

Arms Control: Risk Reduction Measures Between India and Pakistan

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Acronyms

ABM	Anti-Ballistic Missile
AWACS	Airborne Warning and Control System
BSF	Border Security Forces
CBMs	Confidence Building Measures
CTBT	Comprehensive Test Ban Treaty
DRDO	Defence Research and Development Organization
GSLV	Geosynchronous Satellite Launch Vehicle
IGMDP	Integrated Guided Missile Development Program
IRBM	Intermediate Range Ballistic
LOC	Line of Control
MOU	Memorandum of Understanding
NMD	National Missile Defense
NRRC	Nuclear Risk Reduction Center
PSLV	Polar Satellite Launch Vehicles
SAARC	South Asian Association for Regional Cooperation
SRBM	Short Range Ballistic Missile
TMD	Theatre Missile Defense

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Zafar Nawaz Jaspal* | June 2005

Abstract

The conventional, missile and nuclear weapons arms race between India and Pakistan intensifies insecurity in the subcontinent and poses serious risks of strategic instability in South Asia. These security dilemmas demand a realistic agenda focused on practical confidence building measures in areas such as conflict prevention, misperception, and damage limitation if conflict occurs. Therefore it is imperative that New Delhi and Islamabad develop a bilateral arms control regime.

1 | Introduction

India and Pakistan's bilateral relations generate a classic military security dilemma involving the proliferation of military technologies, arms racing and the interplay of national policies for defense and deterrence. Since 1947 New Delhi has introduced a new kind or generation of weapon into its arsenal and Islamabad has followed suit. Today each side is amassing large quantities of conventional, missile and nuclear weapons. Recent developments, however, manifest that India and Pakistan have seriously engaged in a Composite Dialogue for replacing enmity with amity, yet both sides cling to their policies of strategic competition and the enduring primacy of military security. Military security is primarily about the interplay between the actual armed offensive and defensive capabilities of states on the one hand and their perceptions of each other's capabilities and intentions on the other.¹

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¹ External threats range from fear of the complete obliteration of state, society, and people to gunboat coercive diplomacy and intimidation on particular issues of policy. Barry Buzan, Ole Waever, Jaap de Wilde, *Security: A New Framework For Analysis* (London: Lynne Rienner Publishers, 1998), p. 51.

It is imperative that New Delhi and Islamabad develop a bilateral arms control regime

The Indian and Pakistani ruling elites and populations treat the armed forces of each other as a major threat. This is due to a lack of trust and the absence of constraints, or only weak/limited constraints, on the development and procurement of conventional, missile and nuclear weapons. New Delhi and Islamabad constantly provide their armed forces with new weapons, test their nuclear capable missiles, and frequently increase their defense budgets.² Moreover, realistically one could not confidently claim that the ongoing peace process between New Delhi and Islamabad is irreversible due to the deep mistrust and fear on which India-Pakistan relations have been based. In both states the adversary is painted as black as possible, an attitude that has overshadowed the confidence building measures (CBMs) that New Delhi and Islamabad have periodically initiated. Consequently, the risk of conventional and nuclear war is an overriding peril, nuclear related risks remain high, and nuclear deterrence continues to be a central concept in both Indian and Pakistani strategic postures. This increases the risk of threat or actual use of military force in a crisis between India and Pakistan.

The belligerent interstate relations and the conventional, missile and nuclear weapons arms race pose an unacceptable risk of strategic instability and intensify the insecurity of both India and Pakistan. However, this military insecurity and instability stimulates discussion on how to tackle these challenges. The political and security realities in the Indian and Pakistani strategic environment demand a realistic agenda that should focus on practical confidence building measures in areas such as conflict prevention, misperception, and damage limitation should conflict occur. Otherwise the chances of inadvertent or accidental use of nuclear weapons could increase, with the potential to cause nuclear Armageddon in the region.

It is imperative that New Delhi and Islamabad develop a bilateral arms control regime. Why should India and Pakistan pursue arms control regime? How could an arms control regime contribute to risk reduction between India and Pakistan? Arms control theory specifies broad goals that are indistinguishable from the goals one could set for a wise defense policy. In the words of Thomas Shelling, arms control reduces the probability of war, the costs of preparations for war, and the death and destruction if control fails and war comes.³ An arms control regime that does not undermine their military security arrangements would be in the interest of both India and Pakistan.

The following study is an attempt to illustrate that controlling the conventional, missile and nuclear weapons arms race would constitute a major risk reduction measure between India and Pakistan. An arms control regime

² There was an upward spiral in the defence spending allocations in both states' 2004-2005 budgets. India's budget for 2004-05 proposed an allocation of Rs. 770 billion for the defence sector against the revised budget allocation of Rs. 603 billion during the fiscal year 2003-04, denoting a massive increase of 18 to 23 per cent, or according to some estimates 27.69 per cent. See "Pakistan terms raise unusual: Indian defence budget" *Dawn*, July 9, 2004. See also "India's defence allocation", *Dawn*, July 11, 2004.

³ Franklin A. Long, "Arms Control from the Perspective of Nineteen-Seventies", in Franklin A. Long and George W. Rathjens, ed., *Arms, Defense Policy, and Arms Control* (New York: W. W Norton & Company, 1976), p. 1.

between India and Pakistan sounds straightforward, but is a very complex issue. Therefore the following discussion begins with a brief interpretation of arms control theory and explores why India and Pakistan need arms control arrangements between themselves. Thereafter, it discusses the possibility of controlling the conventional, missile and nuclear weapons arms race between India and Pakistan without denying New Delhi's strategic concern vis-à-vis Beijing. The discussion in this section has some visionary but also hopefully realistic and pragmatic elements.

2 | The Concept of Arms Control

An arms control approach seeks to reduce the risk of war by limiting or reducing the threat from potential adversaries rather than relying solely on unilateral military responses to perceived or anticipated changes in the military threat. It is not in conflict with, or a substitute for, military preparedness, but seeks to complement it by providing increased security at lower and less dangerous levels.⁴ Jozef Goldblat argued that a wide range of measures have come to be included under the rubric of arms control, in particular those intended to: 1. Freeze, limit, reduce or abolish certain categories of weapons; 2. Ban the testing of certain weapons; 3. Prevent certain military activities; 4. Regulate the deployment of armed forces; 5. Proscribe transfers of some militarily important items; 6. Reduce the risk of accidental war; 7. Constrain or prohibit the use of certain weapons or methods of war; and 8. Build up confidence among states through greater openness in military matters.⁵

Arms control is specifically proclaimed to be about reducing the risks of war, reducing the damage that might otherwise be suffered in war, and reducing the burden of peacetime military preparation. More elaborate objectives than these have been derived from time to time, but these three command general acceptance as the canonical trinity of the purpose of arms control.⁶ Arms control incorporates a wide spectrum of agreements, measures and processes. For the sake of proficiency one could classify the arms control agreements into three main categories:⁷

- One category of agreements is intended to produce effects on the force levels of parties. For example, 1972 ABM Treaty, 1990 the

⁴ *Arms Control and National Security: An Introduction* (Washington, D.C., The Arms Control Association, 1989), p. 10.

⁵ Jozef Goldblat, *Arms Control: The New Guide to Negotiations and Agreements* (London: Sage Publication, 2002), p. 3.

⁶ Colin S. Gray, *Weapons Don't Make War: Policy, Strategy, and Military Technology* (Kansas: University Press Kansas, 1993), p. 122.

⁷ Jan Anthony, "Arms control after the attacks of 11 September 2001", *SIPRI Yearbook 2002: Armaments, Disarmament and International Security*, (London: Oxford University Press, 2002), p. 470.

Treaty on Conventional Armed Forces in Europe, 1985 Treaty of Rarotonga, 1967 Treaty of Tlatelolco, etc.

- The second category of agreements is intended to restrict the further development and deployment of weapons without prohibiting their acquisition and possession. For example, 1963 Partial Test Ban Treaty, 1996 Comprehensive Nuclear Test Ban Treaty, 1981 Inhuman Weapons Convention, etc.
- The third category of measures is intended to establish conditions under which states may transfer agreed items to others without restricting either the possession or the use of these items by the exporting state. For example, the Australia Group, the Missile Technology Control Regime (MTCR), and the Nuclear Suppliers Group (NSG).

3 | Arms Control between India and Pakistan?

The preceding discussion reveals that there is no precise agreed definition of arms control. In its usage in English it can be described as a cooperative, purposive approach to armament policy. Arms control agreements can be bilateral, involving two parties to an agreement, or multilateral, involving more than two parties. Bilateral arms control agreements between India and Pakistan are possible because the national interests of both neighbors oblige that they should seriously develop understanding in order to avoid detrimental situations in their bilateral relations. Brahma Chellaney argues that:

The bilateral approach remains the best for tackling bilateral differences and problems, even as embryonic efforts to evolve a regional framework for security issues. The bilateral approach provides the most direct method to articulate national interests, resolve disputes peacefully, and deter potential aggression...⁸

India and Pakistan have already accepted and adopted some arms control related proposals. In December 1988, for example, both sides agreed not to attack each other's nuclear facilities. The agreement on non-attack of each other's nuclear installations was ratified in 1991 on the condition that the two exchange an updated list of nuclear sites in their respective states on January 1

⁸ Brahma Chellaney, "CBMs - A Critical Appraisal", in Dipankar Banerjee, ed., *Confidence Building Measures in South Asia* (Colombo: Regional Centre for Strategic Studies, 1999), p. 24.

every year.⁹ An arms control regime between India and Pakistan could have a number of positive impacts on their strategic environment.

