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EDITOR'S NOTE

Events since the beginning of this year offer cautious hope for improvement in relations between the nuclear-armed South Asian neighbours of India and Pakistan. Beginning with a meeting of the Indian Prime Minister and Pakistan's President on the sidelines of the SAARC Summit in January and followed a few weeks later by their Foreign Secretaries issuing a Joint Statement on the resumption of a formal composite dialogue, India and Pakistan are moving towards normalization of relations through a series of both high-level and technical talks on issues including Jammu and Kashmir; peace and security, including confidence-building measures; terrorism and drug trafficking; and economic and commercial cooperation. The two nations just completed the first full cricket tour by India to Pakistan in fifteen years—a series marked by bonhomie and sportsmanship and heralded as a successful example of building people-to-people ties between the two countries.

However, much can upset this delicate process. Optimism concerning the steps towards resolving long-standing differences is tempered by the possibility that either external or internal events could disrupt the process, as evident in the postponement of talks on starting a bus service between the two parts of Kashmir. In addition, there is constant fear that violent action by armed transnational non-state actors could easily derail the drive towards normalization. Clearly, one of the biggest changes for both India and Pakistan is to insulate the process of normalization and people-to-people contact from the perennial upheavals that have marked their troubled bilateral relationship. This issue of *Disarmament Forum* takes stock of recent developments and looks ahead to the key issues facing the region including the arms race, the performance and prospects of confidence-building measures as well as the role of the United States, whose current level of simultaneous involvement with both Pakistan and India is without precedent.

It is widely accepted that human rights and fundamental freedoms must be respected and protected if individuals are to be secure—yet human rights are often suppressed in the name of 'security'. As human rights could offer one conceptual and normative framework for implementing the concept of human security, there is an opportunity to build upon the fundamental connections between the two areas to strengthen this synergistic relationship. In this regard, the next issue of *Disarmament Forum* will examine the relationship between human rights and human security, including the link between human rights and WMD, attempts to quantify human security, small arms and human rights, and a review of the existing human rights mechanisms from a human security perspective.

UNIDIR has been appointed as the consultant to the second United Nations Panel of Governmental Experts on the Issue of Missiles in All its Aspects. Carrying out this work for UNIDIR is Christophe Carle, Deputy Director of UNIDIR, and Waheguru Pal Singh Sidhu, Senior Associate at the International Peace Academy. UNIDIR is also serving as consultant to the United Nations Group of Governmental Experts on the Relationship Between Disarmament and Development.

A Guide to the Destruction of Small Arms and Light Weapons: The Approach of the South African National Defence Force by Sarah Meek and Noel Stott has been published as a companion volume to *Destroying Surplus Weapons: An Assessment of Experience in South Africa and Lesotho* (2003). These two volumes conclude the research project with the Small Arms Survey entitled 'Weapons Destruction and Stockpile Management in South Africa'. The project, funded by the Government of Norway, analysed the procedures that South Africa established to manage the stocks and destruction of collected small arms and light weapons, and to identify best practices.

On 25–26 March 2004, UNIDIR, the Canadian Department for Foreign Affairs and International Trade, the Simons Centre for Peace and Disarmament Research, Project Ploughshares Canada, the Henry L. Stimson Center and the Union of Concerned Scientists co-organized a workshop entitled 'Safeguarding Space for All: Security and Peaceful Use'. The workshop, held in Geneva, dealt with issues such as the existing peaceful uses of outer space and the potential future threats to a peaceful space environment, means to ensure space security and assurance, international legal approaches and the role of the Conference on Disarmament, and transparency and confidence-building in outer space. A workshop report will be published. The workshop was financed by the Simons Foundation and the Canadian Department of Foreign Affairs and International Trade. For more information, see UNIDIR Focus, page 67.

Kerstin Vignard

Peace By Piece

The new year began on a promising note for one of the world's most dangerous flashpoints. In a landmark agreement on 6 January 2004, Pakistan and India decided to resume a composite dialogue to find a peaceful settlement of all outstanding disputes, including Kashmir.

This groundbreaking agreement was reached between President Musharraf and Prime Minister Vajpayee on the sidelines of the twelfth summit of the seven-member South Asian Association for Regional Cooperation (SAARC) in Islamabad. The summit itself produced a framework agreement on a South Asian Free-Trade Area (SAFTA), which marked a significant milestone in regional cooperation by an organization whose evolution has thus far been stymied by the longstanding Indo-Pakistan confrontation.

Military and diplomatic confrontation between the two sub-continental neighbours has been endemic for over half a century. The history of conflict is well known: three full-scale wars, one limited war (Kargil), and several near wars (1987–1990 and most recently in 2002). Until the ceasefire announced by the two sides in November 2003, exchange of artillery and small arms fire had been an almost daily occurrence along the 750km Line of Control in Kashmir, including in Siachen—the world's highest battleground.

Even after the nuclear tests conducted by India and then Pakistan in 1998, the two countries were unable to find ways to manage their tense relationship or evolve new rules of engagement in a nuclearized environment, aptly characterized by a former American president 'as the most dangerous place on Earth'.

The January 2004 breakthrough was preceded by months of backstage diplomacy, the active engagement of the international community led by the United States and a series of confidence-building measures (CBMs) undertaken by the two countries. This led to the restoration of travel links and full diplomatic ties.

To sustain this positive momentum, it is now necessary to go beyond the current improved atmospherics, and to transition from a piecemeal process to a real peace process.

Forming the backdrop to this incipient peace process are the region's key security challenges: the longstanding dispute over Kashmir, growing conventional asymmetry between Pakistan and India, nuclear uncertainty, and fundamentalism and terrorism. New and old security threats combine in the subcontinent to pose daunting challenges, but none that cannot be surmounted by a sustained and result-oriented dialogue, patient diplomacy and statesmanship by both sides.

The first order of business in South Asia must be to avert any possibility of conflict and promote normalization. The starting point is to recognize that there is no military solution to Kashmir. Sustaining dialogue on Kashmir will not be easy. The official positions of the two countries are mutually exclusive. However, President Musharraf has offered a formula that could enable the two nations to search for a peaceful solution. He has suggested a four-step approach. The two countries should:

- Agree that Kashmir is the central problem between them;
- Identify those positions and proposals that are unacceptable to the other side;
- Take up consideration of other proposals; and
- Agree on a solution acceptable to Pakistan, India and the Kashmiri people.

Simultaneously, military issues will need to be constructively addressed. The obvious dangers posed by the growing conventional imbalance are further heightened due to uncertainty in the nuclear dimension of the Indo-Pakistani military equation. Both India and Pakistan are now established nuclear powers, even if this reality is not legally acknowledged.

As neither country is likely to roll back its nuclear and strategic programmes, there is a critical need for discussion of their respective nuclear doctrines, deployment status, command and control, and security of assets. Dialogue between the two must aim to establish understanding on these crucial counts. This is especially so because while India envisages in its draft nuclear doctrine the development of a triad of nuclear forces, including second-strike capabilities, Pakistan advocates maintaining the nuclear deterrence at the lowest possible level and a bilateral non-use-of-force agreement.

Recent developments have added greater urgency to concerns about nuclear stability. These developments include the clearance of the sale by Israel of the Phalcon Early-Warning System to India and the possible sale of the Arrow Anti-Ballistic Missile (ABM) system. These 'force multipliers' will, in Pakistan's view, threaten the stability of mutual deterrence as it exists today.

In particular, the development and deployment of a ballistic missile defence (BMD) system by India will destabilize strategic deterrence in South Asia (for the same reasons that BMD would destabilize deterrence between the great powers). This could set the region on to a new and extremely dangerous phase of an arms race.

Dialogue between Pakistan and India ought to address these important questions. Pakistan has already proposed the creation of a new security architecture, both in the conventional and non-conventional fields. This strategic restraint regime comprises three interlocking elements:

- First, agreed and reciprocal measures for nuclear and missile restraint to prevent deliberate or accidental use of nuclear weapons;
- Second, initiation of conventional arms control measures to build confidence between the two countries; and
- Third, the establishment of a political mechanism for resolving disputes, especially Kashmir.

Pakistan's proposals for nuclear and missile restraint include a bilateral moratorium on further nuclear-weapons testing, maintenance of nuclear weapons on de-alert status, non-deployment of nuclear-capable ballistic missiles, a moratorium on the acquisition and deployment of ABM systems and other CBMs to reduce nuclear risk.

In the conventional field, discussions could take place on Pakistan's proposals for balanced force reductions, restrictions on induction of heavy weapons within certain specified border zones, and CBMs to eliminate the threat of 'surprise attacks'.

On evolving trade ties both countries can utilize the recent SAARC agreement on SAFTA to enlarge bilateral and regional trade.

The successful pursuit of this positive agenda will require the evolution of a common strategic vision for the future of South Asia—a vision of peace based on the priority principle of greater prosperity. This would require:

- A recognition that military build-up by either country is an unnecessary diversion of precious resources and energy and unlikely to lead to the realization of the fundamental aspirations of their peoples;
- Resolution of political disputes; and
- Greater mutual trust, which can be buttressed by the international community's support and guarantees.

Undeniably the way forward is strewn with myriad difficulties. But there is no alternative if the countries of the region are to extricate themselves from the quagmire of conflict, poverty, disease and illiteracy. We need vision and accommodation on all sides to deal with old and new threats as we deliver the long-awaited peace dividend to the one-fifth of humanity that resides in this region.

After all, the window of opportunity opened by recent initiatives may not be available forever. The peace process, like a bicycle, must move forward if it is not to collapse.

Maleeha Lodhi

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A languid but lethal arms race

Waheguru Pal Singh Sidhu

Southern Asia is in the throes of a languorous arms race, which has the potential of spiralling into an unintended but lethal confrontation between China, India and Pakistan.¹ Although this build-up is apparent in both the conventional and nuclear spheres, it is particularly evident in the area of nuclear weapons and their related means of delivery, especially missiles.

Since the end of the Cold War, China, India and Pakistan have developed and tested more ballistic missiles than any other part of the world. Although the absence of any formal notification of missile tests makes it difficult to ascertain the exact details and number of tests, estimates based on media reports suggest that these three countries have amongst them developed at least half a dozen types of missiles and have test-fired well over fifty nuclear-capable missiles since the mid-1990s, thus enhancing their missile holdings both quantitatively and qualitatively.² While these tests, of course, are a fraction of the nuclear-capable missile tests conducted by the two superpowers at the height of the Cold War, they are nonetheless significant given the present pace of similar missile tests elsewhere.

One obvious reason behind this pace is that both India and Pakistan have just started the process of building up their missile inventories from zero to what they consider a credible level. Similarly, China, which already has a substantial missile inventory, is presently modernizing its missile arsenal to match those of the other four declared nuclear-weapon states. However, apart from the series of aggressive 'tests' of missiles conducted by China during the Taiwan crisis of 1996, neither India nor Pakistan have actually 'used' ballistic missiles in battle until now. Nonetheless, for a number of reasons, including the perceived conventional gap between India and Pakistan, Islamabad's tacit doctrine of first and early nuclear use, New Delhi's limited conventional war doctrine, and the dual role (conventional and nuclear) attributed to missiles by both sides, there is greater propensity that these missiles will be used in a future India-Pakistan confrontation with unpredictable consequences.

Compared to the 'missile gap' and related race between the United States and the Soviet Union in the late 1950s and early 1960s, which was set in a mutually accepted bilateral one-to-one context, the nature of the present triangular contest between China, India and Pakistan is far more complicated. First, none of the countries in Southern Asia has actually talked about a 'missile gap' with the others and each vehemently denies that they are in a race to catch up with the others' growing capabilities; in fact, they all officially claim that their efforts in the nuclear and missile field are merely designed to maintain a 'minimum' deterrence capability. Second, even when Beijing, Islamabad and New Delhi justify their missile-related developments in terms of external threats, the linkage is not mutual, as was the case in the American-Soviet context, but is more linear: Pakistan versus India, India versus China, and China versus the United States.³

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Third, related to the linear nature of the linkage, none of the countries is willing to discuss their own missile developments with the other, even under the guise of maintaining strategic stability, for a variety of reasons. For instance, Beijing refuses to discuss its nuclear and missile inventory with the United States unless Washington's own holdings are dramatically reduced to match the level of China's. Similarly, Beijing is also reluctant to get into nuclear and missile discussions with New Delhi because it feels that this would be tantamount to recognizing India as a nuclear-weapon state, which China—the primary sponsor of United Nations Security Council resolution 1172—is unwilling to concede. In a similar vein, some in New Delhi argue that it is futile to discuss the nuclear and missile arsenal only with Islamabad because India's nuclear and missile capability is also aimed at other countries in the region, particularly China. Fourth, added to this volatile mix of each country expanding its nuclear-capable missile capability without fully comprehending the consequences of their actions on the other, is the crucial issue of missile defence; all three Southern Asian nuclear countries were initially determined to grapple with this latest strategic challenge by diplomatic means, but are increasingly trying to deal with the emerging scenario by both improving their own abilities to overwhelm such defences as well as by trying to acquire similar defence capabilities for themselves.⁴ Thus, even though the present Southern Asian arms race is a snail-paced one, it is likely to have serious strategic implications for the region and beyond.

Consequently, the focus of this article will be on the link between the rapidly evolving conventional capabilities and the leisurely paced nuclear-capable missile race in the geo-strategic region of Southern Asia. It will begin with a brief overview of the nuclear-capable missiles as well as the missile defence programmes of China, India and Pakistan. This overview will also present the doctrines related to nuclear use and their impact on conventional capabilities in all three countries. The next section will identify the internal and external drivers behind the evolving missile programmes. The final section will

The conventional gap between China, India and Pakistan is inevitably leading all three to increasingly depend on their nuclear capabilities to counter any perceived threats.

underline the inherent dangers of these developments and argue that the conventional gap between China, India and Pakistan is inevitably leading all three to increasingly depend on their nuclear capabilities to counter any perceived threats. The article will then suggest possible policy options for ensuring strategic stability and preventing an inadvertent slide towards a military and, perhaps, a nuclear row.

China's missile programme and doctrine

China's missile programme, which dates back at least to the late 1950s, has always been associated with the country's nuclear-weapon capability. Indeed, so high was the level of confidence in the missile capability, even in the early days, that in 1966 China conducted its fourth nuclear test by arming a first generation Dong Feng (DF) 3 missile with a live nuclear warhead and launching it over densely populated parts of the country to land at the Lop Nor test site. It was the first and, perhaps, the only country to test a nuclear weapon in this fashion. Today, China has an extensive and sophisticated ballistic missile programme and, according to at least one expert, may be in a position to deploy cruise missiles by 2010.⁵ It is already modernizing its strategic rocket forces through multiple independently targetable re-entry vehicle (MIRV) capabilities and improved guidance systems. These developments are evident in the 8,000km range DF-31 and the 13,000km DF-41. The latter can strike parts of the United States. China is also replacing the ageing DF-3 with the 1,800km range DF-21, which can strike targets deep within India. These capabilities could counter the naval power of the United States in the region and, with adequate numbers, could also punch a hole in the missile defence system being developed to protect the mainland of the United States (see Table 1).

China has also exported its expertise and complete systems to other countries that are of concern to both the United States and India. Apart from its well-documented transfer of the 300km range M-11s to Pakistan, it has also sold the nuclear-capable and 3,100km long-range DF-3s to Saudi Arabia. China's reported transfer of 'enabling technologies' for 'Iran's solid-fueled ballistic missile programme' is also a cause of concern to Washington.⁶ Although currently China does not have any missile defence system, it is reported to be seeking the Russian-made S-300VM air defence system, which is designed to provide protection against ballistic missiles at the theatre level. Given China's growing missile capability, however, it is only a matter of time before it will be in a position to field its own version of a ballistic missile defence system, initially at the theatre level. Thus, China appears to be developing capabilities to both overwhelm the American shield and also to provide limited defence for its own second-strike capability.

