The Introduction of Ballistic Missile Defense in South Asia: Implications on Strategic Stability

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ew Delhi is robustly engaged in both modernization and enlargement of its military arsenal which is amassing a large quantity of conventional and nuclear weapons. Since 2007, Indian scientists have confidently claimed that they would be able to build up a deployable Ballistic Missile Defense (BMD) to defend India’s major cities.¹ On June 24, 2012, leading Indian newspapers reported that “Delhi and Mumbai, the two most vital metros of India, have been chosen for DRDO’s Ballistic Missile Defense system that can be put in place at short notice.”² Indeed, the Indian scientific bureaucracy’s loud declarations can create strong political and public support within India for deploying BMD to protect against long-range missile threats from Pakistan. The deployment of BMD may provide a sense of security to the Indians, but it also contains ingredients that could magnify South Asia’s security dilemma puzzle. In South Asia, both parties have been slow to learn the lessons of history. During the Cold War, with the evolution of the Anti-Ballistic Missile Treaty and subsequent arms control agreements, both superpowers eventually came to understand the benefits of mutual vulnerability. In South Asia, India’s pursuit of BMD undercuts the logic of mutually assured destruction.

The assessment that a BMD protective shield would be able to prevent Indian cities from strategic missiles strikes is debatable. Bernard Loo opined that “Strategic stability is understood as a condition where policy makers do not feel pressured into making reactive changes from existing non-violent to violent strategies involving the large-scale use of military force in the pursuit of particular state interests.”³ Admittedly, BMD is a defensive weapon, and in theory, it may not affect Pakistan’s force posture. Practically, however, the introduction of BMD into India’s arsenal could negatively affect Pakistan’s deterrence strategy.

New Delhi’s consistency in institutionalizing a sophisticated BMD shield is an important indicator that it is determined to reverse the prevailing strategic equilibrium after the 1998 tests. BMD could be an attempt to minimize India’s vulnerability to Pakistani missile strikes. The minimization of

¹ “Missile defense shield to be ready in three years: India,” The Dawn, December 13, 2007; “India’s AAD-O2 performs first endo-atmospheric kill,” Missiles & Rockets 12, no. 2 (February 2008): 1.
India’s vulnerability might decrease regional strategic stability, which relies on nuclear deterrence. The conceptual basis for this deterrence is the existence of Mutual Assured Destruction (MAD).4

Islamabad has occasionally signaled the credibility of its minimum nuclear deterrence posture with successful flight-tests of its new generations of offensive missiles. Islamabad fears that the effectiveness of these signals may be compromised after an Indian BMD deployment. Arguably, BMD would not provide a complete protective shield—though it might prove capable of defeating most warheads that Pakistan could launch in a retaliatory strike. Can the introduction of BMD be a destabilizing initiative to the prevalent strategic stability between South Asia’s belligerent neighbors? Either way India’s acquisition of BMD would significantly influence Pakistani calculations of its strategic offensive needs.

The introduction of BMD would intensify the arms race between India and Pakistan. In the worst case, India may miscalculate the impact of Pakistan’s retaliatory missile strikes. The deployment of Indian BMD could facilitate the launch of Indian conventional military operations, such as through Cold Start. This logic would also incentivize India’s military-industrial complex. Some security experts believe Cold Start is inherently destabilizing. For instance, Thomas W. Graham pointed out that “given India’s Cold Start conventional military doctrine and modernization, the world could face another nuclear crisis in South Asia at any time. Such a crisis could be started by a terrorist group that has limited means and capabilities and no proclivity to foster stability among nuclear-armed states.”5 This chapter, however, does not examine Cold Start’s implications for regional security. The central argument of this paper is that BMD compliments Indian Cold Start or proactive operations, which is a serious concern for Pakistani strategists.

Generally, the advent of new generations of weapon systems amplifies the security dilemma amongst strategic peers. In South Asia, this dilemma intensifies an ongoing arms race. Does India’s BMD capability seriously challenge Pakistan’s strategic deterrence? The simplest answer is that if India arms itself with BMD, Pakistan might increase its missile inventory. Should Pakistan choose to ignore the BMD threat, it could run the risk of strategic exploitation. Thus, Pakistani military planners now face a stark choice between business as usual whereby they continue with Pakistan’s present nuclear posture, or they undertake a concerted effort to deal with the implications of a new threat.