It could stabilize the strategic relationship between India and Pakistan. When both sides agree to limit or reduce specific military forces in a verifiable manner, the predictability of the military relationship could be dramatically improved. New Delhi and Islamabad foresee the evolution of each other's forces in a more restricted context. Hence, improved predictability would contribute directly to the longer-term stability of the strategic relationship since both sides could have greater confidence that there would be no sudden military developments that would drastically undermine their security. Consequently, predictability of the future threat reduces political pressure to develop an overkill capacity and assist in resolving the security dilemma puzzle.

Controlling conventional, missile, and nuclear weapons would enhance the security of India and Pakistan by institutionalizing channels of communication between them.¹⁰ Importantly, during the Cold War period the main value of arms control was to act as a channel of communication between adversaries in conditions where few such channels existed. Communication is believed to reduce the risks that particular weapon programmes, deployments or actions will be misperceived by adversaries or potential adversaries. In this way arms control helps make behavior more predictable.¹¹ It could therefore facilitate the development of an environment that would impede mistrust, avoid belligerence and reduce tensions. It could also allow the political and military leadership on both sides to communicate with each other and search for alternatives to war to diffuse crises and resolve conflict.

Improved predictability contributes directly to the longer-term stability of the strategic relationship

A stable military environment encourages the reduction of political tensions that might otherwise increase the possibility of military confrontation and the risk of war. A decrease in political tensions would pave the way for New Delhi and Islamabad to resort to peaceful means in resolving their disputes.

⁹ Under the 1991 Agreement on the Non-attack of Nuclear Facilities India and Pakistan are obliged to exchange lists of nuclear facilities on the first business day of each year. Thus far, nuclear facilities-related lists have been exchanged.

¹⁰ The record of India-Pakistan relations is full of enmity and betray. Since 1947 they have signed many agreements for generating confidence and reducing tensions. However, the record of their commitment/responsibility with regard to bilateral agreements is not praise worthy. On numerous occasions India and Pakistan have cheated each other. Instead of restoring confidence, these measures have been used to take advantage of each other. Most of the agreements signed between both states in the military and non-military areas have not been implemented or honored. However, both states have been honoring the nuclear related agreements, such as, non-attack of each other's nuclear installations. This generates optimism that both states will respect arms control agreements.

¹¹ Jan Anthony, "Arms control after the attacks of 11 September 2001", *SIPRI Yearbook 2002: Armaments, Disarmament and International Security*, (London: Oxford University Press, 2002), p. 471.

4 | Arms Control between India and Pakistan: a Practical Approach

Theoretically, the constitution of a mutually acceptable arms control regime between India and Pakistan seems an easy task, but practically it is a very difficult assignment.¹² It is a cumbersome process to reach a common decision on how to assign definite figures of arms control to India and Pakistan. Importantly Pakistan offered a strategic restraint regime to India that indicated Islamabad's willingness to negotiate bilateral arms control agreements with India. The elements of the proposal were:

One, not to deploy ballistic missiles; two, not to operationally weaponise nuclear capable missile systems; three, formalize the understanding to provide prior and adequate notification of flight-tests of missiles; and, four, to declare a moratorium on the development, acquisition or deployment of Anti Ballistic Missile systems, since these can destabilize 'minimum credible deterrence'.¹³

India ignored Pakistan's proposal for a strategic restraint regime, because it did not address India's security concern vis-à-vis China

India ignored Pakistan's proposal for a strategic restraint regime, because it did not address India's security concern vis-à-vis China.

Realistically, in addition to Pakistan, China is an important cause of India's insecurity. India's military posture is a reflection of its strategic problems with China. Therefore no arms control agreement would be acceptable to India that does not adequately take into account India's security concerns about China. Does that mean that nothing is possible in the context of arms control between India and Pakistan without the inclusion of China? It is too pessimistic a conclusion that nothing could be practically possible in the sphere of arms control between India and Pakistan without including the Sino-Indian strategic competition. Moreover, the strategic chain reaction concept indicates that the inclusion of China means establishing an international arms control regime.¹⁴ This is not the purpose of this study since the objective here

¹² The negotiation is a difficult process. In fact, arms control agreements are negotiated outcomes among governments, with many compromises and give-and-take over a protracted period of time. Negotiations entail difficult technical and political judgments on reciprocity, mutuality and relative balance. Negotiations tend to exaggerate a government's own calculus of the balance of risks, threats and vulnerabilities, while downplaying that of their opponents. Arms control negotiations can also become hostage to cross-issue linkages and domestic political battles between rival political parties, competing centers of power or bureaucratic turf battles. Often the attainment of arms control treaties flounders on the insistence of each country on its maximum preferred goal as its minimum, irreducible position. See Patricia Lewis and Ramesh Thakur, "Arms control, disarmament and the United Nations", *Disarmament Forum*, Vol. one, 2004, p. 26

¹³ Quoted from Foreign Secretary Inam ul Haque statement during the CD, Geneva, January 25, 2001, in Dr. Shireen M. Mazari, "Understanding Pakistan's Nuclear Doctrine", *Strategic Studies*, Vol. xxiv, No. 3, Autumn 2004, p. 8.

¹⁴ The strategic chain reaction holds that if one state develops strategic weapons its adversary will follow it. This generates further insecurity for other states that subsequently reciprocate in kind. Devin T. Hagerty argued: "South Asia's nuclear programs are links in a proliferation chain extending back to World War II. The first links in the chain were the US and former Soviet Union...." See Devin T. Hagerty, *The Consequences of Nuclear Proliferation: Lessons from South Asia* (Cambridge: The MIT Press, 1998), p. 71.

is to discuss the possibility of establishing a bilateral arms control regime between India and Pakistan.

The literature reveals that terrain is an important factor in the making of strategy at the technical level, i.e. manufacturing or acquiring weapons. The topography of India's border with Pakistan is not identical to its border with China.¹⁵ India therefore requires different kinds of weapons for its defense against Pakistan and China. Admittedly, the identification and listing of such categories of weapons is difficult, but not impossible. There are some categories of weapons that India could use against both adversaries. Therefore arms control should apply, in the first place, to those arms, which are most specifically offensive, most efficacious against national defense or most threatening to Pakistan or vice-versa. This would facilitate India and Pakistan adopting a bilateral arms control agreement(s), without disturbing India's defensive posture against China. Subsequently, arms control agreement could take into account those categories of arms, which are simultaneously applicable against both China and Pakistan. The dual terrain usable categories of arms definitely undermine the development of an arms control regime between India and Pakistan. At the same time, however, it could develop trust and improve the relationship between belligerent neighbors. The simplest approach to solve this puzzle is that India may specifically develop and procure those weapons that are only applicable against China. For example, the Intermediate Range Ballistic Missile (IRBM) Agni-III. Nevertheless, controversy over these weapons is also possible. This controversy could be settled by corresponding deployments by Pakistan. However, such a response has the inherent problem of contributing to the security dilemma. Taking advantage of the predictability, trust building, and other features of arms control could mitigate the puzzle of the security dilemma.

5 | Controlling the Conventional Arms Race

India and Pakistan have engaged in a conventional arms race since 1947. During the past five and a half decades the case for conventional arms control between India and Pakistan has been heard more outside the policy circles than within them. Both sides have not avoided purchase of even one weapon system because of the compulsion of conventional arms control. In 2004, Pakistan reduced the size of its army by 50,000 troops, the first military downsizing in the country's 57-year history. The cuts appear aimed at reducing the huge number of orderlies or 'batmen' appointed to serve officers in Pakistan's army. It is opined that this downsizing has not affected combat troops because the cuts were made only in logistic and administration

¹⁵ The India-Pakistan Line of Control (LOC) and India-China border have identical terrain.

The case for conventional arms control between India and Pakistan has been heard more outside the policy circles than within them

departments.¹⁶ Importantly, these orderlies or batmen were recruited as soldiers and had received war fighting training. These soldiers served officers as orderlies or batmen for only a few years during their entire service. They were treated as combat troops and were regularly engaged in military exercises. Therefore, the orderlies or batmen appointed to serve army officers were asked to report back to their units for active service.¹⁷

After its decision to downsize the army by 50,000 troops, Pakistan wanted India to follow suit to improve the regional security situation. On the contrary, India is believed to be adding 80,000 more troops in the next few years.¹⁸ India did not reciprocate because it viewed Pakistan's downsizing more as a re-structuring rather than reduction. B. Muralidhar Reddy opined, "The Pakistan Army has decided to reduce the strength of its force by 50,000 as part of its effort to cut its long tail and, at the same time, sharpen its teeth in a cost-effective way".¹⁹ On May 5, 2004 the then Indian Defence Minister George Fernandes said: "There is no proposal on this line. All that Pakistan has done is that it has kept the combat forces intact, and cut off only the tail. As far as the combat forces of Pakistan are concerned, the same old balance remains".²⁰ Secondly, New Delhi claimed that the Chinese military build-up undermines its security. Importantly, its conventional military posture indicates that most of its military weapons are Pakistan specific with only a few mountain divisions facing China. Even these can be brought to the plains and used against Pakistan during a major war.²¹ Therefore Pakistan is forced to increase its conventional arsenal.²² President of Pakistan Pervaiz Musharraf

¹⁶ "Pakistan announces first troop cut", *BBC News*, April, 28, 2004.

http://news.bbc.co.uk/1/hi/world/south_asia/3665857.stm, accessed on May 27, 2005.

