile, fast-reacting, stable missiles so [that a] response can be within minutes" for all of India's nuclear missile systems eventually.<sup>51</sup>

35. As for political costs, nuclear weapons acquisition can lead to the creation of a national security state with a premium on governmental secretiveness, reduced public accountability and increased distance between citizens and government.<sup>52</sup> Internationally, India has shifted from being a disarmament champion to a nuclear-armed state.<sup>53</sup> Does it seek nuclear aboli-

tion; does it wish to join the five NWS in converting the NPT from a de jure nuclear prohibition into a de facto non-proliferation regime; or would it be happiest with a complete and early collapse of the NPT regime and relaxed at the resulting cascade of proliferation?

## Conclusion

36. South Asians are less secure today than before May 1998. History and geopolitics make the India-Pakistan nuclear equation more unstable than US-Soviet deterrence in the Cold War. India still lacks effective deterrent capability against China. Nuclear weapons failed to deter Pakistani infiltration and Indian retaliation and escalation in the two-month Kargil war in 1999, and a full military mobilization by both for all of 2002. They are irrelevant to India's security needs against any other country. They are no help in combating internal insurgency, cross-border terrorism, poverty, illiteracy and malnutrition. Contrary to facile claims of strategic, military or political utility and economic cost-effectiveness, once we drill down into the arguments, there is no persuasive need for India to stay nuclear-armed. (And most of the arguments apply to all other nuclear-armed states as well.) Such a conclusion should encourage India to be a champion of phased, regulated and verifiable global nuclear disarmament. This would be in keeping with the legacy of Indian initiatives on nuclear arms control and disarmament, including the Rajiv Gandhi Action Plan of 1988; with the fact that India was the most reluctant nuclear weapons possessor of all the nine nuclear-armed states; and the somewhat incongruent reality that its official nuclear doctrine lists global nuclear disarmament as a national security objective.<sup>54</sup> A self-confident India would be a norm setter and rule shaper, not merely a passive norm and rule taker, of multilateral affairs, at the centre of which stands the United Nations.

<sup>50</sup> "Following Agni 5 success India Plans Longer-Range Missile," *Global Security Newswire*, 18 September 2013, <http://www.nti.org/gsn/article/pumped-over-success-agni-5-india-plans-even-longer-range-missile/>.

<sup>51</sup> Quoted in Narang, "Five Myths about India's Nuclear Posture," p. 148. "Canisterization" allows India to co-locate sub-components in hermetically sealed canisters for transportation and storage, whereby warheads can be "pre-mated" to their delivery vehicles and kept one code away from being armed and released. This also reduces the visible signs of movement to outside observers as systems are fully assembled and readied for firing.

<sup>52</sup> Kanti Bajpai, *Nuclear Weapons and the Security of India: Giving Up the Bomb* (Canberra: Peace Research Centre, Working Paper No. 161, September 1996), pp. 13-18.

<sup>53</sup> Rajiv Nayan, "The Global Nuclear Non-Proliferation Paradigm and India," *Strategic Analysis* 35:4 (2011), pp. 559-63.

<sup>54</sup> See Manpreet Sethi, "Universal Nuclear Disarmament: What Can India Offer?" *Global Consortium on Security Transformation, Non-Proliferation and Disarmament Series 3* (March 2011), [http://www.securitytransformation.org/gc\\_publications.php](http://www.securitytransformation.org/gc_publications.php).

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