This chapter explains how the advent of BMD, in conjunction with other technological advancements, has affected the nuclear learning curvature and has contributed to dampening the prospects of arms control and strategic restraint measures in South Asia. I will investigate the relationship between India’s maturing BMD capability and Pakistani military planners’ response and its impact on regional strategic stability through the logic of nuclear learning. This chapter is structured into three sections. The first investigates India’s BMD capability. The second predicts plausible Pakistani countermeasures and the final section provides conclusions with some

suggestions for potential arms control that will enhance the nuclear learning experience of South Asia.

India’s Ballistic Missile Defense

Since 1983, efforts to solidify India’s defensive capacity had the potential to upset the offense-defense balance. The Integrated Guided Missile Development Program, inaugurated in 1983, included offensive missiles as well as defensive missiles in its planning—specifically, the Akash surface-to-air missile, which had a Theater Missile Defense (TMD) capability. In the following decades, New Delhi stepped up development of the Akash and identified and developed different categories of BMD systems. So why has this occurred? There are multiple drivers, but, since the 1980s these drivers changed at the conceptual and operational level.

Today, the primary driver for Indian BMD is the ambition of its nuclear and defense scientists to prove they can produce world class, highly sophisticated weapons. These scientists wield “a major influence on government decision-making.” The next driver originates from the ambitions of India’s ruling elite who endeavor to achieve great power status for their country. They are convinced that without maximizing hard power, i.e. military power, India will not become a great power in the 21st century. Accordingly, India has modernized its military muscle, with BMD being one among many capabilities that elites employ to enhance India’s status. Ashley J. Tellis indicates that BMD cooperation with the United States fits within India’s objective of acquiring technology and advanced systems to further its military objectives. Tellingly, the Vajpayee and Singh governments supported DRDO’s BMD research.

Since 2000, New Delhi vigorously cultivated strategic cooperation with Washington. To cement a strategic partnership with the United States and acquire sophisticated BMD technology, New Delhi altered its traditional stance on global disarmament. For instance, India endorsed President Bush’s BMD project in May 2001—even before Bush’s closest strategic allies backed him. India also remained silent over the abrogation of the Anti-Ballistic Missile Treaty in June 2002. Though Indian experts and political elites claim they have developed military hardware indigenously, it is an open secret that India’s missile programs were assisted by numerous foreign suppliers. The leading states were Israel, Russia, and the United States, although, in recent years, Israel emerged as a prime source for sophisticated military supplies.

8 Graham, Nuclear Weapons Stability or Anarchy in the 21st Century,” 280.
Indian defense planners appear convinced that their scientists cannot indigenously develop critical BMD components. Therefore, they looked abroad to foreign manufacturers for key components such as radars and launch control centers. India looked into the Israeli Arrow-2, American PAC-3, and Russian S-300V missile technology. A noted South Asia analyst indicates that “Indian scientists have developed the Rajendra-phased array radar and negotiated with Russia for its S-300 anti-tactical ballistic missile (ATBM) system, and also with Israel for the Arrow ATBM and Phalcon airborne early warning (AEW) platform.” Two Pakistani analysts, Moeed Yousaf and Khalid Banuri, reached similar assessments. In addition, New Delhi negotiated with Israel to integrate the Akash’s technology with Israeli’s Arrow-2, and also the Rajendra radar with Arrow-2’s Green Pine radar—which can track a missile 300km away. Hitherto, India has acquired the Russian S-300 missile systems, the Israeli Green Pine Radar system, and the Phalcon Airborne Warning and Control System (AWACS) platform.

The U.S. influence on expanding Indian-Israeli defense ties is undeniable. “The Bush administration cleared the Israeli Green Pine radar system for sale to India, and also entered into talks with India on cooperation in missile defense.” A U.S.-India agreement signed in 2005 also “specifically mentions a commitment to collaborate in missile defense.” The Indian Cabinet Security Committee also approved an air and missile defense umbrella project—worth $2.5 billion—with Israel in 2007. This umbrella uses a network of batteries that can intercept incoming missiles, aircraft, and unmanned aerial vehicles by firing interceptors that could down enemy air assets 70 kilometers away. Under U.S.-Israeli agreements, the Israelis could not transfer this missile technology to India without prior approval from the Americans. Once this approval occurred, India purchased three Green Pine systems.