¹⁷ The Pakistani army is one of the very few in the world which to this day maintains the old colonial institution of batmen. Mazhar Zaidi, "Analysis: Downsizing Pakistan's army", *BBC News*, April 28, 2004.

http://news.bbc.co.uk/1/hi/world/south_asia/3666741.stm, accessed on May 27, 2005.

¹⁸ Sandeep Dikshit, "Time to trim Indian Army", *The Hindu*, April 30, 2004,

<http://www.hinduonnet.com/thehindu/thscrip/print.pl?file=2004043005650100.htm&date=2004/04/30/&prd=th&>, accessed on May 27, 2005.

¹⁹ B. Muralidhar Reddy, "Pakistan to downsize armed forces", *The Hindu*, April 29, 2004.

<http://www.hinduonnet.com/thehindu/thscrip/print.pl?file=2004042906410100.htm&date=2004/04/29/&prd=th&>, accessed on May 27, 2005.

²⁰ "Fernandes rules out downsizing Army", *The Hindu*, May 6, 2004.

<http://www.hinduonnet.com/thehindu/thscrip/print.pl?file=2004050605431100.htm&date=2004/05/06/&prd=th&>, accessed on May 27, 2005.

In simple terms, the teeth-to-tail ratio refers to the number of soldiers in the fighting arms to those in the supporting arms. While the fighting arms comprise units such as the infantry and the armored corps, the supporting arms comprise units such as the Army Service Corps and the Army Ordnance Corps. The ideal teeth to tail ratio is said to be 65 per cent – 65 combatants supported by 100 supporting non-combatants – and most countries are taking steps to achieve this equation. Australia and the United Kingdom are said to be close to achieving this mark while India and Pakistan have to make considerable progress. Russia, weighed by a financial crunch, and China, in line with its new military doctrine, are actively cutting down on their troop strength, especially the non-combatant arms. See Sandeep Dikshit, Op. cit.

²¹ Kamal Matinuddin, "Conventional Arms Race in South Asia: A Pakistani Perspective", in Pervaiz Iqbal Cheema, Imtiaz H. Bokhari, ed., *Arms Race and Nuclear Developments in South Asia* (Islamabad: Asia Printers, 2004), p. 14.

²² Pakistan's strategic posture is Indo-centric. Pakistani defence planners believe that India remains a threat to Pakistan. Therefore, to retain its national independence, sovereignty and territorial integrity against a powerful India, which has both the capability and intention to subdue Pakistan, Islamabad must have a minimum deterrent force.

articulated this pressure in a *Newsweek* interview: “Our Army is enough for deterrence at the moment. But the Indians are increasing their defense budget, having contracted billions of dollars of purchases from Russia and the West. If they tilt the conventional balance, we shall have to restore it”.²³ Although it is a difficult task to match India, Pakistan has addressed conventional asymmetry by adopting strategies, such as developing nuclear weapons. Richard L. Russell argued: “Today, Pakistan’s conventional military posture is dwarfed by India’s and Islamabad could resort to a nuclear defense against Indian conventional military penetration into Pakistan”.²⁴ The conventional arms race could destabilize the strategic balance between India and Pakistan. Significantly, this imbalance increases the threat perceptions of Pakistan because of India’s stronger economy and greater spending on its armed forces build-up. Thus, because of the conventional defense disadvantage, Pakistan relies on the strategy of the threat to initiate nuclear war to deter an Indian conventional attack. To protect this option, Islamabad has consistently rejected a nuclear no-first-use policy and proposed no-war pact.²⁵

Importantly, since the dawn of the nuclear weapons era classical definitions and objectives of war seem irrelevant. Total war is in neither the interest of India nor Pakistan, therefore India and Pakistan could negotiate and adopt an arms control treaty for mutual conventional force constraint.²⁶ This would include the limits of current technology, the resources (human and financial) available to develop, produce, acquire and use arms as well as political decisions about force levels and force structure by responsible authorities in the context of existing threats. A bilateral conventional arms control agreement could reduce Pakistan’s reliance on nuclear weapons. The Indian strategist Jasjit Singh, in his book *Nuclear India* has pointed out:

Public, intellectual, and official opinion in Pakistan is unanimous in the belief that possession of nuclear weapons is necessary for Pakistan’s security. The basic rationale has been to seek a nuclear deterrent against India’s conventional superiority. Giving up the nuclear option would leave it, in its perceptions, vulnerable to India’s conventional forces... Thus Pakistan may be expected to express a willingness to agree to conventional force reduction agreements, but it is not likely to accept any commitment that undermines its nuclear deterrence against the conventional forces of India.²⁷

India and Pakistan could negotiate and adopt an arms control treaty for mutual conventional force constraint

²³ Quoted in Parsa Venkateshwar Rao Jr, “A Triumph of no value?”, *Deccan Herald*, July, 25, 2002. < <http://www.deccanherald.com/deccanherald/july25/top.htm> >.

²⁴ Richard L. Russell, “The Nuclear Peace Fallacy: How Deterrence Can Fail”, *The Journal of Strategic Studies*, Vol. 26, No. 1, March 2003, p. 150.

²⁵ The fundamental problem with India’s offer of nuclear no-first-use is that it does not address the security dilemma that a smaller and weaker Pakistan will face at the hands of a conventional military superior India. For understanding more about the nuclear use option see Dr. Rifaat Hussain, “Thinking about Nuclear Use and No First Use”, *National Development and Security*, Vol. x, No. 2, Winter 2001/02, pp. 1-13.

²⁶ It seems that limited war is possible between India and Pakistan, but the threat of its escalation from limited to total and finally nuclear war caution both sides to avoid resort to a limited war option during a crisis.

²⁷ Quoted in Dr. Rifaat Hussain, “Thinking about Nuclear Use and No First Use”, Op. cit., p. 8.

This manifests that conventional arms control is imperative. Through a bilateral treaty/agreement on conventional arms, the risks of war could be reduced significantly in the region. Within the conventional arms context, however, India could negotiate bilateral arms control with Pakistan on offensive systems, which in the Indian case are Pakistan specific because of terrain. The following are a few areas in which bilateral conventional arms control agreement(s) could most plausibly be reached.

Bilateral agreement for controlling heavy armour

India and Pakistan could negotiate an arms control treaty over military equipment such as the Armored Divisions, Armored Brigades, and Main Battle Tanks, etc. For instance India and Pakistan possess 3,898 and 2,320 main battle tanks, respectively.²⁸ The tanks are only useable in a combat battle at the Southern part of India's and Pakistan's common border. Where there are natural barriers, like mountains, the tanks are useless weapons. Therefore, if New Delhi enters in an arms control measures with Pakistan over the subject of tanks, it would not jeopardize its security fence against China.

Bilateral agreement for force limitation zone

Establish a force
limitation zone
along the
common border

Conventional arms stability reduces the risks of war. A nuclear strike between India and Pakistan could be caused by an escalation of conventional conflict, itself the outcome of miscalculations or inadvertent use of conventional military force. One of the appropriate risk avoiding measures in this context is to establish a force limitation zone along the common border. This would lower armament levels in forward positions and eliminate the threat of surprise attack, thereby greatly reducing the danger of miscalculation, the risk of a surprise-armed attack and the triggering of major offensive operations.²⁹

The first major move would be parallel troop withdrawals from the border area. Both sides would reduce their military forces in the border areas to a minimum level. The geographical vacuum of military forces on both sides of the border could be mutually negotiated and implemented.³⁰ They could also

²⁸ *The Military Balance 2003-2004*, (London: International Institute for Strategic Studies, 2003), pp. 136, 140.

²⁹ During the 2002 military standoff between India and Pakistan, India shifted its forces from Eastern Command to Western Command, to increase the intensity of its coercive diplomacy. The weeks-long mobilization undermined the element of surprise in the making and operationalization of the strategy. Even if this transfer of troops did not take place, India was not in a position to launch a surprise attack on Pakistan because the antagonism in their relation's entails that both sides deploy adequate high alert defensive forces on their common border – which is a destabilizing arrangement.

³⁰ Article 3 of the Agreement Between the Government of the Republic of India and the Government of the People's Republic of China on Confidence Building Measures in the Military Field Along the Line of Actual Control in the India-China Border Areas November 29, 1996 (New Delhi) could be adopted with some changes between India and Pakistan. It says the two sides agree to take the following measures to reduce or limit their respective military forces within mutually agreed geographical zones along the line of actual control in the India-China border areas:

reduce and limit the size of their border guard units, such as Indian Border Security Forces (BSF) and Rangers as well as restrict the quantity and category of their armaments. For instance, they would be allowed to keep small arms but be prohibited from using armored fighting vehicles in the geographical vacuum military zone. The parties would exchange relevant information and data on the military forces and border guard units in the border areas.

The troop withdrawal from the common border could reduce tension and the chances of accidental war. Importantly, in late 2002, the parallel troop withdrawal from the India-Pakistan common border area eased tension between them. Consequently, full diplomatic ties and transportation links were restored between New Delhi and Islamabad in May and July 2003, respectively. It further entailed a cease-fire at Siachen Glacier and Line of Control.³¹ Significantly, an agreement exists in the Indian-Pakistan context prohibiting military aircraft from flying within specified distances of the border, which is generally being observed. The scope of this agreement could be broadened.