As China develops these capabilities, it will inevitably also develop a surplus capability, which could easily be used to target India.⁷ While China's medium and intermediate range missiles (DF-2, DF-3, DF-4, DF-21), which have allegedly been de-targeted away from Russian and American targets in the region, could certainly be re-targeted to reach most Indian metropolises, the fact that Beijing has never considered India a serious threat to its security until now reduced its need for pointing large numbers of missiles in India's direction.⁸ Indeed, as Ashley Tellis has pointed out, 'the political disputes between China and India are too small to warrant any recourse to nuclear weaponry on either side.'⁹ Nonetheless, the Indian Ministry of Defence *Annual Report 2000-2001* is convinced that '[e]very major Indian city is within the reach of Chinese missiles and it is reported that this capacity is being further augmented to include Submarine-Launched Cruise Missiles (SLCMs)'. Another Indian military assessment notes that China has embarked on a programme that by 2010 plans to 'build hundreds of very accurate, GPS guided, DF-15 short-range ballistic missiles, DF-21s with terminally guided munitions, and new long-range cruise missiles with nuclear and non-nuclear warheads' while 'the PLAAF [People's Liberation Army Air Force] may possess over 150 Su-27s and Su-30s' and the People's Liberation Army Navy 'may have at least 14 modern conventional and nuclear-powered attack submarines, which would have better cruise missiles and anti-submarine capabilities.'¹⁰ Indian analysts are also sceptical about China's no-first-use policy and argue that this may not be applicable to regions that China considers to be part of its territory, such as Arunachal Pradesh, Taiwan or even Tibet. These claims are strengthened by the assessment of Western analysts of China's modernization plans as well

Table 1. The inventory of Chinese missiles

Missile	Status	Range (km)	Payload (kg)	Source
M-7 (CSS-8)	Operational	150	190	Domestic
DF-11 (CSS-X-7)	Operational	300	800	Domestic
DF-15 (CSS-6)	Operational	600	500	Domestic
DF-21A (CSS-5, Mod. 2)	Operational	1,800	2,000	Domestic
DF-21 (CSS-5, Mod. 1)	Operational	2,500	600	Domestic
DF-3A (CSS-2)	Operational	2,800	2,150	Domestic/ Russian Federation
DF-4 (CSS-3)	Operational	5,500	2,200	Domestic
DF-31	Tested/development	8,000	700	Domestic
DF-41	Programme cancelled?	12,000	800	Domestic
DF-5A (CSS-4)	Operational	13,000	3,200	Domestic
Julang-1 (SLBM)*	Operational	1,000	600	Domestic
Julang-2 (SLBM)*	Tested/development	8,000	700	Domestic

* = Submarine-launched ballistic missile.

Source: Worldwide Ballistic Missile Inventories available at < www.armscontrol.org/factsheets/missiles.asp >

as a series of de-targeting agreements that China has entered into with the other nuclear-weapon states, particularly the Russian Federation and the United States. Although Beijing has started to question the veracity of its de-targeting agreements with other nuclear-weapon states, the absence of a similar agreement between Beijing and New Delhi lends credence to the Indian argument that a significant part of the growing Chinese missile inventory might indeed be aimed at India. Even Indian strategists who argue against the likelihood of a nuclear exchange between China and India are concerned that nuclear weapons provide 'China with a security shield and the overall cover under which China can use conventional power against an adversary without fearing large-scale retaliation on its own territory.'¹¹

While Indian analysts are not particularly concerned about the present capabilities of the PLAAF and argue that it 'would not pose an unmanageable threat to the Indian Air Force (IAF)', they note that the serial production of the state-of-the-art Russian Sukhoi Su-27 strike aircraft, coupled with air refuelling capabilities, airborne radar and an improved air defence system 'will substantially improve China's capabilities in the coming years', which would require the IAF to modernize its own capabilities.¹² According to one estimate, in quantitative terms 'China has emerged as the third largest aircraft producer in the world'.¹³ However, it is the qualitative improvement in the capabilities of the People's Liberation Army Navy that is the cause of most concern to Indian analysts. China is expected to field nuclear submarines armed with cruise missiles and also to have port facilities available in Myanmar, Pakistan and, perhaps, Iran.¹⁴ It is in this context that New Delhi is concerned about China's assistance in building a signal intelligence facility in the Great Coco Islands, modernizing the port facilities and setting up a new radar station on the Hiangyi islands: these facilities would enable China not only to monitor India's naval communications but, perhaps, also its missile tests in the Bay of Bengal.¹⁵

The lack of transparency clearly makes it difficult to ascertain the direct threat posed to India, especially by China's nuclear-capable missiles, for several reasons. First, Beijing has been 'very effective in keeping secret the details' and 'there remains uncertainty about the number of ballistic missiles deployed', which must be based on 'best estimates'.¹⁶ Second, the Tibetan plateau, full of natural caves and manmade tunnels, is ideal to conceal missiles, most of which are mobile and have been moved around to make them difficult to track or target. Third, presently India does not have the national technical means to track these missiles or pinpoint their locations, particularly in Tibet. India has had to depend on human intelligence, particularly Tibetan refugees or resistance fighters, who may have their own vested interest in over- or underestimating missile strengths. Finally, in the absence of a verification regime, there is no means of checking whether the missiles that China claims have been decommissioned have indeed been retired or simply redeployed and re-targeted.¹⁷

India's missile programme and doctrine

The Indian missile programme, set up in 1958, actually pre-dates the civil space programme by at least four years. Although the two programmes sometimes compete for resources, there is also some cooperation. This cooperation is best exemplified in the transfer of personnel and technology from the successful civilian Satellite Launch Vehicle (SLV) programme to the fledgling Integrated Guided Missile Development Programme (IGMDP), which began in 1983 to develop the nuclear-capable Prithvi and Agni missiles.¹⁸ The latter was to provide a strategic deterrent vis-à-vis China, while the former was seen as a Pakistan-specific missile. Twenty years later, the programme has partially achieved its objective. Two versions of the liquid-fuelled Prithvi (the SS-150 for the army and the SS-250 for the air force) have been developed, flight-tested and put into service. The SS-150, with a range of 150km and a throw-weight of 1,000kg, has been inducted into the 333rd Missile Group, but has not been deployed. These missiles have been stored well away from the border, which 'suggests that the service

does not intend to use the missiles in anything but an emergency'.¹⁹ In addition, India also test-fired the solid-fuel 700km-range nuclear-capable Agni-1 on 25 January 2002.²⁰

These three missile types provide New Delhi with adequate deterrence capability vis-à-vis Islamabad. The Agni-2, first tested in April 1999 and then again in January 2001, 'is a huge stride in missile technology development—it uses a solid propulsion system ..., can be launched in 15 minutes ..., uses far more accurate navigational and guidance systems and is designed to operate on a highly mobile [rail] platform which lends flexibility and reduces vulnerability to strikes'.²¹ In September 2003, New Delhi cleared the raising of the 334th and 335th Agni Missile Groups.²² However, this missile, which was flight-tested to a distance beyond 2,100km in January 2001 and has a reported circular error probable (CEP) of 100 metres, is still considered inadequate to deter China. With its present range the missile 'can at best cover Chinese territory till the western cities of Chengdu and Kunming', but cannot strike either Shanghai or Beijing.²³ Hence, India is developing the 3,500km range Agni-3, with new first and second stages, which is expected to be flight-tested in 2004. In addition, India's civilian space-launch programme, which has now matured to loft multiple satellites into polar and geosynchronous orbits, may also provide crucial technology and expertise for both intercontinental ballistic missile (ICBM) and MIRV capabilities for the missile programme.²⁴ While India may validate both capabilities through a technology demonstrator, it is unlikely to field an ICBM in the foreseeable future, although it may use this capability as a bargaining chip.²⁵ Thus, India will continue testing its nuclear-capable ballistic missiles until it is confident that it will be able to deliver nuclear weapons to all the major cities in China, including Beijing (see Table 2).

At the moment, however, India's nascent nuclear and missile capability is no match for China's inventory of '18–24 ICBMs, 70 IRBMs and a number of assorted short-range missiles' and '500–1500 nuclear weapons'.²⁶ Despite this asymmetrical disparity, Tellis argues that India has successfully replaced 'abject vulnerability with mutual vulnerability'.²⁷ The emerging nuclear capability, however, is only one aspect of the subtle and multifaceted policy that New Delhi has adopted to counter what it perceives to be the challenges posed by a resurgent China. The other Indian responses are likely to include missile defence, cruise missiles and advanced conventional capability.

Like China, India is exploring both the possibility of developing cruise missiles and also of acquiring a limited missile defence system to secure its limited second-strike capability. For the latter objective, India is likely to procure the S-300VM system from the Russian Federation. Subsequently, New Delhi would also seek to acquire the more sophisticated Arrow system from Israel and the Patriot-3 as well as the Standard missile systems from the United States.²⁸ For the former, Moscow and New Delhi have a joint cruise-missile programme called Brahmos.²⁹ India has already acquired a significant sea-launch missile capability with the induction of a Kilo-class submarine armed with the Klub-class missile, which is reported to have a range of close to 300km.³⁰ Thus, India too appears to be developing capabilities that could, if required, overcome theatre defences and protect its own second-strike capability.

Simultaneously, New Delhi has also buttressed its conventional capabilities. In June 2001 Moscow and New Delhi signed a protocol for the supply of US \$10 billion worth of Russian arms, including Tu-22 long-range bombers, nuclear-powered submarines, and Sukhoi Su-30 aircraft in addition to an aircraft carrier, the *ex-Gorshokov* and related carrier-borne aircraft.³¹ India is also acquiring French conventional submarines, American fire-locator radars and a host of Israeli weaponry including the Phalcon airborne early-warning radar. During the 1999–2002 period when 'China ranked first among developing nations in the value of arms transfer agreements, concluding \$11.3 billion in such agreements', 'India ranked third at \$8 billion'.³² In 2002, when China again ranked first in arms transfer agreements, concluding US \$3.6 billion in such agreements, India again ranked third with US \$1.4 billion.³³ Between 1999 and 2002 India took *delivery* of imported weaponry worth US \$2.7 billion, significantly lower than China (which acquired weapons worth US \$6.1 billion) but comparable to Pakistan, which received

weapons worth US \$2.2 billion.³⁴ In 2002 China received weapons worth US \$1.2 billion while India took delivery of weapons worth US \$900 million, and Pakistan got weapons worth US \$600 million. While the bulk of weapon imports by China and India came from the Russian Federation, Pakistan acquired most of its weapons from China.

Coupled with this massive acquisition of conventional capability in the wake of the nuclear tests and the Kargil crisis of 1999 (during which Pakistan crossed the well-demarcated Line of Control and occupied strategic heights in the Kargil sector of Kashmir), New Delhi has also sought to develop a doctrine that will enable it to use its apparent conventional edge over Pakistan. This was first evident in India's 'draft nuclear doctrine' released in August 1999, which argued not only in favour of a nuclear no-first-use posture but also stressed that 'effective conventional military capabilities shall be maintained to raise the threshold of outbreak both of conventional military conflict as well as that of threat or use of nuclear weapons'.³⁵ Subsequently, senior Indian defence officials, citing the Ussuri river incident of 1969 when nuclear-armed China and the Soviet Union fought a purely conventional conflict, propagated the concept of 'limited war' to 'ensure that conventional war ... is kept below the nuclear threshold' in Southern Asia.³⁶ This shift towards a conventional war option also revealed a propensity towards conventional pre-emption and was justified on the basis of India's declared nuclear no-first-use doctrine.³⁷ An attempt to operationalize the 'limited war' concept was also evident in the year-long mobilization in 2002 under *Operation Parakram* following a series of terrorist attacks in India by groups allegedly operating out of Pakistan.

There are, however, several inherent dangers in having a declared 'limited war' doctrine.

First, given the dual-use nature of strike aircraft and ballistic missiles, it would be very difficult for any adversary to evaluate whether the impending strike was part of a limited conventional war or a nuclear strike. Second, in all likelihood even India's conventional limited war doctrine can be expected to have a 'built-in' option of striking Pakistan's strategic nuclear and missile assets with conventionally armed strike aircraft; not catering for such a built-in option is unlikely among serious military strategists.

There is no indication so far that Pakistan has accepted this 'limited war' concept. On the contrary, it is very likely that Pakistan's response to even a limited conventional strike will probably be nuclear.

Such doctrines would, explicably, escalate the conflict to the nuclear level, especially given the present level of distrust between India and Pakistan. Finally, there is no indication so far that Pakistan has accepted this 'limited war' concept. On the contrary, it is very likely that Pakistan's response to even a limited conventional strike will probably be nuclear.³⁸

Table 2. The inventory of Indian missiles

Missile	Status	Range (km)	Payload (kg)	Source
Prithvi-1	Operational	150	1,000	Domestic
Prithvi-2	Operational	250	500	Domestic
Dhanush/Prithvi-3	Tested/development	350	1,000	Domestic
Agni-1 variant	Tested/development	725	~ 1,000	Domestic
Agni-1	Tested/prototype only	1,500	1,000	Domestic
Agni-2	Serial production	2,000	1,000	Domestic
Agni-3	Development	3,000–5,500	?	Domestic
Surya	Development	5,500+	2,000	Domestic/Russian Federation
Sagarika (SLBM)*	Development	350	500	Domestic/Russian Federation

* = Submarine-launched ballistic missile.

Source: Worldwide Ballistic Missile Inventories available at < www.armscontrol.org/factsheets/missiles.asp >

Pakistan's missile programme and doctrine

The Pakistani missile programme and infrastructure, which was set up in the early 1980s, is 'now more advanced than that of North Korea. It will support development of a missile of 2,500km range', that 'will put all of India within range of Pakistani missiles'.³⁹ While the programme remains primarily India-centred, this capability, however, will also give Islamabad the technical base for developing much longer-range missiles.

As with the nuclear-weapons programme, Islamabad appears to have opted for two, often competing, missile programmes. One programme, most probably based on North Korean missile technology, led to the liquid-fuelled Ghauri series of missiles, which are produced by the Khan Research Laboratories led by the now disgraced Dr Abdul Qadeer Khan. According to American intelligence officials, however, the Ghauri-1 with a 1,500km range and the 2,000km range Ghauri-2 bear a striking resemblance to the North Korean No-Dong-1 and 2. The second programme, based on Chinese assistance, led to the solid-fuelled Shaheen missile series built by the National Development Complex, headed by Dr Samar Mubarak Mand. The 600km-range Shaheen-1, first tested in April 1999, is reported to have been inducted into service. The first test-flight of the 2,000km range Shaheen-2 was successfully conducted on 9 March 2004.⁴⁰ According to senior Pakistani military officers, the Ghauri series are earmarked for first-strike 'offensive' operations, while the Shaheen series would be reserved for 'defensive' second-strike purposes.⁴¹ Senior Pakistani scientists claim that once Shaheen-2 meets its design requirements and becomes operational, they would not be developing any other longer-range systems at this time.⁴² There is, however, the distinct possibility that Pakistan might qualitatively improve the capabilities of the present missiles by MIRVing and increasing the accuracy (see Table 3).