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13 Basrur “Missile Defense and South Asia.”


15 Basrur “Missile Defense and South Asia.”

16 Yousaf and Banuri, “India’s Quest for Ballistic Missile Defense,” 108.


New Delhi has made significant progress in BMD over the past six years. For instance, on November 27, 2006 an exo-atmospheric high-altitude interceptor missile—the Prithvi Air Defense (PAD) system—destroyed a Prithvi missile in flight. A year later there was a successful test of an endo-atmospheric low-altitude interceptor—the Advanced Air Defense (AAD)—which hit the target in its terminal phase. A second, more advanced PAD test took place in March 2009. In 2012, DRDO successfully conducted tests of all the elements involved in its BMD shield. At this point DRDO announced that its tested shield was comparable to the U.S. PAC 3. Declassified Indian sources confirm that its BMD project would be operationalized in two phases to intercept short, intermediate, and intercontinental missiles. These phases should be capable of intercepting missiles at 2,000km and 5,000km respectively.

Leading Indian scientists have confidently announced that India is capable of deploying a missile shield and only await a government decision to deploy such systems. On May 6, 2012, Dr. V K Saraswat stated that “the Ballistic Missile Defence shield is now mature…. We are ready to put phase one in place and it can be put in very short time.” Though Saraswat announced that his team conducted successful BMD tests, he did not detail the specific characteristics of a protective shield. Moreover, he did not touch on whether BMD would attack enemy ballistic missiles in one phase or several. This critical gap between scientific claims and declarations from policymakers raise questions about the development and credibility of Indian BMD. In Michael Krepon’s assessment “DRDO’s promises have become even more wildly optimistic under the leadership of Dr. V.K. Saraswat, who is now promising effective, near-term ballistic missile defenses for Delhi and Mumbai. India appears to have flight tested six BMD interceptors. The United States, in contrast has flight tested 67 interceptors since 2001, 53 of which have very generously been labeled as successes. Even so, U.S. BMD programs face severe challenges.” Creating a technologically feasible system is a cumbersome process; therefore, it is nearly impossible to develop an operational shield in a realistic time frame. If U.S. BMD is encountering scientific challenges despite billions of dollars in investment and 53 successful tests than DRDO likely is not capable of deploying a shield for Delhi and Mumbai in the near future.

The Pakistani strategic community is equally convinced that Dr. Saraswat’s recent claims are exaggerated. At the same time, they do not underestimate the impact of BMD advances on Pakistani security. After all India is believed to receive BMD assistance from Russia, Israel, NATO, and the United States. Since the India-U.S. Civilian Nuclear Agreement, Pakistanis believe that

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21 Short-range ballistic missiles are missiles with ranges up to 1,000 kilometers. Medium-range ballistic missiles have ranges of 1,000-3,000 kilometers. Intermediate-range ballistic missiles have ranges of 3,000-5,500 kilometers. ICBMs have ranges of 5,500 kilometers or greater. Note that the 1987 treaty banning U.S. and Soviet ground-based intermediate-range ballistic and cruise missiles uses a different definition, categorizing missiles with ranges between 500 and 5,500 kilometers as intermediate-range.
Washington and its like-minded partners are not concerned with India’s growing nuclear arsenal, and Western observers are instead wary of Pakistani responses to India’s developments. To this point, U.S. Deputy Defense Secretary Ashton Carter stated that Washington was interested in helping New Delhi build its BMD protective shield. Specifically, he saw BMD as an “important potential area for our future cooperation.” Such kinds of cooperation and technical transfers to India will eventually help it produce an effective missile defense shield. According to Dean A. Wilkening, “upper-tier TMD systems can cover the entire territory of US regional allies. This effectively makes them national defenses for these countries.” In Asia’s evolving strategic environment, many Americans assume India will be a regional ally and counterbalance to China. If true, this situation could provide New Delhi political space to develop BMD without U.S. interference.