Reduction in strength of troops

According to the recorded data the active troop strength of India and Pakistan are 1,325,000 and 620,000, respectively.³² President Gen. Pervaiz Musharraf stated on March 13, 2004 in the course of a satellite address to a 'conclave' organized by an Indian magazine, "Why can't our defense expenditure be cut down? It certainly can be. Pakistan is not in the arms race. We maintain a quantified force level based on a perceived threat and a strategy of minimum deterrence." He added, "With the enhancement of firepower of weapons, we are already reducing the strength of our Army by 50,000. We had kept our defense budget frozen for the past four years. India has to review its own strategy because your defense forces are not based on threat but on power

(1) The two sides reaffirm that they shall reduce or limit their respective military forces within mutually agreed geographical zones along the line of actual control in the India-China border areas to minimum levels compatible with the friendly and good neighborly relations between the two countries and consistent with the principle of mutual and equal security. (2) The two sides shall reduce or limit the number of field army, border defence forces, paramilitary forces and any other mutually agreed category of armed force deployed in mutually agreed geographical zones along the line of actual control to ceilings to be mutually agreed upon. The major categories of armaments to be reduced or limited are as follows: combat tanks, infantry combat vehicles, guns (including howitzers) with 75 mm or bigger calibre, mortars with 120 mm or bigger calibre, surface-to-surface missiles, surface-to-air missiles and any other weapon system mutually agreed upon. (3) The two sides shall exchange data on the military forces and armaments to be reduced or limited and decide on ceilings on military forces and armaments to be kept by each side within mutually agreed geographical zones along the line of actual control in the India-China border areas. The ceilings shall be determined in conformity with the requirement of the principle of mutual and equal security, with due consideration being given to parameters such as the nature of terrain, road communication and other infrastructure and time taken to induct/deinduct troops and armaments.

³¹ India and Pakistan were interlocked in a costly struggle in Kashmir's Siachen Glacier area. Since 1983-84 winter, the two nations have battled over a 2,500-square kilometers triangle of contested territory.

³² *The Military Balance 2003-2004* (London: IISS, 2003), pp. 136,140.

projection”.³³ As discussed earlier, Pakistan unilaterally reduced 50,000 its troops, from its active armed forces in 2004. After embarking on a unilateral arms control measure Islamabad expects similar (although not necessarily identical strength) action on the part of New Delhi. India is also in a position to reduce its troops. For instance the former Indian Army Chief, V.P. Malik had executed a 50,000 cut in the Army’s size over a period of two years by not filling vacancies in the non-combatant arms.³⁴ Therefore, they could negotiate an agreement for decreasing their active troops.

6 | Controlling the Missile Arms Race

Since May 1998, nuclear weapons and nuclear capable delivery systems have been the focal point of the strategic discourse in India and Pakistan. India and Pakistan have engaged in tit-for-tat missile tests. Lawrence Freedman wrote, “Part of the nuclear proliferation debate was always the issue of delivery. It was one thing to acquire mighty weapons, but how were they get to their targets?”³⁵ Despite the continuity of the Composite Dialogue³⁶, India and

³³ Quoted in B. Muralidhar Reddy, “Pakistan to downsize armed forces”, *The Hindu*, April 29, 2004.

<<http://www.hinduonnet.com/thehindu/thscrip/print.pl?file=2004042906410100.htm&date=2004/04/29/&prd=th&>>, accessed on May 27, 2005.

³⁴ Sandeep Dikshit, Op. cit.

³⁵ Wyne Q. Browen, *The Politics of Ballistic Missile Non proliferation* (London: Macmillan Press, 2000), p. viii.

³⁶ The Composite Dialogue process between India and Pakistan has been replacing enmity with amity. The peace process between India and Pakistan has been on a cordial path. Since the rapprochement began in April 2003, significant progress has been made in normalizing relations between the belligerent neighbors. This began after then Indian Prime Minister A. B. Vajpayee’s Srinagar statement in April 2003. The goodwill gesture was well received by the then Prime Minister of Pakistan, Zafarullah Jamali. He responded positively not only rhetorically, but he also took practical initiatives to materialize the good will gesture. Consequently, diplomatic representation at the two capitals has been restored; a cease fire declared at the Siachen and LOC (albeit violence still continues in the Indian held Kashmir); road, rail and air links have been revived; delegations of businessmen, Members of Parliament, artists and poets have exchanged visits, and cricket ties resumed after a break of nearly a decade and a half. Above all, both sides’ rulers and higher government officials met number of times to ameliorate India-Pakistan relations. The peace process received a boost, when the then Indian Prime Minister, Atal Bihari Vajpayee arrived in Islamabad on January 3, 2004 for the 12th South Asian Association for Regional Cooperation (SAARC) Summit. He met President Pervaiz Mushaaraf and Prime Minister Jamali on the sidelines of SAARC summit. The meeting between Prime Minister Vajpayee and President Pervaiz Mushaaraf resulted in both sides agreeing to hold Composite Dialogue in February 2004 on bilateral issues, including Jammu and Kashmir.

On February 18, 2004, the Foreign Secretaries of India and Pakistan met in Islamabad. They reviewed and endorsed the agreement worked out at the Director General/Joint Secretary meetings on all subjects on the agenda of the Composite Dialogue. Both sides agreed on the following schedule of meetings:

- Foreign secretaries would meet in May/June, 2004, for talks on peace and security including CBMs and Jammu and Kashmir.

Pakistan continue to develop strategic and tactical missiles. On July 4, and June 13, 2004, India successfully test-fired its Agni-I tactical Short Range Ballistic Missile (SRBM), with a range of some 700 km and BrahMos missile, respectively. Before India's ballistic missile and cruise missile tests Pakistan successfully test-fired its Hatf-V (Ghauri) ballistic missile with a range of 1500 km for the second time in a week on June 4, 2004. Earlier on March 9, 2004 Pakistan tested its longest-range (2500 km) ballistic missile, Hatf-VI (Shaheen-II). A second round of missile tests took place in October /November 2004. On November 7, 2004 India tested the Dhanus missile, with a strike range of 250 km. On November 3, and October 27, 2004 it conducted tests of the supersonic cruise missile BrahMos and a naval version of its Prithvi-III, respectively. Earlier on October 12, 2004 Pakistan test-fired its Hatf-V (Ghauri) missile. All of these missiles can carry both nuclear and conventional warheads.³⁷ In addition, Indian government scientists claimed that New Delhi could develop ICBMs with ranges in excess of 5000 km due to the successful space program of Geosynchronous Satellite Launch Vehicle (GSLVs) and Polar Satellite Launch Vehicles (PSLVs).³⁸

Termination of the missile race necessitates an agreement over deployments and numbers

The missile race generates insecurity and undermines strategic stability. The termination of the missile race necessitates an agreement over deployments and numbers between India and Pakistan. No one expects Pakistan to demand a missile-for-missile balance from India, given India's security concerns in relation to China and its power projection ambitions beyond South Asia. According to Dr Shireen M. Mazari,

In the case of missiles that are Pakistan specific, such as the Prithvi, India will have to have an equitable equation with Pakistan. Also, if India seeks to opt for an even-spread amongst its nuclear triad of forces, then Pakistan needs to have an edge on land-based deployments in terms of numbers.³⁹

- Talks on Siachen; Wullar barrage; Sir Creek; terrorism and drug trafficking; economic and commercial co-operation; and promotion of friendly exchanges in various fields would be held at the already agreed levels, in July 2004.

The following technical-level meetings would be held earlier:

- Meeting between director-general Pakistan Rangers and inspector-general Border Security Force (of India) in March/April 2004.
- Expert-level talks on nuclear confidence building measures in the latter half of May 2004.
- Committee on drug trafficking and smuggling in June 2004.

They also reviewed the existing links between the director-generals of military operations of Pakistan and India and agreed to consider further strengthening these contacts. The foreign minister of Pakistan and the external affairs minister of India would meet in August 2004 to review overall progress. A one-day meeting of the foreign secretaries would precede this. See "Text of India-Pakistan statement", *BBC News*, February 18, 2004.

http://news.bbc.co.uk/2/hi/south_asia/3499111.stm accessed on May 10, 2005.

³⁷ The BrahMos supersonic cruise missile, which has a 290 km range, 300 kg payload and nascent nuclear capability, is a combination of Russian design and propulsion technology, with India software and guidance systems. See *The Military Balance 2004-2005*, (London: IISS, 2004), p. 144. "India test-fires nuclear capable missile", *The News*, November 8, 2004. See also "India tests N- capable missile", *Dawn*, November 8, 2004.

³⁸ *The Military Balance 2003-2004*, (London: IISS, 2003), p. 131.

³⁹ Dr. Shireen M. Mazari, op. cit., p. 17.