At present there are no indications that Pakistan, which has a tacit first-use posture, is developing an indigenous missile defence capability. However, at least one report suggests that Islamabad has sought to acquire missile defence systems, such as the Hawk or Nike-Hercules system, from abroad.⁴³ Thus, for the moment the Pakistani response to the possibility of missile defence becoming operational with its adversaries is to either challenge such moves diplomatically or through a unilateral build-up of missiles to saturate a theatre-based system.⁴⁴

Table 3. The inventory of Pakistani missiles

Missile	Status	Range (km)	Payload (kg)	Source
Hatf-1	Operational	80–100	500	Domestic
Hatf-2	Tested/development	190	500	Domestic/China
Hatf-3 (Ghaznavi)	Tested/development	280	500	Domestic/China
Tarmuk	Development	300	800	Domestic/China
Haider-1	Development	350	?	Domestic
Shaheen-1	Tested/development	750	500	Domestic/China
Ghauri-1 (No-Dong-1)	Tested/development	1,300+	700	Domestic/North Korea
Ghauri-2	Tested/development	2,300	700	Domestic/North Korea
Shaheen-2	Development	2,500	1,000	Domestic/China
Ghauri-3	Engine tested/ development	3,000	?	Domestic/North Korea

Source: Worldwide Ballistic Missile Inventories available at < www.armscontrol.org/factsheets/missiles.asp > .

Of the three nuclear countries in Southern Asia, Pakistan is likely to witness the least expansion of its conventional military capabilities for two reasons: first, given the poor state of the Pakistani economy, state-of-the-art defence equipment is likely to become increasingly unaffordable. Second, even if Pakistan were in a position to buy such expensive weapons, the number of countries willing to sell such critical items is likely to decline. Thus, not surprisingly, China, with whom Pakistan has a long-standing strategic relationship, has emerged as Islamabad's primary weapon supplier. Although Pakistan has also bought French submarines and aircraft, Ukrainian tanks and continues to seek military equipment from the United States, the bulk of its conventional military arsenal is likely to remain Chinese. This perceived conventional military imbalance by Islamabad is likely to make it more dependent on using its nuclear arsenal as well as sub-conventional means to counter an increasingly unbeatable India.

Thus, in the nuclear sphere, although Islamabad has yet to unveil a clearly stated nuclear doctrine, its tacit doctrine and posture indicate a propensity toward a first and early use of its nuclear arsenal. This was evident in both the Kargil and *Operation Parakram* crisis. Pakistan has also sought to indirectly signal both India and the international community the 'red lines' for its nuclear threshold and what

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conditions might qualify as deterrence failure. These include: the space threshold (if India conquers a large part of Pakistan's territory); the military threshold (if India destroys a large part of its land and air forces); economic strangling (such as a naval blockade or blocking the Indus River's waters); and domestic destabilization (if India creates a large-scale internal subversion in Pakistan).⁴⁵ These conditions, coupled with statements by Pakistani leaders that nuclear weapons could come

into play as soon as Indian troops cross even the Line of Control, indicated a significant lowering of the nuclear threshold. It also created a dangerous ambiguity given that it is virtually impossible to draw clear red lines for economic strangulation or domestic instability in a perennially unstable economic and political system. However, Islamabad, while lowering its nuclear threshold, also threw its credibility to being challenged by the first Indian soldier who crossed the Line of Control.

At the sub-conventional level, both the Kargil and the 2002 *Operation Parakram* crises underlined the legitimacy of low-intensity conflict under a nuclear umbrella for Pakistan and proved that 'nuclear weapons not only enable Islamabad to pursue "strategic diversion" and immunize the country from a violent Indian counter-response, they also serve to catalyse the attention ... of the international community'.⁴⁶ However, there was also recognition of the possibility of the conflict widening to conventional warfare and escalating to the nuclear level, without any assurance of international intervention. Thus, by linking sub-conventional actions with the nuclear riposte, Pakistan too has revealed the presence of a dangerous escalatory ladder, which might not always be easy to manage or de-link in time of crisis. As with the Indian 'limited war' doctrine, there are inherent dangers in the Pakistani sub-conventional posture. First, it might become increasingly difficult for an adversary to distinguish between sub-conventional actions sponsored by Pakistan and actions of non-state actors beyond the control of Islamabad. Second, as evident in the Indian mobilization during *Operation Parakram*, New Delhi too might be unwilling to accept such sub-conventional actions and is likely to launch an all-out conventional war even if this carries the inevitable risk of nuclear escalation. Thus, South Asia faces the real risk of nuclear war being instigated by non-state actors.

Drivers behind the arms race

Apart from perceived external threats, a number of indigenous technical and military imperatives, national prestige and domestic political factors provide critical impetus for the Chinese, Indian and Pakistani missile programmes.⁴⁷ However, the appearance of similar nuclear-capable missiles on the

other side of the border certainly provided the post-facto rationale for indigenous development and is often used to justify programmes that might already have been undertaken. In the Indian case, for instance, this rationale took on a more strident tone after news of the transfer of Chinese M-11 missiles to Pakistan in the early 1990s became public, even though India's own nuclear-capable missile programme had been going on for more than a decade. This was made explicit in the annual Indian defence report of 1997/98 that stated, 'China's assistance to Pakistan's nuclear weapons programme and the sale of missiles and missile technology to Pakistan also directly affects India's security'.⁴⁸ The China factor has been a critical and constant element in the Indian security equation since the 1962 Sino-Indian War. The role of this factor was highlighted by the first Chinese nuclear test in 1964 and most recently reflected by Indian Defence Minister George Fernandes, when he asserted in 1998 that China is India's 'potential threat number one'.⁴⁹ The Chinese threat can be divided into direct and indirect categories. China's own missiles and arsenals, particularly those capable of striking targets in India, pose the direct threat. The indirect threat is posed by China's supply of missiles to countries in India's neighbourhood, such as Pakistan and Saudi Arabia; its technical assistance in the missile-related area, particularly to Pakistan; and the creation of bases and monitoring stations in other countries, such as Myanmar. Similarly, China took up cudgels against the ambitious missile defence programme of the United States and warned that the plan (and the implicit threat that it posed to the Anti-Ballistic Missile Treaty) would break the current nuclear balance and stability and would impede international arms control and non-proliferation.⁵⁰ In doing so, Beijing sought to rationalize its own missile modernization programme, which had already been launched by the mid-1990s, well before the details of the American missile plan were made public.

While the present round of missile developments in China, India and Pakistan have been pegged against external events, they are primarily being driven by internal dynamics. For instance, China has been on a modernizing spree since the 1990s to 'maintain domestic stability and ensure regime security'; to develop its power-projection capability to 'deal with a range of possible conflict scenarios along its periphery'; and to 'enhance China's international prestige'.⁵¹ The pace of this modernization will not be determined by the outcome of the missile defence plans of the United States but by China's own internal competition between military and non-military spending, which will limit the rate of Beijing's military modernization.⁵² Similarly, New Delhi, which is now in the midst of gradually trying to operationalize its nuclear and missile capability, is unlikely to abandon building up its arsenal even if all external threats were to disappear overnight. This is primarily on account of the shift from a virtual arsenal to an operational arsenal and the inherent pressure arising particularly from the military to operationalize the recently validated capability. The same trend is evident in Islamabad's missile programme; its schedule of tests is likely to continue even if the Indian threat were to vanish.

In this context the American plans to deploy a missile shield over the mainland are unlikely to have a direct impact on the missile race in Southern Asia, particularly since neither India nor Pakistan intend to target the continental United States. China, whose missile modernization will enable it to puncture the proposed shield, is also unlikely to be perturbed in the long run.⁵³ However, the indirect impact of the American shield is more complex. Were China to complete its modernization to defeat the American shield, it would have a surplus of older missiles, which Beijing would most likely use to target India and, in the absence of a strategic dialogue, such a move might compel New Delhi to build up its arsenal beyond the 'minimum' to retain its credibility. India's build-up, in the absence of a similar strategic dialogue with Pakistan, might compel Islamabad to match India's arsenal, thus leading to a 'cascade' of missile proliferation. The situation would become even more complicated were either China, India or Pakistan to deploy missile defences beyond the theatre or tactical level; it would lead to an inevitable escalation on the part of the others to saturate and defeat such a missile shield.⁵⁴

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Managing the 'race'

Given the fact that all of the three key players in Southern Asia are likely to continue along the trajectory of building up their nuclear-capable missile inventories, both qualitatively and quantitatively, can steps be taken to manage this sluggish but inherently dangerous race? There are at least two different approaches that China, India and Pakistan could take to ensure that the ensuing race between them does not accelerate out of control. The first would be to develop and strengthen a series of confidence-building measures (CBMs), which (while recognizing the inevitable drive of Beijing, New Delhi and Islamabad to increase their arsenals) would seek to provide a modicum of assurance between them so as to avoid misunderstanding and escalation. The second—and more ambitious—approach would be for the three competitors to consider arms control and disarmament measures that would preserve and strengthen strategic stability and prevent dangerous escalation.

In the field of missile-related CBMs, India and Pakistan are the only countries (other than the United States and the Russian Federation) to have a procedure to give pre-notification of missile tests.⁵⁵ However, unlike the extremely formal and successful American–Russian agreement, the Indian–Pakistani arrangement was never formalized and remained ad hoc and patchy in its implementation, with both Islamabad and New Delhi regularly accusing the other of breaching the arrangement. With the resumption of a composite dialogue between New Delhi and Islamabad in February 2004, both sides are likely to revisit this very constructive and critical CBM with a view to ensuring its effective implementation in the May–June round of talks between the two foreign secretaries. A robust agreement on prior notification of missile tests would not only enable both sides to continue their missile programmes, but also ensure that such tests do not lead to crises or escalation.

Subsequently, both India and Pakistan might try to develop a similar agreement with China. The 1996 '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' already has the outlines of such an arrangement. Article III of this agreement, for instance, gives the two sides the option to reduce or limit the number of particular weapons systems, including 'surface-to-surface missiles, surface-to-air missiles and any other weapon system mutually agreed upon'.⁵⁶ Such an arrangement would be possible only if Beijing becomes convinced that such transparency would enhance its security and those of its neighbours.

In the sphere of missile-related arms control and disarmament, all three countries have yet to make a start. Although the 1996 CBM agreement between China and India does cover such a possibility, it has, clearly, not been discussed. Given the sensitivity of all three countries about transparency and the important role that ambiguity plays in their arsenals, as a first step all three could embark on a strategic dialogue that might allow them to at least discuss their relative missile strengths in terms of ratios. Thus, one possible ratio suggested between Indian and Pakistan ballistic missiles might be 3:1.⁵⁷ A similar ratio is also conceivable between China and India.⁵⁸

At a later stage, it might also be in the interest of China, India and Pakistan to negotiate—either bilaterally or trilaterally—the dismantling of a particular class of nuclear-capable missiles as well. Among the potential missile candidates for such an arms control and disarmament agreement could be: the Prithvi-1, -2 and -3; the Hatf-1, -2 and -3; and the Dong Feng-3 and -4. All of these missiles played a critical role in the development of the nuclear deterrence of the three countries. However, the dual capability (conventional and nuclear) of the Prithvi and Hatf makes their role virtually indistinguishable and, therefore, unusable in practical terms on the battlefield. Some Indian and Pakistan scholars have already suggested such a mutual arms control agreement.⁵⁹ Similarly, the Dong Feng-3 and -4, which are likely to be retired, could also be dismantled as part of a trilateral arms control agreement. Hence, one option might be for the three countries to jointly negotiate the elimination of these missiles. In

doing so, Southern Asia would also pioneer the first trilateral agreement on nuclear-capable missiles, which until now have been confined to the bilateral realm. Such a step, however, is likely only when the countries are convinced that doing so will not reduce their security but actually enhance it vis-à-vis the others.⁶⁰ This perspective shift, though inevitable, is likely only in the long term.

While in the foreseeable future Southern Asia is likely to see a continuing missile race, albeit at a snail's pace, it is in the interest of all three countries to ensure that their efforts at building their minimum credible deterrence does not come at the cost of either their security or strategic stability by leading to an inadvertent arms race or, worse, an unintended nuclear confrontation.

Notes

1. Southern Asia 'extends from the Persian Gulf in the west to across the Straits of Malacca in the east, and from the Central Asian Republics in the north to the equator in the south' (see India, Ministry of Defence, 2001, *Annual Report 2000–2001*, New Delhi, Government of India, p. 7), and, significantly, includes China ever since Beijing marched into Tibet in 1950 and later deployed missiles on this Plateau, which are reportedly aimed at India. Subsequently, China was involved in the Afghan war of the 1980s, sold nuclear-capable missiles to Saudi Arabia, has a growing nuclear cooperation with Iran, in addition to its already well-established strategic links with Pakistan, initiated the Shanghai Cooperation Organization (SCO) and is developing close ties with Myanmar (now also a member of the Association of Southeast Asian Nations). By the same logic, Washington's ongoing military operations in Afghanistan and the presence of American troops in Pakistan, Afghanistan, Uzbekistan and Tajikistan also makes the United States a key player in South Asia. Therefore, this article will consider developments in Southern Asia in general and China, India and Pakistan in particular.
2. If the North Korean, Israeli and Iranian missile tests are taken into account, then Asia emerges as the undisputed leader in terms of expanding nuclear-capable missile inventories.
3. See Tariq Rauf, 1999, Accommodation not confrontation, *Bulletin of Atomic Scientists*, vol. 55, no. 1 (January/February) for a detailed explanation of this dilemma.
4. This move towards missile defences even before strategic stability has been achieved in Southern Asia could not only increase strategic instability but could also have a cascading effect. See Michael Krepon and Chris Gagne (eds), 2002, *The Impact of US Ballistic Missile Defenses on Southern Asia*, Stimson Center Report 46, Washington, DC, p. xi, at < www.stimson.org/pubs.cfm?ID=59 >.
5. According to Robert Manning, 'Russian and Israeli assistance could help China develop and deploy cruise missiles before 2010'. See Gerrit Gong et al., 1998, China/Japan/Korea, roundtable discussion in *Commission to Assess the Ballistic Missile Threat to the United States* (hereafter Rumsfeld Commission), Appendix III: Unclassified Working Papers at < www.fas.org/irp/threat/missile/rumsfeld/pt1_china.htm >. See also Bill Gertz, 2000, *The China Threat: How the People's Republic Targets America*, Washington, DC, Regnery Publishing.
6. Rumsfeld Commission, 1998, *op. cit.*, Executive Summary at < www.fas.org/irp/threat/missile/rumsfeld/execsum.htm >.
7. For an in-depth examination of the Sino-Indian strategic relationship see Waheguru Pal Singh Sidhu and Jing-Dong Yuan, 2003, *China and India: Cooperation or Conflict?*, Boulder, Lynne Rienner, pp. 45–78.
8. Bates Gill, James Mulvenon and Mark Stokes, forthcoming, China's Strategic Rocket Forces: Transition to Credible Deterrence, in James Mulvenon and Richard Yang (eds), *The People's Liberation Army as Organization*, Santa Monica, RAND; Robert Norris et al., 2001, Chinese Nuclear Forces 2001, *The Bulletin of Atomic Scientists*, vol. 57, no. 5 (September/October), pp. 71–72.
9. Ashley Tellis, 2001, The Changing Political-Military Environment: South Asia, in Zalmay Khalilzad et al. (eds), *The United States and Asia: Towards a New U.S. Strategy and Force Posture*, Santa Monica, RAND, p. 208.
10. Col. S.B. Asthana, 2001, The Peoples Liberation Army of China: A Critical Analysis, *Combat Journal*, vol. 30, no. 2 (September), p. 49.
11. Sujit Dutta, 1998, China's Emerging Power and Military Role: Implications for South Asia, in Jonathan D. Pollack and Richard H. Yang (eds), *In China's Shadow: Regional Perspectives on Chinese Foreign Policy and Military Development*, Santa Monica, RAND, p. 97.
12. Dutta, *op. cit.*, p. 98.
13. Asthana, *op. cit.*, p. 48.
14. *Ibid.*