**Pakistan’s Plausible Nuclear Posture**

Presently, both India and Pakistan possess sufficient strategic forces—ballistic and cruise missiles and nuclear capable bombers. It can be argued that a situation of MAD exists between India and Pakistan. If either side considers striking first, it must calculate the huge damage it would suffer as a result of retaliation. Pakistan developed a series of ballistic missiles to deliver munitions over long distances to an opponent’s well-defended areas, where penetration by fighter aircraft is either difficult or impossible. India has an advanced air defense system, but it cannot guard against ballistic missiles. Thus, Pakistan’s defense strategy assures sufficient destruction of the Indian homeland. With the advent of BMD India can dent the assured penetration capability of ballistic missiles, which undermines the credibility of Pakistan’s deterrence strategy. In essence, effective Indian BMD allows India a shield from Pakistani nuclear retaliation and means India would be more confident to carry out conventional offensives like Cold Start.

Pakistan’s security managers are concerned that even a rudimentary BMD capability could undermine their nuclear deterrent because it exposes Pakistan to coercive diplomatic tactics. Therefore, Pakistan’s reaction is natural and since 1998, Pakistan has tried to prevent the introduction of BMD into South Asia through proposals such as the strategic restraint regime, which included amongst other measures, a restraint against the development and deployment of BMD. The entire premise of this proposal was to enhance deterrence and strategic stability by making predictably certain—that neither India nor Pakistan could win nuclear war nor yield any major political-military advantage from it. Another advantage of this proposal was that it would limit the expansion of nuclear arsenals and restrain the deployment of strategic defenses.
The failure of the strategic restraint initiative was the first misstep that prevented India and Pakistan from embarking on positive learning towards restraint; instead, it placed them in the midst of the prospects for an arms race. This letdown also compelled Pakistan to employ technical countermeasures, such as increasing missile production and taking other passive and active countermeasures. Pakistani nuclear optimists argue that Islamabad needs to develop and retain an expanded nuclear triad to guarantee its ability to strike Indian strategic targets. One immediate response for Pakistan might be the mastering of advanced ballistic missile technologies—including multiple-warhead reentry vehicles (MIRVs). Thus, Islamabad is spending more on an assortment of defense items, including ballistic and cruise missiles, so as to avoid looking weak and exploitable.27

Pakistan has a long history of searching for alternatives to deal with its conventional asymmetry vis-à-vis India. Since the 1971 defeat, Pakistani military planners have counted on the look-within or self-defense strategy. So, they succeeded in institutionalizing their nuclear deterrence potential. Today, Pakistan’s scientific bureaucracy’s ability to manufacture conventional military hardware, nuclear devices, and cruise as well as ballistic missiles of diverse ranges, grants Islamabad the confidence to employ a range of measures to deter India’s BMD threat.28

Implications for Strategic Stability

India’s enormous investment in defense spending and development of sophisticated conventional forces increases the asymmetry between India and Pakistan. This asymmetry forces Pakistan to offset its disadvantages by developing an assortment of nuclear weapons and delivery systems. Despite its military advantages, India cannot deliver a decisive blow to Pakistan because of the latter’s nuclear capability. The introduction of BMD may not provide the much-needed defensive shield to India in an actual war, but it has the potential to upset strategic stability. “Antimissile systems…are a double edged sword; they may provide increased protection from missile attack and perhaps an alternative to offensive ballistic missile development, but they can also increase tensions.” 30

A BMD capability influences regional stability due to its potential to alter nuclear deterrence principles (MAD), trigger an arms race, and produce misperceptions that could lead to dangerous miscalculations during a crisis. Christoph Bluth noted that in the nuclear era “strategic stability mean[t] that the balance of forces between the two states is such that nuclear deterrence is effective,
and consequently there is little incentive for the initiation of armed conflict.”

BMD in South Asia will likely affect three major components of strategic stability: deterrence stability—to maximize second-strike potential and mutual vulnerability; arms race stability—to minimize incentives to build more weapons; and crisis stability—neither side perceives an advantage in escalating violence in a crisis.

Indian BMD ambitions instigated a debate among security observers regarding the applicability of traditional deterrence theory. According to Daniel Barkley, “traditional deterrence theory rests on a number of assumptions including notions of rationality, credibility, and effective communication of threats.” BMD possession may provide a false source of confidence during a crisis that may lead India to reach irrational conclusions and act more aggressively. Further it would enable India to deny Pakistan “the ability to execute its strategy.”