Pakistan had offered a ‘Zero Missile Zone’ for the region as far back as 1993.⁴⁰ Since 1998 Pakistan has suggested many times at different forums a reciprocal arrangements with India in order to control the missile race. The following were the important offers:

- Not to deploy ballistic missiles.
- Not to operationally weaponise nuclear capable missile systems.
- To formalize the understanding to provide prior and adequate notification of missile flight-tests.
- To declare a moratorium on the development, acquisition or deployment of ABM systems, because of their potential to destabilize the minimum credible deterrence.⁴¹

Pakistan advocates arms control proposals because it serves its strategic interests. The arms race between India and Pakistan is more injurious for Pakistan because of economic constraints. India did not take into account Pakistan’s missile restraint proposals. It has not responded to the idea that while Pakistan’s defense preparedness is India centered, Indian defense readiness is not Pakistan-centered.⁴² It appears that India and Pakistan will continue to pursue the development of sophisticated missile systems. This trend is neither in the interest of India nor Pakistan. There is room for missile restraint. The following are some of the areas where both states could negotiate bilateral missile control agreements.

Notification of missile tests and their direction

India and Pakistan have conducted many missile tests. Since the Lahore summit in 1999, they have been generally informing each other prior to their missile tests, but no formal agreement regarding the notification of missile tests exists between them. It is imperative that they formalize an agreement on advanced notification of ballistic missile flight tests. In addition, missile tests should not be conducted in the direction of the adversary. The notification of ballistic missile tests and their direction would lead to greater transparency and predictability.

Restraint over raising additional missile units/groups

India and Pakistan are in the process of raising additional missile groups/units. They had already handed over their missiles to their armed forces. India had handed over its surface-to-surface Prithvi-I, nuclear-capable

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⁴⁰ Address by Shahbaz Hussain, Director General Disarmament, Ministry of Foreign Affairs, reported in *The News*, February 23, 2001.

⁴¹ For more details see Naeem Ahmad Salik, “Pakistan’s Missile Programme”, in Pervaiz Iqbal Cheema, Imtiaz H. Bokhari, ed., *Op. cit.*, p. 120.

⁴² B. Muralidhar Reddy, “Downsizing army: Pakistan wants India to follow suit” *The Hindu*, April 30, 2004.

<<http://www.hinduonnet.com/thehindu/thscrip/print.pl?file=2004043004011600.htm&date=2004/04/30/&prd=th&>>, accessed on May 27, 2005.

SRBMs to its Army in May/June 1997.⁴³ It was reported that the Indian government decided to raise two Agni missile groups in 2005 as well as two new Prithvi missile groups.⁴⁴ Islamabad has been following suit, because the Prithvi series and Agni-I are Pakistan specific missiles. Consequently, the surface-to-surface Ghauri-I medium range and Shaheen-I short range ballistic missiles were handed over to the Pakistan Army's Strategic Force Command for induction on January 9, 2003 and March 6, 2003, respectively.⁴⁵ The raising of additional units undermines the concept of minimum deterrence and also increases the risk of conflict. Therefore restraint over raising additional missile units in the subcontinent would be in the interest of both India and Pakistan.

An Anti-Ballistic Missile treaty between India and Pakistan

The nuclear weaponization of India and Pakistan has substantially reduced the chances of total war between them.⁴⁶ Neither side could launch a nuclear attack against the other without calculating the risk of a retaliatory strike that would produce unacceptable damage. It seems that New Delhi is not satisfied with current balance of terror between India and Pakistan. It has been developing weapons systems that would shift the balance of power in the region to its advantage. Without developing foolproof nation-wide missile defence systems, India remains vulnerable to Pakistani missile strikes. India's commitment to develop and procure anti-ballistic missile (ABM) defense systems – designed to defend the Indian homeland – holds a defensive inclination. India has prioritised the development and procurement of Theatre Missile Defense (TMD). It has developed a limited capability of TMD, designed to protect Indian forces from the hostile theatre and tactical missiles and has conducted verifying tests. It is an open secret that New Delhi's plan is not limited to the development of TMD, since it has designs to extend or expand these capabilities which could provide an effective nationwide defensive shield against Chinese and the Pakistani theatre and strategic ballistic missiles.⁴⁷ The scope of Indian ABM plans more or less identical to the US National Missile Defense system.⁴⁸

It seems that New Delhi is not satisfied with current balance of terror between India and Pakistan

⁴³ "Indian-Pakistani Missile Activities, Accelerate As Bilateral Talks Continue", *Arms Control Today*, June/July 1997, p. 24.

⁴⁴ *The Military Balance 2004-2005*, (London: IISS, 2004), p.144.

⁴⁵ "Pakistan's Missile Program Chronology", <http://www.pakistanidefence.com/Nuclear&Missiles/Missile_Program_Chronology.html> accessed on May 29, 2005.

⁴⁶ In the prevalent strategic environment total war between India and Pakistan is a negative sum game. Do nuclear weapons increase or decrease the prospects for armed conflicts between nation-states? The scholarly literature that has probed this question contains contradicting answers. The author respects the opinion of nuclear proliferation pessimists, but also believes wars between nuclear-armed nations will be unlikely to start and, if they do, the conflicts are likely to be limited because the belligerent will stop the fighting short of the intensity needed to bring about the resort to nuclear weapons. In the context of India and Pakistan, for example, the 1999 Kargil Conflict ended even before escalating into a conventional total war, and Military Standoff 2002 did not break out into war.

⁴⁷ Gregory Koblenz, "Theater Missile Defense and South Asia: A Volatile Mix", *The Nonproliferation Review*, Vol. 4, No. 3, Spring/Summer 1997, pp. 52 to 62. Vladimir Radyuhin, "Fernandes in Moscow for talks on defence ties", *The Hindu*, June 22, 2000. *Indian*

India's ABM defense system has the potential to undermine Pakistan's security by upsetting the mutual deterrent relationship between India and Pakistan built on retaliatory capabilities. An effective Indian ABM force deployed against Pakistan's offensive nuclear capable ballistic missiles would not only undermine its nuclear deterrence against India but also dramatically increase the Indian ability to launch a disarming/decapitating first strike against Pakistan's nuclear assets. This generates apprehension that the Indian ABM capability would erode the strategic equilibrium and shift the balance of power in its favor. The calculus of 'realpolitik' holds that India behind a safe missile shield might be more likely to adopt adventurous policies against Pakistan, especially when it would be relying/depending more on missiles as its nuclear weapons delivery vehicles. For instance, by neutralizing Pakistan's retaliatory capabilities with the deployment of anti-missile systems, India could launch a conventional war or nuclear pre-emptive strike against Pakistan, without fear of nuclear retaliation from Pakistan.⁴⁹ Pakistani strategists have not only expressed such apprehensions,⁵⁰ but many foreign security analysts have similar views. Michael Quinlan wrote, "sudden strike and the use thereafter of systems such as *Arrow* (a theatre ABM system) to ward off surviving retaliatory capability might give India a pre-emptive option".⁵¹

India's ABM defense capability has evolved after many years of clandestine research and development. Since July 1983, Indian scientists have been engaged in fusing the foreign and domestic research and components for the development of the TMD.⁵² India's other preference for augmenting its TMD potential is to buy systems from friendly states. The Russian Federation and Israel have signed agreements with India under which India has been receiving TMD components and technology from these states. It was also reported in the press that the USA agreed to assist India in its pursuit of a missile shield.⁵³ India has extended unqualified official support to President George W. Bush's determination to build an anti-missile shield as a strategic

Defense Yearbook 1997-98, pp. 501-502. Pravin Sawhney, "Anti-missile role planned for Akash", *Jane's International defense Review*, January 1997.

⁴⁸ Zafar Nawaz Jaspal, "India's Endorsement of the US BMD, Challenges for Regional Stability", *IPRI Journal*, Vol.1, No.1, Summer 2001.

⁴⁹ Admittedly, the issue that India's ABM system would undermine Pakistan's nuclear deterrence is debatable. For more details see Zafar Nawaz Jaspal, "India's Anti-Ballistic Missile Programme: Impact on Pakistan's Security", *IPRI Journal*, Vol. 2, No. 2, Summer 2002. pp. 59-70.

⁵⁰ Brig. Naeem Ahmad Salik, "Pakistan's Ballistic Missile Development Programme-Security Imperatives, Rationale and Objectives", *Strategic Studies*, Vol. xxi, No. 1, Spring 2001, p. 38.

⁵¹ Michael Quinlan, "How Robust is India-Pakistan Deterrence?", *Survival*, Vol. 42, No. 4, Winter 2000-01, p. 150.

⁵² In July 1983, under India's Defence Research and Development Organization (DRDO), India launched a \$1 billion Integrated Guided Missile Development Program (IGMDP). The IGMDP today comprises five core missile systems. They are the Prithvi series, Agni series, Akash, Trishul and Nag. In addition to these five core missiles, Surya and Sagarika are also part of IGMDP. For technological assistance details about these missiles, see Zafar Nawaz Jaspal, "India's Missile Capability: Regional Implications," *Pakistan Horizon*, Vol. 54, No. 1, (January, 2001), pp. 33-64.

⁵³ C. Raja Mohan & Pranab Dhal Samanta, "US gives Pak F-16s, *The Indian Express*, March 26, 2005.