15. Rahul Roy-Chaudhury, 1997, *The Indian Navy: Past, Present and Future*, in Jasjit Singh (ed.), *Asian Strategic Review 1996–97*, New Delhi, Institute for Defence Studies and Analyses, pp. 89–115 and Rahul Roy-Chaudhury, 1995, *Sea Power and Indian Security*, London, Brassey's.
16. National Resources Defense Council, *Table of Chinese Nuclear Forces, end 1996*, NRDC Nuclear Program Nuclear Data, at < www.nrdc.org/nrdcpro/nudb/datab17.html> .
17. These are elaborated in Waheguru Pal Singh Sidhu, 1998, *India's Security and Nuclear Risk-Reduction Measures*, in Michael Krepon and Michael Newbill (eds), *Nuclear Risk-Reduction Measures in Southern Asia*, Stimson Center Report 26, Washington, DC, pp. 23–24, at < www.stimson.org/pubs/cbm/sa/sidhufnl.pdf> .
18. Waheguru Pal Singh Sidhu and Chris Smith, 2000, *Indian Defence and Security—Industry, Forces and Future Trends*, Coulsdon, Jane's Information Group, p. 83.
19. Andrew Koch, 2000, *Nuclear Friction—Nuclear Policy in India and Pakistan*, *Jane's Defence Weekly*, no. 6, December. See also Bharat Rakshak, *Prithvi Shorter-range Ballistic Missile (SRBM)*, at < www.bharat-rakshak.com/MISSILES/Prithvi.html> .
20. The Agni-1 has to be distinguished from the original solid/liquid-fuelled hybrid Agni Technology Demonstrator, which was first flight-tested in 1989. This technology demonstrator, which was tested three times, has sometimes also been referred to as the Agni-1.
21. Fire in the Sky, *The Hindu*, 19 January 2001.
22. Missiles to be Handed Over, *The Hindu*, 24 September 2003.
23. Dinesh Kumar and Manoj Joshi, 2001, *Agni-II Adds Fuel to India's N-Arms Policy*, *Times of India*, 18 January. See also Bharat Rakshak, *Agni-II IRBM*, at < www.bharat-rakshak.com/MISSILES/Agni.html> .
24. David R. Tanks, 1998, *Ballistic Missiles in South Asia: Are ICBMs a Future Possibility?* in Rumsfeld Commission, *op. cit.*, at < www.fas.org/irp/threat/missile/rumsfeld/pt2_tanks.htm> . See also India Poised to Test-Launch ICBM, and GSLV Had Launched India into ICBM Club, *South Asian Nuclear Dialogue*, 10 May 2001, vol. 2, no. 19, available at < www.nautilus.org/sand/Updates2001/V2N19.html#item1> .
25. Michael Krepon of the Stimson Center made these observations. See David Goure, Michael Krepon and David Tanks, 1998, *India/Pakistan*, Rumsfeld Commission, *op. cit.*, at < www.fas.org/irp/threat/missile/rumsfeld/pt1_india.htm> . See also India Denies Plans to Launch ICBM, *South Asian Nuclear Dialogue*, 10 May 2001, vol. 2, no. 19, available at < www.nautilus.org/sand/Updates2001/V2N19.html#item1> .
26. Asthana, *op. cit.*, p. 48.
27. Tellis, *op. cit.*, p. 205.
28. In the long run, India may also try to develop its own missile defence system based on the Akash surface-to-air missile system and other space-based assets. See Group Captain R.G. Burli, 2000, *India's Option for Space-Based BMD*, *Indian Air Force 2000*, New Delhi, Indian Air Force, pp. 40–42.
29. Andrew Feickert and K. Alan Kronstadt, 2003, *Missile Proliferation and the Strategic Balance in South Asia*, *CRS Report for Congress*, 17 October, p. 29.
30. Vladimir Radyuhin, 2000, *INS Sindhusashtra Commissioned*, *The Hindu*, 20 July.
31. Jonathan Marcus, 2003, *India-Pakistan Military Balance*, *BBC News*, 9 May, at < news.bbc.co.uk/go/pr/fr/-/1/hi/world/south_asia/1735912.stm> .
32. Richard E. Grimmett, 2003, *Conventional Arms Transfers to Developing Countries, 1995–2002*, *CRS Report for Congress*, 22 September, Summary. See also SIPRI Arms Transfer Database, at < projects.sipri.se/armstrade/Tnd_Ind_IND_PAKMpts93_02.pdf> .
33. Grimmett, *op. cit.*
34. Grimmett, *op. cit.*, especially Table 21, p. 60.
35. See India, 1999, *Draft Report of the National Security Advisory Board on Indian Nuclear Doctrine*, paragraph 2.7, at < http://www.indianembassy.org/policy/CTBT/nuclear_doctrine_aug_17_1999.html> .
36. Inaugural address by Raksha Mantri [George Fernandes], at National Seminar on The Challenges of Limited War: Parameters and Options, organized by the Institute for Defence Studies and Analyses, New Delhi, 5–6 January 2000. Senior Indian strategists, however, have challenged the limited war concept. See, for instance, V.R. Raghavan, 2000, *Limited War & Strategic Liability*, *The Hindu*, 2 February.
37. However, the latest version of the Indian nuclear doctrine released in January 2003 has further diluted the no-first-use commitment by noting that 'in the event of a major attack against India, or Indian forces anywhere, by biological or chemical weapons, India will retain the option of retaliating with nuclear weapons'. See The Cabinet Committee on Security Reviews Operationalization of India's Nuclear Doctrine, *Press Release*, 4 January 2003, at < www.indianembassy.at/US/Press/nuclearDoctrine2003.html> .
38. Indeed, all indications are that Pakistan has summarily rejected this 'limited' war concept. For instance, a senior Pakistani diplomat warned that 'the thesis promoted by India's Defence Minister and Army Chief that it is possible to pursue a "limited" conventional war against Pakistan amounts to dangerous brinkmanship'. See Ambassador Maleeha Lodhi, 2000, *New Security Architecture for South Asia*, paper distributed at International Institute for

- Strategic Studies conference on Minimum Deterrence, Concepts and Practices, Mauritius, 22–23 June. See also We'll Use Nukes Even in a Conventional War: Pak, *Press Trust of India*, 30 May 2002 in which the Ambassador of Pakistan to the United Nations, Munir Akram, issued a nuclear threat against the Indian conventional military build-up during 2002.
39. Rumsfeld Commission, 1998, *op. cit.*, Executive Summary at < www.fas.org/irp/threat/missile/rumsfeld/execsum.htm>. See also Luke Harding and Rory McCarthy, 2002, Why nuclear conflict is a real threat, *The Guardian*, 23 May and Lt. General Sardar F.S. Lodi (Retd.), 1998, Pakistan's Missile Technology, *Defence Journal*, May, at < www.defencejournal.com/may98/pakmissiletech.htm>.
 40. *BBC News*, Pakistan Tests Long-range Missile, 9 March 2004, at < news.bbc.co.uk/2/hi/south_asia/3545775.stm> and 'Shaheen II/ Hatf – 6 / Ghaznavi' available at < www.fas.org/nuke/guide/pakistan/missile/shaheen-2.htm>.
 41. Koch, *op. cit.*
 42. This is also the view of American analysts who say that Pakistan would be unable to construct an ICBM by 2015 because Islamabad does not have the finances, production base and technical know-how for the endeavour. See Goure, Krepon and Tanks, 1998, *op. cit.*, Appendix III Unclassified Working Papers at < www.fas.org/irp/threat/missile/rumsfeld/pt1_india.htm>.
 43. See Pak to Acquire Anti-Ballistic Missile from U.S., *Times of India*, 15 May 2003.
 44. For indications of this see Foreign Secretary of Pakistan [Inam ul Haque] Addresses Conference on Disarmament, press release at < www.unog.ch/news2/documents/newsen/dc0103e.html>.
 45. See Paolo-Cotta Ramusino and Maurizio Martellini, 2001, *Nuclear Safety, Nuclear Stability and Nuclear Strategy in Pakistan: a Concise Report of a Visit by Landau Network-Centro Volta*, 21 January, at < www.mi.infn.it/~landnet>.
 46. Ashley J. Tellis, C. Christine Fair and Jamison Jo Medby, 2001, *Limited War Conflicts Under the Nuclear Umbrella: Indian and Pakistani Lessons from the Kargil Crisis*, Santa Monica, RAND, p. 30.
 47. Waheguru Pal Singh Sidhu, 2001, South Asia, in Center for Non-proliferation Studies and the Mountbatten Centre for International Studies, *International Perspectives on Missile Proliferation and Defenses*, Occasional Paper 5, at < www.mcis.soton.ac.uk/op5.pdf>.
 48. India, Ministry of Defence, 1998, *Ministry of Defence Annual Report 1997–98*, New Delhi, p. 2.
 49. John F. Burns, 1998, India's New Defense Chief Sees Military Threat, *New York Times*, 5 May.
 50. China Warns of Arms Race, *Associated Press*, 3 May 2001.
 51. Harold Brown, Joseph W. Prueher and Adam Segal (eds), 2003, *Chinese Military Power*, report of an Independent Task Force sponsored by the Council on Foreign Relations and the Maurice R. Greenberg Center for Geoeconomic Studies, p. 2, at < www.cfr.org/pdf/China_TF.pdf>.
 52. *Ibid.*, p. 7.
 53. See Rajesh Rajagopalan, 2003, *The Impact of Missile Defences*, paper presented at the Mountbatten Centre Workshop on Missile Issues in South Asia, Gorse Hill Conference Centre, United Kingdom, 13–14 December.
 54. For the possible options before Pakistan to defeat a potential Indian missile shield, see Group Captain Khalid Banuri, 2003, *The Impact of Missile Defences*, paper presented at the Mountbatten Centre Workshop, *op. cit.*
 55. The advance notification of missile tests was one of the many provisions in the Memorandum of Understanding reached between India and Pakistan in February 1999 as part of the Lahore Agreement, but which was never formally implemented. Atal Bihari Vajpayee and Nawaz Sharif signed the Lahore Declaration on 21 February 1999 following a high-profile bus trip made by Vajpayee from New Delhi to Lahore.
 56. See *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*, 29 November 1996, at < www.stimson.org/?sn=sa20020114290>.
 57. See General Jehangir Karamat (Retd.), 2003, *The Drivers of Missile Proliferation: Missiles and Military Strategy*, paper presented at the Mountbatten Centre Workshop, *op. cit.*
 58. Some Chinese analysts have suggested such a ratio privately. See Waheguru Pal Singh Sidhu, 1999, China and the Nuclear Vision, *Indian Express*, 22 September.
 59. See Rahul Roy Chaudhury, 2003, *Regional Efforts on Missile Non-Proliferation*, and Ayesha Siddiq, 2003, *Regional Efforts and Verifying Missile Non-Proliferation in South Asia*, papers presented at the Mountbatten Centre Workshop, *op. cit.*
 60. This was one of the primary factors behind the successful Intermediate Force Treaty. See Waheguru Pal Singh Sidhu, 1998, A Virtual De-alert in South Asia, *UNIDIR Newsletter* (Nuclear De-alerting: Taking a Step Back), no. 38, pp. 27–31.

Seizing the 'ripe' moment: building confidence and security in South Asia

David LOGAN and Stuart CROFT

It has become commonplace to see the relationship and tension between India and Pakistan as one of the most sensitive nuclear flashpoints in the world. With a fifty-year dispute over Kashmir and three wars between them, for nearly twenty years the two states have been lurching from crisis to thaw, only to fall back into crisis again. And throughout this oscillating pattern the two states' nuclear developments have continued unabated, culminating in the events of May 1998 when both nations detonated tests and became *de facto* nuclear-weapons states.

However, there is perhaps a crucial moment to be grasped in terms of developing a structured security dialogue between the two states. At the time of writing, the January 2004 summit of the South Asian Association for Regional Cooperation (SAARC) appears to be a crucial turning point. Following a meeting between Indian Prime Minister Vajpayee and Pakistan President Musharraf, India 'hailed "progress"'.¹ Vajpayee, in a speech to the SAARC summit, remembered that 'our forefathers [had] fought side by side transcending religious, regional and linguistic differences against the colonial oppressor in the first war of Independence in 1857', and hoped that 'perhaps India, Pakistan and Bangladesh can together celebrate' the 150th anniversary of that uprising 'in remembrance of our joint struggle against a common adversary'.² Such language of commonality has certainly been rare. It is, potentially, a moment of 'ripeness' for a change in the nature of the relationship between India and Pakistan.

This article looks at the nature of this emerging moment of 'ripeness', to assess how it is different from other potential moments over the past fifteen years. But recognizing a ripe moment is not sufficient; what are needed are ideas about how the moment can be seized, and so this article looks at the contribution that might be made to the security and stability of the subcontinent through the development of confidence-building measures (CBMs). The Lahore Declaration of February 1999 created some possibilities for development, but these were seemingly lost during the Kargil crisis of that year, and the increasing tensions of 2002. Indeed, many 'moments' have simply not developed over the past twenty years. Hence, before examining possible confidence-building measures, the article begins with a consideration of the concept of 'ripeness' and its application to South Asia over the past fifteen or so years.

Recognizing 'ripeness'

The concept of 'ripeness', as developed by Zartman and others, suggests that there is a specific moment that is particularly favourable for a change in the nature of tense relations in favour of some

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form of negotiation process.³ The key is both in the identification of this moment, and in seizing it in order to bring about a change in relations. Both elements are crucial—it is not enough simply to recognize the moment of ripeness; it must be acted upon.

Zartman argued that the moment becomes ripe in the context of what he described as a ‘mutually hurting stalemate’. In that situation, cost-benefit analysis on the part of the conflicting parties illustrates that there is more to be gained from de-escalation than from a continuation of the *status quo*, or through an escalation. Thus, there is a plateau in the nature of the relationship upon which there is time for reflection and choice. But importantly, this is a moment created by perception—it is not simply a matter of rational calculation. That is, what is required is a change in the ‘enemy image’, in the ability of one side to trust the other, in order for the moment to be ‘ripe’.