Cold War era nuclear deterrence principles, therefore, are not likely to guide Pakistani nuclear strategy into the future. This change to nuclear deterrence theory could generate a fear for Pakistani decision-makers that during a crisis they would be unable to defend their country from India’s superior military muscle without early nuclear weapon use. The effect of BMD is that it allows India to use its superior military muscle, which in turn obliges Pakistan to modernize its nuclear posture to deter conventional attack. Pakistan’s nuclear deterrence posture in turn switches from deterrence to nuclear war-fighting so as to frighten an opponent who possesses superior conventional and unconventional forces. The strategic instability in the region could also push Pakistan toward strategic and battlefield nuclear weapon deployment. Consequently, this strategic shift is necessitating a dramatic increase in spending on offensive nuclear weapons and infrastructure.

The fear of mutually assured destruction resulting from inadvertent escalation discourages both sides from using war as a means to accomplish political objectives. Robert Powell points out that “a state's assured-destruction capability gives it the ability to make the cost that an adversary has to bear in any conflict outweigh any possible gains. If, therefore, a state’s threat to impose these costs were sufficiently credible, an adversary would prefer backing down.” Theoretically, the deployment of BMD would not prevent inadvertent escalation of war to the nuclear level. The alarming puzzle is that the deterring factor (retaliatory or second-strike capability) of inadvertent escalation to the nuclear level would lose significance for the state with defensive shield capabilities. The holder of BMD gathers confidence that its defensive shield minimizes the repercussions of inadvertent escalation to the nuclear level. That is why many analysts are convinced that as India’s BMD advances military planners will be less fearful of inadvertent escalation and will therefore be more

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likely to initiate military adventurism against Pakistan. Hence, in the evolving strategic environment of the sub-continent, deterrence between India and Pakistan may not work with the same effectiveness as was the case in the mid-1980s.\(^{36}\)

Pakistan’s nuclear posture might shift from declared, recessed deterrence to active deterrence, which entails an ambiguous state of hair-trigger alert. Subsequently, India would also look for an ambiguous deployed, hair-trigger posture. This escalatory ladder in both India and Pakistan’s nuclear posture would stimulate a destabilizing action-reaction cycle. This action-reaction phenomenon not only would result in ever expanding strategic forces on both sides, but bring India and Pakistan’s command-and-control structures under perpetual stress. During a crisis, the situation would be more alarming because the time available to decision-makers for reacting to an ambiguous event would be correspondingly short.

BMD also undermines arms race stability, which envisaged a situation in which neither side had incentives to expand its nuclear forces. If New Delhi began deploying BMD, Islamabad might need to increase its offensive missiles in order to be confident it could overwhelm India’s defenses. The history of India and Pakistan’s military buildup suggests that BMD will trigger a new arms race—a sword versus shield competition. As Feroz Hassan Khan noted, “the ensuing regional culture leans more toward military competition, as opposed to strategic restraint and conflict resolution (the logical course for strategic stability).”\(^{37}\) This mirrors the dilemma that Pakistan would not observe restraint at the introduction of BMD and therefore, instantly rush for countervailing strategies.

BMD’s impact on regional crisis stability is equally alarming. In theory, BMD increases preemptive-strike advantages for India and undermines crisis stability by increasing pressure in a conflict to preempt and overwhelm the opponent’s defense. Dean A. Wilkening opined that “ballistic missile defense can be destabilizing in a crisis if the level of defense is sufficient to absorb an opponent’s ragged retaliatory strike after attacking the opponent’s ballistic-missile force in a pre-emptive counterforce attack.”\(^{38}\) On the contrary, arrangements that limit or reduce preemptive-strike advantages will enhance crisis stability.\(^{39}\) “Crises in this view become a kind of brinkmanship. During a crisis, states exert coercive pressure on each other by taking steps that raise the risk that events will go out of control. This is a real and shared risk that the confrontation will end in a catastrophic nuclear exchange. Consequently, no state bids up the risk eagerly or enthusiastically.”\(^{40}\) Invulnerability to an adversary’s retaliatory or second strike annihilation through BMD could tempt a state to launch a preemptive strike in a severe crisis. Hypothetically, the possessor of BMD might

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\(^{36}\) Many analysts opined that nuclear capability of Pakistan has been providing it deterring potential against militarily superior India since mid-1980s. Numerous crises—1986-87 Brasstracks, summer 1990, Kargil 1999, 2001-2002 military deployments and Mumbai November 2008—having potential to escalate into war were managed due to India and Pakistan nuclear weapons potential.