<http://www.indianexpress.com/full_story.php?content_id=67213> accessed on May 29, 2005.

and technological inevitability. This is probably the first time in decades that India had extended such support to the US on any global armament issue.⁵⁴ In June 2004, a high level American delegation visited New Delhi for negotiations on the transfer of technology related to missile defence systems to India.⁵⁵ Moreover, the US did not oppose the transfer of the Arrow missile and cruise missile technologies to India by Israel and the Russian Federation respectively. The transfer of Arrow missile technology is a key part of India's missile defense system program.⁵⁶

The development/procurement and operationalization of ABM systems by India would introduce an additional element of uncertainty into an already militarized environment of the subcontinent. The introduction of ABM systems into the Indian arsenal undermines Pakistan's security only because China's large missile potential could easily overcome this challenge. India's ABM potential could not have any practical impact on Sino-India strategic competition. In such a situation, Pakistan might feel psychologically more vulnerable and less secure. Worst-case analysis and mirror imaging could oblige Pakistan to devote more resources to its defenses for sustaining her nuclear deterrence. The modernization of its offensive force⁵⁷ and introduction of ABM systems into its arsenal would be the preferred choice for Pakistan. Thus, India would be initiating a dangerous ABM arms race with Pakistan. Keeping in view the cost and strategic impracticability of ABM systems in the

The introduction of ABM systems into the Indian arsenal undermines Pakistan's security

⁵⁴ Raja Mohan, "India welcomes Bush plan for cuts in n-arsenal", *The Hindu*, May 3, 2001. Interestingly, the US BMD is now seen in India as having merits, which it did not possess earlier. For instance on July 24, 2000, Mr. Jaswant Singh, the then Minister for External Affairs of India, in an interview with the Times of India said, "We have consistently held a view that opposes the militarization of outer space. The NMD will adversely influence the larger movement towards disarmament of which India is a staunch advocate. We believe that technological superiority will result in a reaction in other parts of the world, thus reviving the possibility of yet another, and newer arms race. We cannot support this development." See V. Sudarshan, "The Ballistic Friends", *Out look*, May 14, 2001, pp. 76-77.

⁵⁵ On February 5, 2003, the US eased its rules on the export of dual-use technology to India. The sale of US dual-use technology, or hi-tech products could have military applications. "US eases rules on export of dual-use tech to India", *Dawn*, February 7, 2003.

⁵⁶ India's Defense Minister Pranhab Mukherjee has stated several times since taking office that ties with Israel would remain firmly in place. Israel is the second largest supplier of sophisticated military technology and equipment to the Indian armed forces, and the two countries have established close defense ties. For example, on February 29, 2004 Israel's security cabinet finalized, US\$1.1 billion sale of the Phalcon Airborne Warning and Control System (AWACS) – one of the world's most sophisticated long-range warning and control systems – to India. Ramtanu Maitra wrote that the Phalcon deal is a three-way transaction involving Israel, India and Russia, one that will greatly enhance the surveillance capability of the Indian Air Force against incoming surface-to-surface missiles, while also providing India with the means to strike deep into enemy territory. Under the terms of the agreement, Israel will purchase an Ilyushin-76 cargo aircraft from Uzbekistan, which will then be sent to Russia to be fitted with new high-powered engines. After structural modifications, the aircraft will be sent to Israel to be mounted with the AWACS radar system, and the complete aircraft will then be delivered to India. Ramtanu Maitra, "India's Phalcon: Long-range problems", *Asia Times Online Ltd.*, March 9, 2004. Accessed on March 14, 2004.

⁵⁷ "The corollary of this anticipated action-reaction relationship is the hypothesis that the limitation of strategic defenses establishes the necessity of offensive limitations". Keith Payne, "Strategic Defenses and Virtual Nuclear Arsenal", in Michael J. Mazarr, (ed) *Nuclear Weapons in a Transformed World. The Challenge of Virtual Nuclear Arsenal* (New York: St. Martin's Press, 1997) p. 147.

geo-strategic environment of India and Pakistan,⁵⁸ abandoning plans to deploy ABM systems in the region seems a pragmatic approach. Admittedly, the possibility for the constitution of an ABM Treaty is remote between India and Pakistan because of the Chinese factor in the security calculations of India. But the encouraging factor is that China has opposed the development and deployment of anti-missile systems. Significantly, India has legitimized its nuclear weapons program by linking it to China's nuclear weapons capabilities. China's opposition to anti-missile systems provides India an opportunity to save its resources from the development of these costly weapons. Therefore, a bilateral Anti-Ballistic Missile Treaty, prohibiting nation-wide defences against strategic and tactical ballistic missiles and barring the development, testing, and deployment of sea, air, space and mobile land-based ABM systems or components could be negotiated and implemented.

7 | Controlling the Nuclear Weapons Arms Race

Eliminating nuclear weapons entirely is wishful thinking in the present global strategic environment

India and Pakistan have been increasing their nuclear weapons potential. If this trend persists they could acquire large and extremely risk prone overkill arsenals of nuclear weapons in the near future. The hope to eliminate the threat of nuclear war in South Asia by eliminating nuclear weapons entirely is wishful thinking in the present global strategic environment. The significance of nuclear weapons in the security doctrines of major powers reveals that complete disarmament of nuclear weapons is not yet possible. Even if complete nuclear weapons disarmament is achieved the problem remains that in a nuclear-disarmed world even a small number of illegal nuclear weapons could provide an enormous military advantage. So long as the global nuclear environment remains similar to what it is now, India and Pakistan will not move in the opposite direction towards denuclearization. India's traditional stance that the status of nuclear weaponry is a global rather than a regional problem determines the direction, level, and patterns of both India and Pakistan's future nuclear policies. According to their official stance, both states developed their nuclear weapons because their adversary's nuclear weapons potential had jeopardized their security environment – China in the

⁵⁸ The 'lesser strategic impracticability' of ABM systems between India and Pakistan means that it could not seriously endanger Pakistan's missiles penetrating potential. This is because India needs extremely sophisticated ABM technology for targeting and destroying Pakistani ballistic missiles at their pre-launch stage, in their boost phase, mid-course/trajjectory, and re-entry phase, which New Delhi would not be able to achieve in the near future. Secondly, due to the geographical narrowness of targets, Pakistani short and medium range missiles make smaller trajectory curves and give less time for Indian interceptors' and their auxiliary systems to react. Thirdly, even a full NMD system could be defeated by simple countermeasures. For more details about it see Zafar Nawaz Jaspal, "India's Anti-Ballistic Missile Programme: Impact on Pakistan's Security", Op. cit. pp. 65-69.

case of India, and India in the case of Pakistan. Proliferation appears to beget proliferation.

One alternative to complete elimination of Indian and Pakistani nuclear weapons is negotiation and adoption of nuclear risk reduction measures. Close collaboration will be needed here because unilateral steps are widely viewed as essential but insufficient. India and Pakistan, therefore, should sincerely engage in cooperative arrangements to build trust, control their nuclear competition, and reduce the security dilemma. Current developments in Indo-Pakistan relations indicate that the environment is suitable for bilateral nuclear arms control arrangements. In January 2004 the peace process was initiated between India and Pakistan. On June 19-20, 2004, after the first round of discussions in New Delhi, Indian and Pakistani officials discussed and agreed to continue a dialogue process for devising a consensus on the following issues:

1. A dedicated and secure hotline would be established between the two foreign secretaries, through their respective Foreign Offices, to prevent misunderstanding and reduce risks relevant to nuclear issues.
2. They decided to work towards concluding an agreement with technical parameters on pre-notification of flight-testing of missiles, a draft of which was handed over by the Indian side.
3. Each side reaffirmed its unilateral moratorium on conducting further nuclear explosions unless, in exercise of national sovereignty, it decides that extraordinary events have jeopardized its supreme interests.
4. They would continue to engage in bilateral discussions and hold further meetings to work towards implementation of the Lahore Memorandum of Understanding of 1999 reached between then Prime Ministers Atal Bihari Vajpayee and Nawaz Sharif.⁵⁹

⁵⁹ In February 1999 during the Lahore Summit the Memorandum of Understanding (MOU) was signed by Indian Foreign Secretary K. Raghunath and Pakistani Foreign Secretary Shamshad Ahmad. According to the MOU, both India and Pakistan approved confidence building measures for improving their security environment. Seven of the eight points listed in the MOU directly addressed nuclear reduction for the first time. The issues decided upon were: (1) The two sides shall engage in bilateral consultations on security concepts, and nuclear doctrines, with a view to developing measures for confidence building in the nuclear and conventional fields, aimed at avoidance of conflict. (2) The two sides would undertake to provide each other with advance notification in respect of ballistic missile flight tests, and shall conclude a bilateral agreement in this regard. (3) The sides are fully committed to undertake national measures to reduce the risks of accidental or unauthorized use of nuclear weapons under their respective control. The two sides further undertake to notify each other immediately in the event of any accidental, unauthorized or unexplained incident that could create the risk of fallout with adverse consequences for both sides, or an outbreak of a nuclear war between the two countries, as well as to adopt measures aimed at diminishing the possibility of such actions, or such incidents being misinterpreted by the other. The two sides shall identify/establish appropriate communication mechanism for this purpose. (4) The two sides shall continue to abide by their respective unilateral moratorium on conducting further nuclear test explosions unless either side, in exercise of its national sovereignty, decides that extraordinary events have jeopardized its supreme interests. (5) The two sides shall conclude an agreement on prevention of incidents at sea in order to ensure safety of navigation by naval vessels, and aircraft belonging to the two sides. (6) The two sides shall periodically review the implementation of existing (CBMs) and where necessary, set up appropriate consultative mechanism to monitor and ensure effective implementation of these CBMs. (7) The two sides shall undertake a review

5. They would continue to engage in bilateral consultations on security and non-proliferation issues within the context of negotiations on these issues in multilateral fora.
6. They recognized that the nuclear capabilities of each other, which are based on their national security imperatives, constitute a factor for stability.
7. They would be committed to national measures to reduce the risks of accidental or unauthorized use of nuclear weapons under their respective controls and to adopt bilateral notification measures and mechanisms to prevent misunderstanding and misinterpretations.
8. They declared that they would be committed to working towards strategic stability and reiterated they were conscious of their obligation to their peoples and the international community.