Why is there the possibility of significant movement in this phase of relations between India and Pakistan? Why might this be a moment of ripeness? Perhaps three factors are important. First, international pressure has grown; as Pakistan’s President Musharraf noted himself in a very important interview with Reuters when asked whether this time there was a difference about the current thaw: ‘one [factor is] of the world realising that Kashmir is a serious issue which must be resolved, and obviously they keep saying this is a nuclear flashpoint and all that, so the world is concerned.’⁴ Prime Minister Vajpayee has said that ‘Pakistan has been repeating its stance [over Kashmir] and we have also been doing the same, and the world has been saying that we should resolve it.’⁵ That concern translates into very real diplomatic pressure, as seen in particular during the crisis of 2002. Second, the sense of

Both sides seem to have a strong sense of their own ability to control escalation in conflict; but both are concerned that the other side may not have sufficiently robust procedures, or fear ‘extremists’ in the other capital.

risk is increasing amongst policy-makers in both New Delhi and Islamabad. Both sides seem to have a strong sense of their own ability to control escalation in conflict; but both are concerned that the other side may not have sufficiently robust procedures, or fear ‘extremists’ in the other capital. With nuclear weapons, such fears are very sobering indeed. But there is a third factor as well. The strategic balance on the subcontinent has changed significantly over thirty years. The Tashkent Declaration of 1966, following the war of the previous year, set out principles ‘of vital importance for the welfare of the 600 million people of India and Pakistan.’⁶ Nowadays, India alone has a population of over 1 billion, and a middle class that has now grown to some 120 million, that is only slightly less than Pakistan’s total population of 153 million. (Bangladesh is, of course, now independent; its population is nearly 147 million.)⁷ Whereas, for much of the period since independence Pakistan’s economic performance was at least on a par with that of India, and in some ways superior, in the analysis of Ishrat Husain: ‘there is an important and perceptible positive shift in most of the indicators of India since 1991. Export growth rates have almost doubled, GDP growth is averaging 6 to 7% in recent years, current account deficit is down and foreign capital flows for investment have risen several fold. The edge that Pakistan has gained over India in most of these indicators until 1990 is fast eroding.’⁸

And, finally, a quick look at the military balance shows a major Indian advantage: in manpower (1.1 million compared to 500,000), combat aircraft (738 to 353), estimated nuclear weapons (60 to 25), warships (27 to 8), and military budget (\$15.9 billion to \$2.6 billion).⁹ The strategic change is exacerbated for Pakistan by the growing sense of internal challenge from terrorist and dissident groups, symbolized by the attempted assassinations of the President in December 2003. These trends seem likely to continue. But they do not form a platform from which India can change the situation by force. Thus, for international, risk assessment and strategic reasons, there might be a moment where relations could move from thaw into a structured peace process.

It would, however, be foolish to be overly optimistic—there is nothing inevitable about such a positive outcome. Sanjoy Majumder of the BBC quotes a final year medical student in Lahore. ‘We’ve seen it all before’, she says. ‘The talk, the gestures—and then it’s back to the squabbling.’¹⁰

There have been other moments of apparent ripeness when a structured peace might have emerged since the event that marked South Asia's first nuclear crisis nearly fifteen years ago. In 1987, India conducted a major military exercise known as 'Brasstacks' held in a strategically sensitive location, which produced a nervous response from Pakistan, fearing this was the precursor to an Indian attack.¹¹ In late January of that year, Abdul Qadeer Khan, the key man responsible for the Pakistani nuclear programme, gave an interview to an Indian journalist and signalled Pakistan's success in producing weapon-grade uranium; a clear signal of nuclear deterrence.¹² Three years later, tensions resurfaced. Infiltration into Kashmir from the Pakistani side of the border led to Indian consideration of pre-emptive strikes against bases across the Line of Control in Kashmir; such considerations were interpreted in Islamabad as preparations for a deep military strike into Pakistan, to which the only response seemed to be nuclear. Fearing an inability of the two sides to manage the crisis, the American president sent Robert Gates on a mission to both capitals. He reportedly pressed for restraint in New Delhi, while informing Islamabad that all the Pentagon's war-gaming on the region led to Pakistani defeat.¹³

The 1987 and 1990 crises could have led to a thaw producing a more structured dialogue, but they did not, for four crucial reasons. First, Pakistani leaders had read the crises as underpinning the need for a nuclear deterrent, and hence continued their development of such weapons. With Chinese aid, and despite the cut-off of American economic and military assistance, this process continued through to 1994. Second, the balance on the subcontinent had been altered by the collapse of the Soviet Union, and hence the collapse of the 1971 Peace and Friendship Treaty with Moscow. Third, Indian policy calculations had predicted that the efforts to extend the Non-Proliferation Treaty (NPT) beyond its twenty-five years would fail; in 1995, the opposite occurred. With the treaty's extension, only Cuba, India, Pakistan and Israel were left outside its scope. Fourth, the Comprehensive Test-Ban Treaty (CTBT) was also making significant progress, resulting in its adoption in September 1996. This would clearly lead to increased pressure on the South Asian states; but, critically for India, China had conducted a series of nuclear tests prior to its accession. Indian policy-makers saw this as a sign that China felt comfortable that it would not need to test further, and that pressure on India to sign the CTBT, along with China's nuclear comfort, could only be to India's strategic detriment.

In the period between the crises of 1987 and 1990 and the 1998 nuclear tests, therefore, the possibilities of halting nuclear developments on the subcontinent were in fact very limited. And certainly the role of the Bharatiya Janata Party (BJP) in coming to power in India was important in that the party had made an election pledge to 'induct' nuclear weapons into India's armoury.¹⁴ The moment for negotiations did not become, in arms-control terms, ripe.

The crisis re-emerged in 1999 and in 2002. In 1999, Pakistan made an incursion at Kargil; the crisis did not escalate, and some have concluded that a form of nuclear deterrence had emerged.¹⁵ But these are dangerous assumptions. There is evidence that the regime in Islamabad under Nawaz Sharif assumed that the nuclear relationship would freeze any possibilities for escalation at the level of limited conventional conflict. Further, Indian forces were able to inflict significant casualties on the infiltrators in the theatre; Pakistan and Kashmiri militants were not able to hold the ground, not least with Pakistan under intense diplomatic pressure from the United States. Further, the conflict began only three months after a thaw in relations had been symbolized by the visit of Indian Prime Minister Vajpayee to Pakistan, thus underlining in New Delhi the problem of trust in the relationship with Pakistan. A potential moment of ripeness was lost by a policy misjudgement in Islamabad.¹⁶ Hopes that, in the aftermath of Kargil, there might be a chance for progress were dashed by the failure of the Agra Summit in July 2001, which seemed to suggest further that the moment was still not ripe for development.

The 2002 crisis resulted from continued incursions into Indian-controlled Kashmir, and seemingly an inability or an unwillingness on the part of Pakistan to control the attacks. The context had been set at the end of 2001 when the Indian Parliament was stormed. By the summer of 2002, thirty-two people had been killed in just one day by the incursions. India's Prime Minister was reported as telling

his troops that 'India has accepted the challenge thrown down by our neighbour and we are preparing ourselves for decisive victory against the enemy. We will not let Pakistan carry on its proxy war against India any longer'; and when Vajpayee was asked about gathering 'war clouds' he reportedly replied: 'The sky is clear. But sometimes lightning strikes, even in clear skies.'¹⁷ All of this led to a recommendation by the United States for its citizens to leave the region; the United Nations took the same line, as well as other states. The outside perception was that the region was on the brink of a nuclear war. But statements from the participants frequently suggested the opposite. India's Defence Minister, George Fernandes, said that: 'The underlying belief [of our western critics] is: "Bombs are safe in our hands. But after they cross the Arabian Sea and move eastward, they are not".'¹⁸ In a similar vein, India's *Economic Examiner* told us that 'Polemics are liberally used when tensions rise, but it is naïve for the West to conclude that the elite in India or Pakistan (the most educated and sophisticated people outside Europe and North America) did not know what their nuclear bombs would do.'¹⁹

Since those dark days, a thaw has certainly set in to the extent that by early 2004 both states can talk openly about discussions over Kashmir, emphasizing flexibility on the part of both countries.²⁰ It must represent, in any language, a moment of ripeness. And it is not just amongst the policy elite: snapshot polls indicate public support too.²¹ The issue is whether this moment can be seized; can a process be consolidated that finds ways of building confidence between the two states. The following section looks at methods and ideas concerned with seizing this moment of ripeness.

Seizing the ripe moment and building confidence

MECHANISMS FOR AGREEING A PROCESS

One of the major difficulties in moving relations from tension, through thaw, to something more positive is that there are always countervailing tendencies. There are always those who are concerned that it is dangerous to place too much trust; that worst-case analysis is the only basis upon which it is possible to deal with the 'other'. There are those who have learnt, often through violence, that the 'other' cannot be trusted. There are some who see personal political advantage in maintaining tension. There is the problem of inertia—any new initiative takes time and effort. And in many countries, many of these countervailing pressures are articulated through the media.

Certainly, the media in both countries have been able to give voice to concerns and fears of the 'other'. In contrast to much of the positive rhetoric surrounding the 2004 SAARC summit, Absar Alam, in the Pakistani newspaper *The Nation*, suggests, in an article entitled 'The ego has landed' (Vajpayee being the 'ego'), that India is driving the current move towards a fuller normalization of relations.

The price that India extracted from Pakistan to attend the SAARC summit is huge, according to some Pakistani analysts who believe that now the Kashmir issue will stay in cold storage for a long time and efforts will only focus to improve relations in other fields. This is what India wanted. In return, New Delhi has made Islamabad announce a ceasefire on Siachin and the Line of Control, and restore air, rail and road links. This is in addition to agreement on terrorism control and a pledge to launch efforts for poverty control. There are many in the Pakistani establishment who believe that all these measures could be rolled back if India did not move ahead to discuss the core issue of Kashmir. Sure, CBMs can always be reversed, but for that Islamabad will have to do a lot of explaining in western capitals.²²

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Perhaps it is inevitable that, without a clear structure for communication, much (though by no means all) communication has to take place in public. President

Musharraf chose a public forum—an interview with Reuters—to float the idea that Pakistan would set aside its fifty-year-old demand to implement the Security Council resolution that troops should be withdrawn from Kashmir and a plebiscite held on the question as to whether the province should be a part of India or Pakistan.²³ Such ‘flexibility’ has to be crucial to making the transition into a deeper set of relations.²⁴ But in a public forum, it has to be reacted to in a public way. These comments were met by hostility in Pakistani-controlled Kashmir²⁵—and though welcomed by the Indian government, they encountered suspicion in parts of the Indian media. *The Times of India* asked: ‘Does Mush like the taste of his own words? Or do domestic compulsions make him eat them? Whatever, the Pakistan President has made it a habit of backtracking on his grand gestures—give it to him, he makes them often. But then he takes them away.’²⁶ A report in the *Hindustan Times* also focused on Pakistan’s ‘backtracking’.²⁷ With a different approach to the worst-case analysis, Syed Saleem Shahzad argued that: ‘Musharraf’s offer is seemingly a bold one designed to put India on the back foot, for the longer Delhi dithers, the more they will appear to be the recalcitrant party, especially as the United States is exerting pressure on both sides to resolve the problem “by meeting each other halfway”.’²⁸

The point here is not to be critical of the media, but to illustrate the difficulties of communicating flexibility and change in a public forum. Under those circumstances, there is a large and important role for track-two diplomacy. But in other places, and at other times, different tactics have been followed. For example, in the dispute over Taiwan, a formula of words allowed diplomatic progress to be made between the United States and China with agreement that ‘all Chinese on either sides of the Taiwan straits maintain that there is but one China.’ In the peace agreement between Israel and Egypt, concern that audiences were playing a role in stalling movement led to a deliberate decision to leave the public stage, and the final negotiations between Begin and Sadat were held at Camp David, specifically to isolate negotiators from their national audiences. Something very similar occurred at Dayton at the conclusion of the Bosnian conflict.²⁹

A further reason why imaginative means of communication are important is because of the danger of ‘entrapment’ in negotiations. The problem here is not one of the audience, but rather a situation where a process develops from which the perception is that when making concessions is undesirable, but the only way out, it amounts in effect to capitulation. Thus, both sides continue with the conflict, unable to escape from the weight of investments already made. Consider the Viet Nam War: American administrations for a long time became entrapped in continuing the fighting to make the loss of American lives seem ‘worthwhile’; continuing because of the ‘immeasurable’ costs of regimes that might collapse like dominoes in South-East Asia if they withdrew. This concern with entrapment could be a very real danger in the India–Pakistan case. In both countries, historical investment in the rivalry and conflict with its neighbour is high.³⁰ In both of them, major costs have been borne to develop military forces, to the detriment of the general economy. Most particularly, this may be said to be true in the nuclear realm. With such investment, not only of monetary resources but also of human and intellectual resources, a decisive move away from a military relationship would be a major undertaking in its own right.

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But, in that case, it might be thought that a secure nuclear-deterrent relationship might actually encourage negotiations; might it provide the cover for an improving political relationship? In other words, paradoxically, nuclear deterrence might provide the security that allows a general improvement in security relations? Perhaps. But there are several factors that are important in thinking about the stability of such a relationship. There might be a change in the broader strategic environment—whether in China, in Iran or in the Middle East. Deterrence is burdensome to maintain. And it also carries with it the danger—no matter how small—that it might break down with cataclysmic results.

DEVELOPING CONFIDENCE-BUILDING MEASURES

India and Pakistan are by no means new to the area of CBMs, although it must be admitted that few concrete measures have taken place. There are some agreements on communications (see below), and a 1998 agreement not to attack each other's nuclear facilities.³¹ In February 1999, leaders of the two states, meeting in Lahore, issued a declaration ('Recognising that the nuclear dimension of the security environment of the two countries adds to their responsibility for avoidance of conflict between the two countries'), and issued a Memorandum of Understanding (MoU).³² The MoU, in particular, made a whole series of CBM proposals—covering seminars on security concepts and nuclear doctrines, notification of ballistic missile flight tests, accidental or unauthorized nuclear use, unilateral moratoria on nuclear tests, prevention of incidents at sea, consultative mechanisms, and communications links—

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while agreeing to consult bilaterally in multilateral fora. Little progress had been made on developing the Lahore agenda in the crises of the following years. But now, if there is a moment of ripeness, it can be seized by looking again at the Lahore MoU, seeing where it needs updating and developing, and working to bring about its introduction.

CBMs cover a whole spectrum of different activities. Some non-military ones are already being put back into place. On New Year's Day 2004, passenger flights between the two countries began once again, symbolic of the restoration of travel arrangements. The January 2004 SAARC summit also made crucial agreements in terms of the adoption of liberal visa regimes for media and journalists in the region. This could be a vital step in improving understanding between states and peoples; Yashwant Sinha, India's External Affairs Minister, notably asked that journalists become what he described as 'co-conspirators' in the task of leaving 'behind the baggage of hatred, suspicion and violence.'³³ And, perhaps, the most important of all CBMs in the region, the Indus Water Treaty, has been honoured for over forty years, despite war and crises.³⁴

Non-military CBMs are important and should not be underestimated. However, it is in the military realm that most focus is placed; and here there is complexity not only in the issues and the history involved, but also in India's security relationship with China. However, focusing on South Asia and developing and following the outline of the Lahore MoU, five ideas have emerged.

The first concerns debate over security concepts and nuclear doctrine. Clearly, the development of nuclear concepts in both countries is at a relatively early stage, but with a statement from India on this issue, and with statements of a more philosophical nature from Pakistan, the developments that have occurred should not be undervalued.³⁵ But there is a danger that if these developments continued, India would move further towards a policy of massive retaliation, Pakistan towards a minimal deterrent (but one that would be capable of inflicting catastrophic damage upon India), and that this would not encourage crisis stability. (India may be tempted to launch a first strike to 'knock out' the minimal deterrent; Pakistan might be tempted to launch early to avoid such a scenario.)

Should there be clarity over the 'red lines' that would lead to nuclear use? Some Indians certainly fear that this might allow a separation of limited conventional war from nuclear war—with the learned experience of Kargil in mind. Indeed, there was much concern during the Cold War on the Western side about precisely these sorts of issues, and so the response in general was to keep the issue opaque—NATO, in particular, followed a line which said that 'whatever was necessary' would be used in conflict. That made 'no first use' declarations redundant, which has not been a logic followed in New Delhi.

What is clear is that both India and Pakistan would benefit from sharing the development of their respective nuclear doctrines. Neither will gain from creating strategic instability, either because there

are nuclear incentives to strike first in a crisis, or because the two sides are unclear of the relationship between low-level conventional conflict and the use of nuclear weapons. Doctrine seminars, perhaps facilitated by a third party, could play a very important role.