\(^{40}\) Powell, “Nuclear Deterrence Theory, Nuclear Proliferation, and National Missile Defense,” 90.
calculate that, if it strikes first and destroys a substantial portion of the adversary’s strategic offensive forces, its BMD systems could cope with the weakened retaliatory strike—or at least leave it in a substantially better position than if it absorbed a preemptive strike.

Even if BMD’s effect on strategic stability was relatively marginal, it still generates serious consequences. As James M. Lindsay and Michael E. O’Hanlon noted, “defenses provide a safety net in the event that some enemy missiles survive the initial attack, just as a preemptive attack that destroys some but not all enemy missiles can make the defense’s job easier. In short, rather than serving as alternative strategies, preemption and missile defense can reinforce each other.”41 Hence, anything that increases the chances of preemption is dangerous for crisis stability.

Finally, BMD facilitates interdependence between offense and defense. India’s offensive capabilities could operate in a defensive mode to limit the damage that Pakistan inflicts in retaliation.42 If Pakistan fears the offensive potential of its adversary through defensive deployments and, for fear of preemption, responds in a way that increases Pakistani aggressiveness and unpredictability, it would undermine strategic stability. Hence, BMD is a weapon that could create intent in the form of an incentive to preempt in times of crisis. Moreover, the moment crisis occurs between India and Pakistan, it is likely that the latter’s National Command Authority would delegate authority to junior commanders to guard against a knockout preemptive strike to the central command by India.43 The decentralization of nuclear weapon launching authority would have spiraling repercussions, risky for the continuity of strategic stability during a crisis.

**Conclusion**

BMD in South Asia instigated an offensive-defensive arms race between India and Pakistan. Given the history of strategic competition between New Delhi and Islamabad, should India acquire BMD, Pakistan would consider its retaliatory ability insufficient to meet the threat. Consequently, Pakistan would look to increase its nuclear arsenals and delivery systems and engage in an arms race, which would be debilitating given its prostrate economy. This might force Pakistan to look for alliance and strategic partners who could provide Pakistan with the ability to counter BMD. More precisely, introduction of BMD would create an enormous spiral in offensive nuclear arms—a situation in which there would be far less strategic stability and therefore less security for both India and Pakistan.

New Delhi has coupled its enthusiasm for BMD with an expressed distaste for the strategic restraint regime proposed by Islamabad. India’s approach is dead set against strategic stability in South Asia. The sensible and direct way of supplementing both India and Pakistan’s defensive abilities cannot be

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43 To date, Pakistan’s official announcement has been that it will maintain centralized control over its deployed tactical nuclear weapons. The author, however, believes that the effectiveness of the weapons would demand decentralization once deployed on the battlefield.
found through BMD. Instead, comprehensive arms control would guarantee restraint, predictability, and transparency in the region.

In the context of nuclear learning, India and Pakistan were already finding simple technological developments difficult to deal with. Now, with the introduction of more sophisticated technological innovation, for instance via BMD development, the learning curve has become steeper and more complicated. During the Cold War, the superpowers learned the hard way through arms races and crises to reach for the stabilizing effects of arms control. The Anti-Ballistic Missile Treaty was one such example, which employed a deterrent logic that that dissuaded the superpowers from an unbridled arms race to reach MAD. Luckily, in South Asia’s first decade, India and Pakistan skirted past this Cold War learning pathway. Nevertheless, in this decade, BMD and other technological developments put India and Pakistan onto a path of nuclear unlearning and ignorance of past folly. This journey will eventually cause instability and financial hardship for both states before the light dawns.

Hence, the sustainability of current strategic stability in South Asia warrants both India and Pakistan to adopt a cooperative and non-confrontational approach on the issue of the introduction of BMD in the region. Indeed, New Delhi and Islamabad’s engagement in an honest and constructive dialogue on BMD would create a favorable strategic environment for constituting an arms control arrangement, at the very least, if not establishing a disarmament understanding between the South Asian strategic competitors.