The durability of strategic stability between India and Pakistan, however, demands bolder nuclear CBMs between them. The following discussion indicates possible areas where bilateral cooperation is essential and possible.

Bilateral agreement to increase strategic warning time

Both states could place de-alerted warheads in storage sites at some distance from their launch vehicles

The increase in strategic warning time needs prior trust between the negotiating parties. The ‘Strategic Warning Time’ term denotes the time interval between the emergence of a nuclear threat and one’s ability to respond to it. Most of the nuclear weapon states have sought to bring hair trigger deployments of their nuclear weapons close to zero. In the case of India and Pakistan a reasonable interval can be maintained by not mating warheads with the delivery systems, so that a potentially disastrous situation could be defused through dialogue. For that, time is essential. This solution implies putting a physical distance between the delivery vehicle and the warhead.⁶⁰ Both states could place de-alerted warheads in storage sites at some distance from their launch vehicles. They would also allow placing neutral observers at those sites, with authority only to count what went in and

of the existing communication links (e.g. between the respective Directors- General, Military Operations with a view to upgrading and improving these links, and to provide for fail-safe and secure communications) . “Text of Document signed at Lahore,” *Dawn*, February 22, 1999. Text of the Lahore Declaration, February 21, 1999. <<http://www.ipcs.org/documents/1999/1-jan-mar.htm>>. See also Chris Gagne, “Nuclear Risk Reduction in South Asia: Building on Common Ground”, in Michael Krepon and Chris Gagne, ed., *The Stability-Instability Paradox: Nuclear Weapons and Brinkmanship in South Asia*, Report No. 38 (Washington, D.C.: The Henry L. Stimson Center, June 2001), p. 52.

The MOU signed in Lahore was the result of the nine months-long parallel diplomatic dialogue facilitated by the US, which brought the two sides to the negotiating table. The US initiative encouraged India and Pakistan to take five steps to help avoid a destabilizing nuclear and missile competition, reduce regional tension and bolster global non-proliferation. The main contours of the Talbott Mission broadly were to a) declare a voluntary moratorium on further testing. b) Refrain from producing more fissile material. c) Observe restraint in the development and deployment of missiles and aircraft capable of carrying weapons of mass destruction. d) Tighten export control on sensitive material and technology. e) Finally to engage in direct, high-level frequent and above all a productive dialogue.

⁶⁰ Shaukat Qadir, “Op-ed: Nuclear South Asia: reducing risks”, *Daily Times*, May 11, 2002. <<http://www.dailytimes.com.pk/default.asp?date=5/11/02>>

what went out. The increase in warning time would certainly reduce the likelihood of pre-emption success.

Bilateral agreement on non-deployment of nuclear weapons

In the aftermath of the May 1998 nuclear weapons tests, the non-weaponized nuclear deterrence between India and Pakistan was transformed into a weaponized capability and they have given their short and medium range nuclear capable ballistic missiles to their armed forces. The deployment of ballistic missiles would pose severe security risks given the relatively short distances between major population centers in India and Pakistan and the brief time required for missiles to travel such distances, i.e. three to eleven minutes.⁶¹

They must sign a non-deployment of nuclear weapons agreement

The deployment of nuclear weapons compresses decision-making cycles for national leaders and battlefield commanders, reducing stability during times of crisis. Moreover, operational capabilities would create a hair trigger situation that would put societies under an acute psychological strain. Moreover, in an era of potential nuclear terrorism, the theft of a nuclear weapon from a storage site could spell disaster for a city, but the seizure of a strategic missile or group of missiles ready for immediate firing could be apocalyptic for entire nations.⁶²

The non-deployment of nuclear weapons by India and Pakistan would be an effective strategy to avoid one of the biggest terrorist threats that could arise from the extremely high launch-readiness of tactical and strategic missiles. It is critically important that India and Pakistan avoid going further down this road during their build-up of operational capabilities.⁶³ For achieving this objective they must sign a non-deployment of nuclear weapons agreement.

Bilateral arrangement for nuclear risk reduction centers

Communication systems form a necessary backbone for threat-reduction and monitoring. Kent L. Biringer argues that “the process of managing missile possession in tense regions demands a reliable, secure, dedicated, and timely

⁶¹ Pakistan’s geographical narrowness or lack of strategic depth and India’s commitment to introduce more sophisticated nuclear capable delivery systems, like cruise missiles and ballistic missile defense systems, undermine Pakistan’s security and limit its choices during a crisis.

⁶² Dr Bruce G Blair, “The new nuclear threat”, *Daily Times*, May 5, 2003.

⁶³ India’s declared China specific nuclear deterrent compels her to deploy her nuclear capable missiles or operationalize her nuclear capabilities. But many analysts, for example Nazir Kamal, believe that “India does not need to nuclearize against China. China has a no-first-use policy and a conventional conflict between them, as in the past, is most likely to be limited in scope, both geographically and politically. They are also well-matched along the Himalayan frontiers. Furthermore, the danger of conflict between them is much lower than between India and Pakistan, as they have moved toward a significant reduction of border tension over the past decade.” See Nazir Kamal, “Pakistani Perceptions and Prospects of Reducing the Nuclear Danger in South Asia”, *Cooperative Monitoring Center Occasional Paper/ 6* (US: Sandia National Laboratories, January 1991).

communications infrastructure”.⁶⁴ The most important agreement in the June 2004 Delhi talks was the establishment of a hotline to counter the accidental use of nuclear weapons.⁶⁵ The hotline would alert Indian and Pakistani officials of potential nuclear threats or accidents. Admittedly, hotline establishment would be a positive development but it could not serve the purpose – nuclear risk avoidance – in totality. Therefore, it is important that New Delhi and Islamabad instead of relying on the hotline mechanism, they could establish Nuclear Risk Reduction Centers (NRRCs) in their capitals and to establish a special facsimile communications link between these Centers. Michael Krepon wrote “...key element in Cold War nuclear risk reduction was the establishment of reliable lines of communication across borders, for both political and military leaders”.⁶⁶ The Centers are intended to supplement existing means of communication and provide direct, reliable, high-speed systems for the transmission of notifications and communications at the Government-to-Government level.

The Centers communicate by direct satellite links that can transmit rapidly full texts and graphics. In addition, NRRCs could be staffed by mixed groups of officials from both sides to defuse crises before they erupt. In this respect, the Centers could have a communications capability very similar to – but separate from – the modernized hotline, which is reserved for Heads of Government. The NRRCs would serve an effective, exclusive and a dedicated technical means of official communication for exchanging rapid, accurate and factual information. This could help prevent misperception or unintended reactions that could lead to accidental or inadvertent escalation. The second element of NRRCs may be a verification mechanism, which could prove essential in building trust. It may include observers or inspectors to physically verify the authenticity of intelligence when there is doubt. Certainly, it could set a positive precedent by incorporating transparency and verification measures into military procedures. Consequently, it could serve to build trust and confidence between the two sides.⁶⁷

Bilateral Ban on Nuclear Exercises

When states conduct their nuclear related military exercises, it gives the impression that they are operationalizing their nuclear capabilities. The summer 2001 Indian military exercise Poorna Vijay (complete victory) aroused many questions among Pakistani policy makers. In fact the official stated purpose of the exercise was to evaluate concepts and practice battle procedures during offensive and defensive operations on the future battlefield, with a nuclear backdrop. Importantly, Islamabad viewed the exercise as an

⁶⁴ Kent L. Biringer, “Missile Threat Reduction and Monitoring in South Asia”, in Michael Krepon and Chris Gagne, ed., *Op. Cit.*, p. 68.

⁶⁵ Importantly, the possibility of pre-emptive strikes between the belligerent neighbors could not be ruled out. The CBMs process is viewed as functional phenomena, thereby if it is happening between adversaries, the possibility of a pre-emptive strike is near zero.

⁶⁶ Michael Krepon, “Nuclear Risk Reduction: Is Cold War Experience Applicable to Southern Asia?”, in Michael Krepon and Chris Gagne, ed., *Op. Cit.*, p. 6.

⁶⁷ Colonel Rafi uz Zaman Khan, “Pakistan and India: Can NRRCs Help Strengthen Peace?” *Occasional Paper No. 49* (Washington D.C. : The Henry L. Stimson Center, December 2002). <<http://www.stimson.org/southasia/pdf/nrrcsouthasia.pdf>>.

attempt by India to legitimize conventional war waged under a nuclear umbrella. In July 2002 Pakistan conducted a joint week-long war game. One of the important objectives of the war game was to enhance joint planning and to explore ways to increase Pakistan's tactical planning capabilities, especially its nuclear deterrence. Significantly, the Strategic Plans Directorate (SPD) also participated in the nuclear related war games.⁶⁸

The nuclear related military exercises by India and Pakistan further endanger the regional strategic environment. These exercises do not only increase the importance of nuclear weapons in the military calculations of both states, but also promote a spiral of competition that usually manifests itself in an arms race that, ultimately, can lead to war. One factor may be that these exercises increase misperceptions and mistrust. Therefore such nuclear related military exercises ought to be avoided. In this context, the already existing India-Pakistan agreement for restriction on certain military exercises should be updated.