Second, work could be developed on notification of ballistic missile flight tests. This seems a particularly important area, given the great argument over alleged non-notification of tests in early 2003. Flight-testing has taken on a political resonance in South Asia, far greater than was ever the case between the Cold War adversaries. Hence, the development of CBMs relating to ballistic missile flight-testing is an area for serious consideration. Obvious possibilities include agreement on how far in advance a test must be notified; the direction of the missile trajectory; the period over which tests will take place; and the criteria for abstinence of tests during periods of crisis. Cruise missiles would need to be included in such CBMs as well. In the East-West context, there had been a steady development of missile launch monitoring from 'quantitative' to 'qualitative', so that, in the end, each side was actually supplying information to the other that helped to generate transparency and trust. Although the scale of missile developments on the subcontinent compared to that of the superpowers during the Cold War is clearly very different, this attitude—growing transparency to encourage trust—should be an important part of CBMs in the region.

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Third, on the subject of accidental or unauthorized use, the incorporation of robust safety systems that minimize the risk of accidental use, training in accident response, public education and communication with the other side on these measures in order to generate confidence are obvious and important lines of development. These are central issues not only in terms of developing trust and rules of the road, but also because they will dictate how (and if) the two states' nuclear technology becomes fully weaponized—and how a safe command and control system will be developed accordingly.³⁶ Perhaps, ultimately, a Nuclear Risk Reduction Centre could be developed; it might be worth having this on the agenda from the beginning.

The fourth area is communication. We know that a back channel exists between the two states and has been used—for example, over Kargil. Foreign ministers have, of course, spoken to each other directly on the telephone. There is also a formal line between the Directors-General of Military Operations (DGMO) of both states, that has operated since 1987 on a weekly basis. But there is no 'hotline'—a secure, dedicated line—as existed successfully for many years in the Soviet-American conflict, and that has also operated in Sino-Indian relations. For some years in the superpower relationship it was agreed that the hotline would only be used for discussions over nuclear matters. A structure of communication, clarifying at what level issues could be shared, and in what format, would be a relatively straightforward matter. There is no evidence that the DGMO line has been deliberately used for disinformation, although this would need to be ruled out at all levels. And the creation of a hotline would not imply that there was any suspicion as to the motives of either state. It simply creates 'rules of the road' by and for each state. One of the central concerns for the nuclear powers during the Cold War was with survivability; should there be a use of force by either side, by accident or deliberately, a national authority with full communication capabilities would be the only means of judging a response. A hotline is crucial to this.

Fifth, and finally, CBMs could be developed in connection with the central issue: Kashmir. Debate over the Line of Control has continued for over forty years, as specialists have sought to initiate breakthroughs, including the possibility of making it an international border, or of a repartition along religious/ethnic lines (both very difficult for the parties concerned to accept). But in the interim, perhaps there are possibilities for addressing the central sore—cross-border terror raids. Can Indian scepticism about Pakistani actions be addressed by the deployment of United Nations or other neutral observers as monitors? This has been seen as more difficult for India to accept than for Pakistan. There might be

scope for an observation element to monitor activity and to monitor training camps. If they were allowed an intrusive role, monitoring forces could enter without giving time for camps to disperse. This would be more difficult for Pakistan to accept. Perhaps there could, with goodwill, be some compromise by both sides along these lines. A variant of this might be the deployment of observers to monitor adherence to the Agreement on Advanced Notice of Military Exercises that the parties entered into in 1991.³⁷ The key is not the creation of concrete proposals from outside, but the generation of ideas to

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be taken up by the two states, and discussed with facilitation and support from third parties.

Many of these ideas might be too radical for the political environment; but the point of identifying a moment of ripeness is to see how the environment could change and be developed. And it is not necessary to simply focus on maximal solutions. Although the political will needed to create CBM structures that are implemented and to establish the 'rules of the game' might be at a premium between India and Pakistan, the possibility of creating a virtuous circle by starting with very modest CBM measures should not be neglected.

Conclusion

The January 2004 SAARC summit ended with a key commitment by India and Pakistan—that bilateral talks would begin the following month. The moment of ripeness has, it seems, been recognized. Now it needs to be seized. Security issues have to be tackled with a sense of urgency. Any future terrorist incident might provoke India into punitive action, which in the worst case might lead to uncontrolled or accidental responses, all the way to a nuclear exchange. This suggests that, although the nuclear aspects will have to be a part of the general discussions on security, it might also be worth considering whether they can be made separable, in case the moment passes too quickly.

But the central task must be to build upon the moment by agreeing an agenda of CBM initiatives; and the five areas discussed above are a good starting point. What is also needed is a commitment to make agreements that might become legally binding, to insulate (as far as possible) processes from any future downturn in relations.

The role of the specialists from the two countries in carrying through their leaders' commitments to flexibility is certainly a key issue, as are the continued efforts of those leaders to keep talks on track. But there has been a very important role for the international community (and, of course, for the United States in particular) in encouraging and supporting these developments, and in being creative about future facilitation roles. However, the essence of any new process to develop greater security rests first and foremost with the policy-makers of the region.

Notes

1. India, Pakistan in Landmark Talks, *BBC News (online edition)*, 5 January 2004, at < news.bbc.co.uk/1/hi/south_asia/3367981.stm > .
2. Vajpayee Tells SAARC Nations to Replace Mistrust with Trust, *The Hindu*, 4 January 2004 at < www.hindu.com/thehindu/holnus/00004141501.htm > .
3. See the following works by I.W. Zartman: 1989, *Ripe for Resolution*, New York, Oxford University Press; 1986, *Ripening Conflict, Ripe Moment, Formula and Mediation*, in D. Bendahamane and J. MacDonald (eds), *Perspectives on Negotiation*, Washington, DC, Center for the Study of Foreign Affairs; and 2001, *The Timing of*

- Peace Initiatives: Hurting Stalemates and Ripe Moments, *The Global Review of Ethnopolitics*, no. 1, pp. 8–18. For an application and adaptation, see D. Pruitt, 1997, Ripeness Theory and the Oslo Talks, *International Negotiation*, no. 2, pp. 237–50.
4. Interview with Reuters on 19 December 2003. Transcript available at < www.pakdef.info/forum/showthread.php?t=4922 > .
 5. Indian PM Wants Kashmir Dialogue, *BBC News (online edition)*, 3 January 2004, at < news.bbc.co.uk/1/hi/world/south_asia/3365881.stm > .
 6. The text of the Tashkent Declaration is available at < www.southasiafoundation.org/saf/safdic/doc/india_pak_agr_23.htm > .
 7. 2003 population figures from the United Nations.
 8. Ishrat Husain, *India, Pakistan: A Comparison*, at < users.erols.com/ziqbal/ih2.htm > , for PakBase, a research site on Pakistan based in Washington, DC.
 9. Figures from 2001. See Jonathan Marcus, 2003, India-Pakistan Military Balance, *BBC News (online edition)*, 9 May, at < news.bbc.co.uk/1/hi/world/south_asia/1735912.stm > .
 10. Sanjoy Majumder, 2004, Pakistanis Eager for Neighbourly Peace, *BBC News (online edition)*, 4 January, at < news.bbc.co.uk/1/hi/world/south_asia/3366945.stm > .
 11. See the excellent analyses in Kanti Bajpai et al., 1994, *Brasstacks and Beyond: Perception and the Management of Crisis in South Asia*, New Delhi, Manohar.
 12. See Sumit Ganguly, 1999, India's Path to Pokhran II, *International Security*, vol. 23, no. 4 (Spring), p. 165.
 13. *Ibid.*, p. 166.
 14. See the criticism of Ganguly's analysis on this point in Rodney W. Jones, 2000, Debating New Delhi's Nuclear Decision, *International Security*, vol. 24, no. 4 (Spring), pp. 185–86.
 15. *Ibid.*, p. 189.
 16. On these issues, see Farzana Shaikh, 2002, Pakistan's Nuclear Bomb: Beyond the Non-Proliferation Regime, *International Affairs*, vol. 78, no. 1, January, pp. 29–48.
 17. As cited in The Acronym Institute, 2002, India and Pakistan Camped on Brink of War over Kashmir, *Disarmament Diplomacy*, no. 65 (July–August), at < www.acronym.org.uk/dd/dd65/65nr01.htm > .
 18. *Ibid.*
 19. India-Pakistan Nuclear Tensions: What Have We Learned?, *Economic Examiner*, 1 July 2002, at < www.economic-examiner.com/in_20020701.asp > .
 20. See, for example, in the Indian media: Substantial Talks on J&K Possible, Says Vajpayee, *Hindustan Times*, 4 January 2004; and in the Pakistan media: Vajpayee Willing to Hold Talks with Musharraf, *Dawn*, 4 January 2004, at < www.dawn.com/2004/01/04/top1.htm > .
 21. *The Statesman* conducted two illustrative polls. On 9 May 2003 Indians were asked 'Does Pakistan really want to solve all outstanding issues with India?' In response, 42% agreed, 57% did not. On 3 January 2004, in reply to the statement 'Peace with Pakistan is not a realistic desire given current conditions', 33% agreed, 62% did not. That is, with all the caveats about this not being a scientific process, those who felt peace was possible rose from 42% to 62%, those who did not fell from 57% to 33%. See < www.thestatesman.org/page.pollarchives.php > .
 22. Absar Alam, 2004, The Ego Has Landed, *The Nation*, 4 January, at < www.nation.com.pk/daily/Jan-2004/4/main/top3.asp > . See for Indian media criticism of the Pakistani media on these issues, Pak Media Flays Govt. for Putting J&K on the Backburner, *The Hindu*, 4 January 2004, at < www.hindu.com/thehindu/holnus/00104141559.htm > .
 23. The President's comment was 'we are for the United Nations Security Council resolutions whatever it stands for. However, now we have left that aside.' Musharraf interview on India and Kashmir, Reuters, 19 December 2003.
 24. And, as such, it had been an issue of debate between 'modernizers' and 'traditionalists' within the Pakistan elite for some years. See the brief account by Alexander Evans, 2001, Reducing Tension Is Not Enough, *Washington Quarterly*, Spring, pp. 186–91.
 25. Sheikh Mushtaq and Zulfiqar Ali, 2003, India Welcomes Pakistan's Surprise Kashmir Offer, *Reuters*, 19 December, at < www.reuters.com/locales/newsArticle.jsp?type=topNews&locale=en_IN&storyID=4019943 > .
 26. C.R. Jayachandran, 2003, What Makes Musharraf Eat His Words?, *The Times of India*, 19 December, at < timesofindia.indiatimes.com/cms.dll/html/uncomp/articleshow/369903.cms > .
 27. Musharraf's Remarks on Kashmir Cause a Flutter in Pakistan, *Hindustan Times*, 19 December 2003.
 28. Syed Saleem Shahzad, 2003, Pakistan Plays a Canny Game, *Asia Times Online*, 20 December, at < www.atimes.com/atimes/South_Asia/EL20Df02.html > .
 29. An excellent empirical analysis of this point is that of T. Armstrong, 1993, *Breaking the Ice: Rapprochement between East and West Germany, The United States and China, and Israel and Egypt*, Washington, DC, United States Institute for Peace.
 30. See, as an example, the article by Firoza Ahmed, 2003, Possible to Negotiate Peace with India?, at < www.paknews.com/articles.php?id=2&date1=2003-11-11 > , that refutes the contributions of Indian authors in the Pakistani media by focusing on differences in the historical record, presented as an objective reality.

31. For the text of the short agreement, the Prohibition of Attack on Nuclear Facilities, see < www.pnnd.org/pak_india_nuclear_power_plants.htm> .
32. The text of the Declaration, the Joint Statement and the MoU can be found at < www.usip.org/library/pa/ip/ip_lahore19990221.html> .
33. See O.P. Veerma, 2004, Talks with Pak within SAARC Regime: India, *Deccan Herald*, 4 January, at < www.deccanherald.com/deccanherald/jan042004/i1.asp> .
34. Text of the treaty is available at < www.stimson.org/southasia/?sn=sa20020116300> .
35. On Indian doctrine, see Draft Report of the Indian National Security Advisory Board of August 1999 at < www.indianembassy.org/policy/CTBT/nuclear_doctrine_aug_17_1999.html> . For further insight, see Rear-Admiral Raja Menon (Retd.), 2000, *A Nuclear Strategy for India*, New Delhi, Sage Publications. On Pakistan, see, for example, Foreign Minister Abdul Sattar's address in response to India's doctrine, excerpted in *Disarmament Diplomacy*, 1999, no. 41 (November), at < www.acronym.org.uk/textonly/dd/dd41/41pakis.htm> .
36. For an excellent analysis, see Shaun Gregory, 2001, A Formidable Challenge: Nuclear Command and Control in South Asia, *Disarmament Diplomacy*, no. 54 (February), which can be found at < www.acronym.org.uk/textonly/dd/dd54/54greg.htm> .
37. See the text of the agreement on < www.southasiafoundation.org/saf/safdic/doc/india_pak/agr_42.htm> .

The United States' role and influence on the India-Pakistan conflict

Rahul ROY-CHAUDHURY

India and Pakistan have long held contradictory views on the involvement of external non-regional powers—primarily the United States—in their conflict. Whereas Delhi has opposed the intervention of 'third parties' in what it sees as a 'bilateral' dispute over Kashmir—due primarily to an uncertain outcome—Islamabad has actively encouraged international mediation to balance its asymmetrical relationship with India. The United States has also had an ambivalent attitude in an active and sustained role in South Asia.

However, these perspectives appear to be changing significantly. Not only is the United States actively involved in South Asia in the post-September 11 security environment—with its engagement of Pakistan in the 'war on terror' and the development of a strategic relationship with India—but, for the first time, it has a growing military presence in the region as well as in the Arabian Sea. The strengthened Indo-American relationship since the 1990s has made possible American 'facilitation' in the India-Pakistan conflict. Simultaneously, Islamabad has become aware that such facilitation may not lead to the expected outcome, due to its own complex internal dynamics. An American military presence in South Asia, especially in Afghanistan and Central Asia, can be expected to continue in the foreseeable future.

Although the Soviet Union played a critical role in formally ending the second India-Pakistan war in 1965—through the Tashkent Declaration—its close military and security relationships with Delhi during much of the Cold War years decreased its influence over Islamabad, which became increasingly linked to the United States for the supply of arms. China's discreet missile and nuclear linkages with Islamabad, along with memories of the India-China border war of 1962, precluded Beijing's influence over the India-Pakistan dispute. Despite an apparent shift in Beijing's position since 1996 (especially during the Kargil conflict in 1999 when it refrained from publicly supporting Pakistan, and due to its concerns over Islamist extremists in Xinjiang province), elements of future India-China competition make it difficult for Beijing to influence Delhi. While French, European Union or Japanese influence appear limited, a potential British role exists only alongside the United States, with the latter doing much of the 'heavy lifting'. Notwithstanding Washington's unprecedented and simultaneous influence over both Delhi and Islamabad, the nature and extent of its future engagement in the India-Pakistan conflict remains unclear.

Kashmir dispute

In view of India's asymmetrical relationship with Pakistan—population, size, economic strength and relative military power—Delhi has invariably resisted the role of a third party or the United

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Nations in its conflict with Pakistan; it is precisely for these reasons that Islamabad has favoured such a role, with the hope that ‘internationalization’ would provide a favourable resolution of the Kashmir dispute. India’s disillusionment with the international community over Kashmir began soon after Independence, when Prime Minister Jawaharlal Nehru took Pakistan’s aggression against India in Kashmir to the United Nations on 1 January 1948. Instead of being seen as the aggrieved party, losing Indian territory to an armed attack by Pakistan—following the signing of the Instrument of Accession by the Hindu ruler of the predominantly Muslim province of Jammu and Kashmir on 26 October 1947—India became a party to the dispute. Subsequent UN Security Council resolutions advocating the future of Kashmir on the basis of a UN-mandated plebiscite—after the withdrawal of armed forces by both countries from divided Kashmir—were ignored by Delhi, as was the United Nations force, the UN Military Observer Group in India and Pakistan (UNMOGIP). Since the UN-sponsored ceasefire to the first India-Pakistan war over Kashmir on 1 January 1949, UNMOGIP has been deployed to monitor the ceasefire line—currently, the Line of Control (LoC) (the *de facto* border dividing Indian- and Pakistan-administered Kashmir).

For Islamabad, however, the UN Security Council resolutions on Kashmir boosted its position on Kashmir, and justified its stance that it was a territorial dispute between the two sides. This contradicted Delhi’s view that Kashmir was ‘not a disputed territory’, with the only point of contention being Pakistan’s ‘illegal occupation of a portion of the state’, fortified by a Parliamentary resolution to this effect in the early 1990s. Even though it was clear that neither Pakistan nor India were inclined to withdraw forces from divided Kashmir, Islamabad was not averse to using UN Security Council resolutions on a plebiscite in Kashmir for political purposes.

However, Indian and Pakistani positions on a plebiscite and the status of Kashmir appeared to change in December 2003-January 2004. In an interview with Reuters in mid-December 2003, Pakistan’s President Musharraf, in a bold move, publicly offered to drop Pakistan’s traditional demand for a UN plebiscite in Kashmir, and meet India ‘half-way’ in a bid to resolve the Kashmir dispute. Musharraf reportedly stated, ‘... we are for the United Nations Security Council resolutions whatever it stands for. However, now we have left that aside’.¹ Although this was subsequently denied by Pakistani officials, it was clear that this was simply a recognition that a UN plebiscite could never have been implemented, in view of Indian and Pakistani intransigence. Yet, it had been a major irritant to Delhi,

On the sidelines of the twelfth South Asian Association for Regional Cooperation Summit in Islamabad, Delhi implicitly agreed that Kashmir was disputed territory, by explicitly agreeing that Kashmir was to be settled ‘to the satisfaction of both sides’.

which welcomed Musharraf’s statement. Subsequently, in the joint press statement of 6 January 2004, following the meeting between Indian Prime Minister Vajpayee and Musharraf, on the sidelines of the twelfth South Asian Association for Regional Cooperation (SAARC) Summit in Islamabad, Delhi implicitly agreed that Kashmir was disputed territory, by explicitly agreeing that Kashmir was to be settled ‘to the satisfaction of both sides’.²

‘Third party’ involvement in war

Notwithstanding India’s aversion to a ‘third party’ (including UN) role in its dispute over Kashmir, this did not apply to assistance in formally ending wars, or in the 1990s, preventing the outbreak of full-fledged conventional war. The second India-Pakistan war in 1965, for example, ended with a UN Security Council-sponsored ceasefire on 23 September 1965. Three months later, Indian Prime Minister Lal Bahadur Shastri and Pakistani President Mohammed Ayub Khan met in Tashkent and signed an agreement to formalize the end of the war and the withdrawal of their armed forces to positions held prior to 5 August 1965. The erstwhile Soviet-brokered ‘Tashkent Agreement’ of 10 January 1966 also pledged continued negotiations and the observation of ceasefire terms on the ceasefire line.³

During this period, American policy towards South Asia remained fairly ambivalent, although an attempt at engagement on the Kashmir dispute had been made during the Eisenhower Administration in the 1950s.⁴ Although the Kennedy Administration was able to initiate direct negotiations between India and Pakistan—in the aftermath of the 1962 India-China war, the talks failed; by the mid-1960s the United States had virtually given up on Kashmir. During the 1971 India-Pakistan war, the United States 'tilt' towards Pakistan—through the deployment of an aircraft carrier task force in the Bay of Bengal in the midst of the war—whatever its intent or purpose—made it difficult for India, among other reasons, to develop a satisfactory 'comfort level' with the United States on security issues. Despite American economic and military sanctions on Pakistan in 1979 in an attempt to stem its covert nuclear-weapons programme, Pakistan's role as a front-line state against the Soviet occupation of Afghanistan in the 1980s alleviated this situation. The demise of the former Soviet Union, along with India's economic liberalization in the aftermath of the 1991 economic crisis, began to lead to more favourable Indo-American relations.

In the late 1990s, high publicity American engagement with South Asia took place on nuclear issues, sparked off by multiple Indian and Pakistani nuclear tests in May 1998. On 11 and 13 May 1998, India carried out a series of five underground nuclear tests, twenty-four years after its first 'peaceful nuclear explosion' on 18 May 1974. This was promptly followed by six Pakistani nuclear tests on 28 and 30 May 1998. Although the immediate American reaction was to impose economic and military-related sanctions on both India and Pakistan, their respective importance in United States foreign policy soon generated less coercive measures to counter proliferation. In a significant development, within the Lahore Memorandum of Understanding (MoU), both countries agreed to develop confidence-building measures (CBMs) in the nuclear and conventional fields aimed at the avoidance of conflict within nine months of the nuclear tests.⁵ The Lahore documents—signed at the Summit between Vajpayee and Pakistani Prime Minister Nawaz Sharif in Lahore—appeared to provide the momentum towards enhanced and formalized nuclear stability in South Asia.

American facilitation in the Kargil Conflict, 1999

Unfortunately, the Lahore framework remains unimplemented, with the single exception of advanced notification of ballistic missile flight tests on a unilateral basis—in the 'spirit' of the Lahore MoU—although this has generated its own share of controversy over the years. Pakistan's military intrusion across the LoC, allegedly at the time of the Lahore Summit, effectively ended all moves towards regional nuclear stability. Instead, India and Pakistan were involved in an armed conflict with each other for the first time after their nuclear tests; the Kargil conflict of May-July 1999 formally ended with United States facilitation.

In early 1999, Pakistan's regular and irregular forces crossed the LoC and occupied positions in the Kargil sector of Indian-administered Jammu and Kashmir, for reasons that are as yet unclear. When this was detected in early May 1999, Delhi's response was swift and comprehensive, involving the use of land and air forces to evict the intruders from the Indian side of the LoC. After several weeks of increasingly bloody conflict, Indian forces captured the key heights of Tololing (14 June) and Tiger Hill (early morning on 4 July). With Pakistani forces suffering critical defeats, it was expected to be only a matter of time before they were pushed back across the LoC; but, undoubtedly this would have raised Indian casualties further. Meanwhile, the United States was urging Pakistan to respect the LoC and withdraw its forces across the LoC, while at the same time, urging India to restrain itself from crossing the LoC to open another front in the conflict. Notwithstanding Delhi's public statements on not using force across the LoC, the potential for escalation into a full-scale conventional war raised fears in the international community of the risk of inadvertent nuclear escalation.

In early July, the Pakistani Prime Minister flew to Washington, concerned over Pakistan's increasing international isolation. At a hastily organized meeting with President Clinton on 4 July, Sharif requested American intervention to stop the fighting and resolve the Kashmir issue. But Clinton came down heavily on Sharif, and told him that a clear Pakistani withdrawal to the LoC was essential. Clinton also told Sharif that Pakistan was preparing its nuclear arsenal for possible deployment at the instructions of the Army Chief, General Musharraf, which was apparently taking place without Sharif's knowledge.⁶ Amidst considerable American pressure, Sharif finally agreed 'to take concrete and immediate steps for the restoration of the LoC', which was accepted by Vajpayee when it was conveyed to him prior to its publicization.⁷ In effect, the United States facilitated a formal end to the Kargil conflict, which shortly

American facilitation on the Kargil conflict—in Delhi's favour—came as quite an unexpected surprise to many in India's Ministries of External Affairs and Defence.

afterwards saw the withdrawal of all Pakistani forces to its own side of the LoC without many additional Indian casualties. American facilitation on the Kargil conflict—in Delhi's favour—came as quite an unexpected surprise to many in India's Ministries of External Affairs and Defence. This was, in effect, the first time in fifty years that the United States had sided with India against Pakistan 'openly and firmly'.⁸ This soon led to a greater 'comfort level' with the United States, followed by Clinton's successful visit to India in March 2000, followed by Vajpayee's visit to the United States in the final days of the Clinton Administration.

American facilitation in the India-Pakistan Border Confrontation, 2001–2002

Even though the United States became involved in resolving the Kargil conflict, it is the American-led war on terror in South Asia and the subsequent India-Pakistan border confrontation that has brought about a significant change in American engagement in South Asia. Following the American attack against Afghanistan in October 2001—targeting the terrorist Al-Qaeda leadership responsible for the attacks on the United States and their Taliban hosts—Pakistan became a frontline state for American logistics support and intelligence facilities in Afghanistan. A number of American military personnel and equipment also remain deployed in Pakistani military bases in support of the ongoing war on terror in Afghanistan.

However, the attack on the Indian Parliament on 13 December 2001—allegedly by Pakistan-based Jaish-e-Mohammed terrorists—threatened to disrupt the ongoing American-led military campaign in Afghanistan. As part of its 'coercive diplomacy' against Pakistan, Delhi launched 'Operation Parakram' ('valour') on 19 December 2001, which constituted the largest mobilization of the Indian armed forces. This was a deliberate move, taking place amidst the war on terror, to threaten military action against Pakistan if its demands to end alleged Pakistan-sponsored cross-border terrorism were not met. This included the deployment of India's three strike corps (comprising armoured and mechanized formations) at forward positions on the international border with Pakistan. With Pakistan's counter-mobilization, nearly one million armed personnel were deployed across the India-Pakistan borders. In view of the nuclear-armed status of both states, there appeared to be considerable risk of nuclear escalation—by misperception or miscalculation—following the break-out of a conventional war. On 20 March 2002, the Director of the Central Intelligence Agency (CIA), George Tenet, warned the United States Senate Armed Services Committee that the chances of a war in the region were the highest since 1971.⁹

Having repeatedly stressed the sanctity of the LoC during the Kargil war, India's prospective actions—threatening the use of force across the LoC—set off alarm bells in Washington and London. Meanwhile, Pakistan appeared equally determined to counter an Indian military attack with conventional

and nuclear forces. With the deliberate disruption of normal diplomatic communication, Delhi and Islamabad were communicating with each other on nuclear and conventional matters on a public basis during much of the ten months of the 2001–2002 border confrontation. These nuclear signals were multiple in nature, carried out at multiple levels, and addressed to multiple constituencies—internal, regional and international. For both India and Pakistan, the most important constituencies were the domestic public, each other and the United States, which had the most influence in the region. For Delhi, the United States could help put pressure on Pakistan to cease cross-border infiltration of militants into Indian-administered Kashmir; for Islamabad, the United States could restrain Delhi from military action.

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With tensions heightening following the terrorist attack on an Indian Army residential camp in Kaluchak, Jammu, on 14 May 2002, and Delhi's subsequent nuclear signalling, a flurry of high-level American and British choreographed visits took place to Delhi and Islamabad. The contours of a possible easing of India-Pakistan tensions began to emerge from Jack Straw's visit at the end of May. On 28 May, Straw visited Islamabad, where he urged Musharraf to take action on the ground to counter cross-border 'terrorism' in Indian-administered Kashmir. In Delhi the next day, Straw urged India to exercise restraint and prevent its armed forces from using force across the LoC. He also told Delhi that Musharraf had promised to curb infiltration into India and to close down 'terrorist' camps in Pakistan-administered Kashmir by the time of Armitage's visit to the region in early June.

On his return to London on 31 May, Straw publicly expressed his concern over the 'dangerous situation' in the region, 'when you have one million men under arms on either side of the LoC, all in a high state of alert and readiness, both countries have nuclear weapons, and one of them—Pakistan—has said they reserve the right to use them first'.¹⁰ This essentially signalled the issue of travel advisories on 1 June by the Governments of the United States, the United Kingdom, Canada, France, Japan, Australia, New Zealand and others, urging their citizens to leave India and Pakistan immediately, and warned others from travelling to either country. The travel advisories led to an exodus of business visitors, tourists, diplomatic personnel and their dependants, largely from India, as they had already pulled out from Pakistan earlier. Ostensibly ordered for fear of an outbreak of war, this unprecedented step caused much annoyance in Delhi, which perceived it as an attempt to pressure it against launching an attack across the LoC.

On 31 May, United States Secretary of State Colin Powell publicly criticized Pakistan for the 'continuing' infiltration across the LoC, despite Musharraf's assurances that it would be ended. The following day, in an interview with the BBC, Musharraf indicated that 'instructions' had been given by Pakistan to cease such activity. Although it was still too early to say that it had stopped, Powell emphasised that '... when, and if, it does stop, it must also stop permanently'.¹¹ On 6 June, United States Deputy Secretary of State Richard Armitage arrived in Islamabad to build on Straw's visit, and hammer out a deal between India and Pakistan. After a tough meeting, Musharraf gave Armitage a commitment that he would end cross-border infiltration 'permanently'.¹² This was a considerable improvement on his pledge to Straw a week earlier to curb infiltration into India. While Delhi formally welcomed this development, it expressed caution in terms of implementation. Consequently, Armitage described India-Pakistan tensions as 'a bit down on both sides'.¹³ Within days of Armitage's departure from Delhi, the thaw in India-Pakistan tensions was evident. In effect, American facilitation successfully eased India-Pakistan tensions, and ended the ten-month border confrontation—the longest period of military mobilization between the two countries.

India-Pakistan Joint Press Statement, 6 January 2004

In a dramatic development on the sidelines of the twelfth SAARC Summit in Islamabad in January 2004, India and Pakistan agreed to resume an official-level dialogue after a three-year hiatus. The Joint Statement of 6 January 2004 also noted that Delhi agreed to settle Kashmir 'to the satisfaction of both sides', and that Islamabad would not permit 'any territory under Pakistan's control to be used to support terrorism in any manner'. On 18 February 2004, after three days of official-level 'talks on talks' in Islamabad, India and Pakistan agreed to resume their bilateral 'composite dialogue' in May–June 2004, soon after the Indian general elections. This is to take the form of a 'composite dialogue' on eight issues, including two—on 'peace and security, including CBMs' and 'Jammu and Kashmir'—at the Foreign Secretary-level. The two foreign ministers are to meet in August 2004 to review progress.¹⁴

Both Delhi and Islamabad had strong motivations to reach an accord during the SAARC Summit. For Vajpayee, a personal desire for a stable bilateral relationship with Pakistan—his third and final peace effort—had been initiated with his 'hand of friendship' speech in Srinagar in April 2003, and buttressed by approaching general elections in April 2004; for Musharraf, two assassination attempts within eleven days in December 2003 had led to a renewed vigour to fight terrorism of all kinds, along with the increasing radicalization of domestic politics. Vajpayee's rising popularity, seen by the results of the Indian assembly elections in November 2003, also boosted Islamabad's view that it would be advisable to deal with Vajpayee himself.

In addition, American pressure on Islamabad to end cross-border infiltration into Indian-administered Kashmir, and to a lesser extent on India—to begin an official-level dialogue with Pakistan—may also have played a part in the success of bilateral diplomacy on the sidelines of the multilateral summit. Even if the United States had facilitated such a dialogue, it would have been advisable to have maintained this in a low-key manner, for fear of undermining the fledgling peace process.