Nuclear related military exercises by India and Pakistan further endanger the regional strategic environment

Bilateral agreement to abandon tactical nuclear weapons

The definition of 'tactical', or 'sub-strategic', nuclear weapons is somewhat tenuous and can include many criteria, such as range, yield, target, national ownership, delivery vehicle, and capability. Tactical nuclear weapons generally have smaller explosive power and limited blast damage radii measured in hundred of meters and cause relatively low levels of casualties compared to strategic nuclear weapons. Tactical nuclear weapons are intended for 'battlefield' use against enemy forces, rather than against enemy cities or strategic nuclear forces. Tactical nuclear weapons include a broad array of devices, from so-called nuclear landmines and nuclear artillery shells to air-dropped or missile-launched nuclear warheads. Their yields can be relatively low (0.1 kiloton), equal to those of the bombs dropped on Hiroshima and Nagasaki (15-20 kilotons), or very large (1 megaton).⁶⁹

There is the possibility that India and Pakistan will deploy very low yield nuclear weapons in the sub-kiloton or 1-2 kiloton range because of their apparent utility on a battlefield, for example in compact form they can be fired from artillery guns. This apprehension is valid because both India and Pakistan tested small yield nuclear weapons. On May 28, 1998, for example, Pakistan conducted four tests of small or low yield weapons. The collective yield of these four weapons was 4-10 kilotons. India has also demonstrated such a capability through its sub-kiloton tests in May 1998. According to Dr. R. Chidambaram India has developed tactical nuclear weapons.⁷⁰ If India and Pakistan use tactical nuclear weapons in the battlefield, they have strategic implications since Pakistan's major industrial and populous cities are near its

⁶⁸ Dr. Ayesha Siddiqa-Aga, "War-gaming in a nuclear environment", *The Friday Times*, July 26-August 1, 2002. < <http://www.thefridaytimes.com/news6a.htm>. >

⁶⁹ Alistair Millar, "The Pressing Need for Tactical Nuclear Weapons Control", *Arms Control Today*, May 2002. < http://www.armscontrol.org/act/2002_05/millarmay02.asp>.

⁷⁰ Brahma Chellaney, "India's Nuclear Planning, Force Structure, Doctrine and Arms Control Posture", in Dr. Digumarti Bhaskara Rao, *Nuclear Materials Issue and Concerns*, Vol. 11 (New Delhi: Discovery Publishing House, 2001), p. 997.

eastern border and the use of tactical nuclear weapons increases the possibility of further escalation. The uncertainties associated with the employment of tactical nuclear weapons are simply too great. Use of tactical nuclear weapons by India would have strategic implications for Pakistan and vice versa and could quickly lead to an all-out nuclear war.

Islamabad may consider tactical nuclear weapons a way to counter conventional weapons asymmetry

The small size and portability of tactical nuclear weapons increases their vulnerability to theft by terrorists. Even in the hands of state militaries, tactical nuclear weapons are more susceptible to unauthorized or accidental use than strategic weapons: they are often deployed near the front line; they are far more sensitive to communication problems under crisis conditions; and they can be fired by a soldier in the field without going through many of the stringent safety precautions that govern the launch of strategic nuclear weapons. P. R. Chari argued that “War-fighting requires tactical nuclear weapons which could be very destabilizing in the sub-continental scenario”.⁷¹

Therefore it is imperative that India and Pakistan negotiate a bilateral treaty for countering the tactical nuclear weapons threat. Of course such an agreement requires intrusive monitoring and verification and the mistrust between India and Pakistan does not ensure the practicability of such an agreement. In addition, Islamabad may consider tactical nuclear weapons a way to counter conventional weapons asymmetry between India and Pakistan. The overriding puzzle is that the use of tactical nuclear weapons would instantly escalate a conflict into all out nuclear war and is therefore a dangerous development. The dividends of an agreement between India and Pakistan banning the development and deployment of tactical nuclear weapons are impressive in terms of deterrence stability.

Bilateral agreement for qualitative and quantitative restraint on the nuclear weapons

India and Pakistan face a choice between the assured dangers of proliferation or the challenges of disarmament. The better choice is to cap, progressively reduce and perhaps even completely eliminate nuclear weapons, but the international and regional environment and their security needs do not allow them to opt for this better choice. What is possible in the current scenario is that they opt for a strategy of minimum nuclear deterrence keeping in view the reality of nuclear asymmetry and refrain from developing overkill nuclear capabilities. According to P. R. Chari,

Pakistan needs to accept the fact that India’s nuclear capability has to be designed against Pakistan and China, just as India would have to accept that China’s nuclear capability must configure to the United States and Russia. Strict parity would be unrealistic in the light of

⁷¹ P. R. Chari, “Nuclear Restraint, Nuclear Risk Reduction, and the Security-Insecurity Paradox in South Asia”, in Michael Krepon and Chris Gagne, ed., “”, in Michael Krepon and Chris Gagne, ed., *The Stability-Instability Paradox: Nuclear Weapons and Brinkmanship in South Asia*, Report No. 38 (Washington, D.C.: The Henry L. Stimson Center, June 2001), p. 32.

differing security perceptions and seeking this goal could lead to an unrestrained arms race.⁷²

Bilaterally formalize a moratorium on further nuclear testing

India and Pakistan's geo-strategic environment also permits them to live with the first generation of nuclear weapons. This entails that they do not require further nuclear weapons tests. In addition, minimum nuclear deterrence also permits them to limit production of fissile material for nuclear weapons. The encouraging element in this case is that following their May 1998 nuclear tests both India and Pakistan declared unilateral testing moratoria and hinted that they might adhere, in some manner, to the Comprehensive Test Ban Treaty (CTBT).⁷³ At the time of writing both states have refrained from further nuclear weapons testing. The favorable arrangement is that both India and Pakistan either join the CTBT or make similar arrangements at the regional level. For improving trust, they could also verify and exchange seismic data. Such an exchange would assuage fears that either country was secretly conducting further tests. The exchange of information would be conducted with a view to enhancing cooperation and transparency.

Bilateral agreement on a monitoring system

Such bilateral agreements need a system to monitor nuclear storage areas and nuclear facilities. A monitoring system therefore involves the declaration of nuclear storage sites and facilities and permission for monitoring teams to inspect them. Technical monitoring of storage areas involves use of a number of sensors to detect activity level in or around the facility. Ground sensors such as seismic, magnetic, or acoustic sensors could be used to detect movement around the facility boundary or on access roads leading to the facility. Through these sensors data could be collected and stored on site and sent by radio, satellite, phone, Internet or other communication means to party/parties of the agreement.⁷⁴

Technical monitoring of sensitive facilities involves sensors such as door switches, motion sensors, or electronic seals to detect entry or activity in the facility. The seals would indicate any incident of tampering with containers, monitoring equipment, or portions of the facility that have been closed and sealed. Moreover, the technique of sensor-triggered video systems, which capture a digital image when another sensor is activated, could be used to better characterize any detected interior or exterior event.⁷⁵ Admittedly, both India and Pakistan lack such technologies at this time, but they could develop or procure such technical equipment from the developed world.

⁷² Ibid., pp. 32-33.

⁷³ In September 1998 both then Indian Prime Minister Atal Bihari Vajpayee and Pakistani Prime Minister Nawaz Sharif announced during the opening session of the 53rd UN General Assembly that their governments were prepared to sign the CTBT within the next year.

⁷⁴ Kent L. Biringier, "Missile Threat Reduction and Monitoring in South Asia", in Michael Krepon and Chris Gagne, ed., *Op. Cit.*, p. 73.

⁷⁵ Ibid.

8 | Conclusion

It is vital that India and Pakistan constitute a bilateral arms control regime for a sustainable and durable peace

Pakistan is trying to keep a balance of terror with India. In terms of strategic equilibrium it is not lagging behind in the South Asian arms race. Admittedly, in the conventional arms race it cannot afford to catch up or maintain symmetry with India because of its economic and population constraints, but in missile and nuclear weapons buildup Islamabad has been sustaining a reasonable strategic balance of terror with New Delhi. Although this strategic balance of terror maintains peace between the adversaries, it is very much prone to nuclear catastrophe.

The absence of an arms control regime in the region obliges both India and Pakistan to develop their strategies based on worst-case scenario planning. The non-predictability of the behavior of the adversary is one of the main causes of investment or wasting of both states' precious resources in the deadly business of conventional, missile and nuclear weapons arms racing. This is because both have been building weapons in part to maintain what they perceive to be a favorable military balance with their adversary. The action-reaction cycle has been a major factor in sustaining the arms race between India and Pakistan. Ironically, an arms race does not guarantee the security of strategic competitors because it has a potential to affect the balance of power and undermine deterrence. Moreover, according to realist theory the balance of power could be shifted in ones favor by a preemptive strike. Therefore, a treaty undertaking not to resort to force should be drafted and adopted that necessitates consultation between the adversaries in the event of a breach, or threat to breach, of any bilateral arms control agreement or treaty, with the purpose of preserving peace and averting conflict. It is vital that India and Pakistan constitute a bilateral arms control regime for a sustainable and durable peace between them.