Current American engagement with India and Pakistan

In the post-11 September security environment, American relations with Delhi and Islamabad have strengthened considerably, placing it in a unique position of trust by two traditionally antagonistic nuclear-armed states. But the content of the two sets of 'dehyphenated' diplomatic relationships—stressing the absence of any inter-relationship—are quite different and complex.

Current Indo-American ties are fairly broad-based and comprehensive, with the prospect of developing into a strategic relationship in the medium term.

Current Indo-American ties are fairly broad-based and comprehensive, with the prospect of developing into a strategic relationship in the medium term. If the United States 'tilted' towards Islamabad in the 1971 India-Pakistan war, it clearly 'tilted' towards Delhi in the 1999 Kargil conflict. A relatively high level of joint military exercises, growing naval cooperation, and high-level political and trade-related relations continue to take place between Delhi and Washington. This has not been adversely affected by Delhi's refusal in mid-July 2003 to send troops to Iraq—at the behest of the United States—in the absence of a UN mandate or UN forces command. In January 2004, a joint agreement on a 'quartet' of issues—cooperation in high technology fields, civilian nuclear and space programmes, and discussions on missile defence—provided the framework for significantly enhanced strategic relations. While this may appear related to an American requirement to counter China in the medium term, it is extremely unlikely that Delhi will acquiesce to such a role for some very good reasons—the most important being that both countries share a long land border.

In marked contrast, American relations with Islamabad appear to be more focused on the war on terror and on countering nuclear proliferation. Within Pakistan's highly charged and volatile politics, there are legitimate concerns over Musharraf's personal safety—exacerbated by the two assassination attempts. His reputation and influence is increasingly under question in the light of the proliferation activities of key scientists in the nuclear-weapons establishment. They are expected to decline further when he retires as Army Chief at the end of the year, even though he continues as President until 2007.

However, the United States also sees Pakistan as a major source of Islamic radicalism. On several occasions, the United States has had to stress to Islamabad the need to counter terrorism in Afghanistan, and its related aspects in Indian-administered Kashmir and the activities of Islamist extremist groups operating in Pakistan. In November 2003, Musharraf re-banned several Islamist extremist groups. In one of his strongest statements against extremism, Musharraf—in his first address to the joint sitting of parliament on 17 January 2004—appealed to the Pakistani nation 'to wage *jihad* against extremism'.¹⁵

Nonetheless, Islamabad is clearly Washington's closest ally in the war on terror, through the provision of considerable intelligence and logistical support to its Afghanistan operations. In March 2004, Pakistani paramilitary and armed forces carried out their first major operation against Al-Qaeda-linked militants in the tribal areas of Wana in South Waziristan, loosely controlled by Islamabad. In recognition of this support, the United States granted Pakistan the status of 'major non-NATO ally' in March 2004, subject to Congressional approval. Although this appeared to be largely, though not wholly, symbolic, to provide additional support for Musharraf under trying conditions, Delhi expressed pique at not being informed earlier. This also increased Islamabad's prospects for acquiring American military equipment, ammunition and defence R&D cooperation—all of which had been previously denied.

Prospects for the future

In view of the nature and extent of diplomatic relations with both Delhi and Islamabad, there are attempts to encourage a sustained American foreign policy engagement in the region. Instead of current American foreign policy fixation on what is essentially 'crisis management', a more activist role in conflict resolution in South Asia is advocated. In October 2003, for example, an American Independent Task Force on India and South Asia—co-sponsored by the Council on Foreign Relations and the Asia Society—urged Congress and the Bush Administration to make South Asia a high foreign policy priority. It warned that if this did not take place, the United States could face crises in the region that would pose major threats to American national security. Although some members of the Task Force felt that American foreign policy did not go far enough in view of the dangers of another India-Pakistan conflict—and therefore urged a more active stance, including putting forward American ideas about a Kashmir settlement—this was not its formal conclusion. Instead, it felt that there should be 'more forward-leaning and sustained United States engagement. There should be a long-term American diplomatic effort to assist—not to mediate or arbitrate—India and Pakistan's intermittent efforts to bridge their differences'.¹⁶

Despite highly successful American facilitation between India and Pakistan in the recent past—formally ending the Kargil conflict, easing tensions during the border confrontation, and helping initiate an official-level dialogue between the two countries—Delhi remains disinclined to accept an American-mandated resolution of the Kashmir dispute. It continues to feel quite strongly that this remains a bilateral issue, as stated in the Simla declaration of 2 July 1972. This stated that both countries agreed to 'settle their differences by peaceful means through bilateral negotiations or by any other peaceful means mutually agreed upon between them'.¹⁷ Emphasis on the implementation of the Simla

Agreement—in letter and spirit—was reiterated in the Lahore Declaration of 21 February 1999.¹⁸ The India-Pakistan Joint Press Statement of 6 January 2004 also noted the bilateral nature of the dialogue which is required to resolve the disputes between the two countries, including Kashmir. In a wide-ranging interview with *India Today* in January 2004, Vajpayee clearly indicated this when he stated that the United States had been making genuine efforts to promote peace in the subcontinent—'as friend, not mediator'.¹⁹ In effect, a resolution of the Kashmir dispute needs to emanate from the governments and people of India and Pakistan, if it is to lead to a meaningful and lasting settlement. However, the United States can play an extremely useful role in the following issues, but it needs to be done quietly in the background.

- *Assist the fledgling India-Pakistan peace process.* For the peace process to be tangible, it needs to be understood as a long-term process, as there are no quick solutions. However, it is fraught with problems and difficulties. If it is not to break down—as has happened so often in the past—it needs to be carefully managed by both Delhi and Islamabad, with assistance from the United States. The key, therefore, will be to sustain the dialogue against disruption. The United States could assist by facilitating communication and promoting dialogue.
- *Share ideas on nuclear-related issues.* Much more needs to be done to enhance bilateral nuclear stability. The United States could assist by sharing ideas on various technical issues, such as the drafting of a bilateral agreement on the advanced notification of ballistic missile flight tests or the establishment of nuclear risk reduction centres for the mutual notification of nuclear accidents or unauthorized or unexplained nuclear incidents—both of which have been agreed to in the Lahore MoU of February 1999. Also, nuclear deterrence in both countries needs to be made more stable, with far greater understanding and thinking on critical issues, such as nuclear doctrine, force development, command and control, deployment and readiness, survivability and nuclear safety.
- *Prepare for the disruption of diplomatic communication between India and Pakistan.* In a worst case scenario, the disruption of bilateral diplomatic communication in the future may not easily lend itself to American facilitation as in the past. This may require the conduct of immediate 'back channel' negotiations between the Indian and Pakistani governments—with senior and trusted representatives of the two leaders. The United States could assist in setting the groundwork for such 'back channel' diplomacy amidst the current thaw in India-Pakistan relations.

Notes

1. Pakistan makes Kashmir Concession, *BBC News*, 18 December 2003, at < news.bbc.co.uk/2/hi/south_asia/3330031.stm > .
2. India-Pakistan Joint Press Statement, 6 January 2004, at < www.indianembassy.org/press_release/2004/jan/07.htm > .
3. The Tashkent Declaration, 10 January 1966, at < www.acdis.uiuc.edu/homepage_docs/link_docs/Treaty_docs/tashkent.html > .
4. See Stephen Philip Cohen's comments, 2002, What Role does the United States Have in the India-Pakistan Crisis?, *Brookings Press Briefings*, 11 June, at < www.brook.edu/comm/transcripts/20020611.html > .
5. Text of the Lahore Declaration and the Memorandum of Understanding at < www.nyu.edu/globalbeat/southasia/Lahore022299.html#Memo > .
6. Bruce Reidel, 2002, *American Diplomacy and the 1999 Kargil Summit at Blair House*, Center for the Advanced Study of India, University of Pennsylvania, p. 11, at < www.ccc.nps.navy.mil/research/kargil/reidel.pdf > .

7. *Ibid.*, p. 13.
8. Stephen Philip Cohen, 2003, The United States and South Asia: Core Interests and Policies and their Impact on Regional Countries, paper presented to the Conference on Major Powers and South Asia, 11–13 August, at the Institute for Regional Studies, Islamabad, Pakistan (revised for publication on 1 October 2003), p. 3.
9. Sridhar Krishnaswami, 2002, Chances of India-Pak War High: CIA Chief, *The Hindu* (online edition), 21 March, at < www.hinduonnet.com/thehindu/2002/03/21/stories/2002032103871100.htm> .
10. Kamal Ahmed, Peter Beaumont and Luke Harding, 2002, Britain in War Zone Rescue Mission, *The Guardian*, 2 June, at < observer.guardian.co.uk/international/story/0,6903,726432,00.html> .
11. Sridhar Krishnaswami, 2002, Pak Has Indicated It Is Acting on Curbing Terrorism, *The Hindu* (online edition), 2 June, at < www.hinduonnet.com/thehindu/2002/06/02/stories/2002060202270800.htm> .
12. Cohen, 2003, *op. cit.*, p. 6.
13. C. Raja Mohan, 2002, Musharraf Vows to Stop Infiltration: Armitage, *The Hindu* (online edition), 8 June, at < www.hinduonnet.com/thehindu/2002/06/08/stories/2002060804470100.htm> .
14. Text of India-Pakistan Joint Statement, 18 February 2004, at < news.bbc.co.uk/1/hi/world/south_asia/3499111.stm> .
15. B. Muralidhar Reddy, 2004, Musharraf Calls for 'Jehad' against Extremism, *The Hindu* (online edition), 18 January, at < www.hinduonnet.com/thehindu/2004/01/18/stories/2004011806570100.htm> .
16. Chairman's Report of an Independent Task Force Cosponsored by the Council on Foreign Relations and the Asia Society, 2003, *New Priorities in South Asia: U.S. Policy Toward India, Pakistan, and Afghanistan*, New York, Council on Foreign Relations, p. 7.
17. Text of the Simla Agreement, 3 July 1972, at < www.indianembassy.org/policy/kashmir/shimla.htm> .
18. Lahore Declaration, *op. cit.*
19. Excerpts from the interview with the Prime Minister of India, Atal Bihari Vajpayee, by *India Today*, 12 January 2004, at < meaindia.nic.in/> .

Strategic stability in South Asia: the need for restraint in targeting technologies

Gaurav RAJEN

India has a clearly stated policy of building a credible minimum nuclear deterrent.¹ However, there is a dilemma in deciding the size of a country's small nuclear forces. 'A small, unsophisticated nuclear force may have to choose whether it can survive a first strike or whether it can avoid physical accidents and have weapons that are safe from theft and unauthorized use.'² It is important, therefore, for analysts to study aspects of strategic stability related to the size and form of South Asian nuclear forces.

It is commonly presumed that neither India nor Pakistan has the capability to carry out a 'splendid' strike³ and sufficiently destroy the other's nuclear arsenal that damage to itself can be dramatically reduced by having struck first.⁴ As discussed by Ashley Tellis, Indian pre-emptive strikes are highly unlikely, and Indian policy-makers 'appear to be cognizant of the challenges associated with the temptations of pre-emption, but they remain convinced—correctly—that so long as their own nuclear assets are properly safeguarded through a combination of concealment, deception, and mobility, they could escape the burden of acting precipitously even though the temptations themselves are unlikely to disappear so long as nuclear weapons exist in Southern Asia.'⁵

The main argument of this paper is that, along with the strategies of concealment, deception and mobility, restraint in acquiring the technologies that counter the benefits of these strategies (concealment, deception and mobility) will allow both countries to have greater confidence in the survivability of their forces. Restraint will have greater benefits for survivability than increases in the numbers of weapons and delivery systems, given that larger numbers create the dilemma of inadvertence and accidents even while increasing survivability.

Even though a pre-emptive Indian strike against some types of Pakistani nuclear forces may never occur, this is a scenario that Pakistan certainly does believe possible, and has often alerted its forces in preparation for a possible Indian pre-emptive strike.⁶ Further, a short-range liquid-fuelled missile regiment is vulnerable, as the 'large retinue required, perhaps as many as four [Transporter-Erector-Launchers (TELS)] and six other vehicles in each regiment, makes them vulnerable to pre-emptive attack, especially during the long fuelling time, if their location is known.'⁷

The answers to some important questions related to the above scenario are not clear. One of these questions is, 'In the case of India and Pakistan, given a certain probability of success of the adversary detecting, searching, acquiring, tracking and killing⁸ a mobile missile launcher, what is the minimum number of launchers required by the defender to ensure a very high probability that a militarily effective force survives?' Another related question to this issue of the possibility of strikes

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against mobile missile launchers is, ‘Given a definite number of mobile launchers, and a specific probability of success of detecting, searching, acquiring, tracking and killing a single missile launcher, what is the probability that a

Table 1. The probability of destroying all missile launchers for $p = 0.9$ and different values of N

	$N = 5$	$N = 10$	$N = 50$	$N = 100$
Probability that all launchers will be destroyed <i>i.e. $x = N$, for individual probability $p = 0.9$</i>	0.59049	0.3486	0.005	0.000026

significant portion of the total number of mobile launchers could be destroyed?’ The answers to these questions will determine in some part the shape and size of the Indian and Pakistani deterrents.

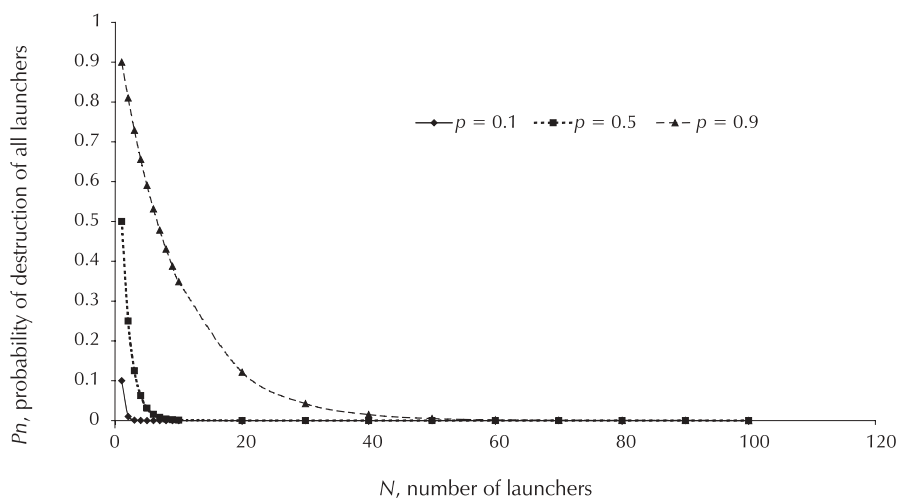
Quantitative approach

The probability that a given number (fraction) of launchers are destroyed out of the total number of launchers depends mainly on three factors. The most important is the probability that any one launcher will be detected, searched for, acquired, tracked and, through a successful launch, flight and penetration of a weapon against the target, killed. We shall call this probability p for short. The second factor is the total number of existing launchers. Some of these launchers could be decoys, but the attacking side is assumed not to know or be able to discriminate which are decoys and which not, and so must attempt to destroy them all. We shall call this number of total launchers N . The third important factor is the number that one side is attempting to destroy—say 30 out of a total force of 50, or 90 out of a total force of 100. We shall call this number x . Given these three factors, p , N and x , we can estimate the probability of success in destroying a given number, x , of a given total number of launchers, N , assuming a certain range for p .

The probability p will vary for different attacks. The defender will take greater evasive and defensive action after the first attack, decreasing the probability of success in subsequent attacks, while the attacker will learn from each success, increasing the probability of future successes. However, as a first approximation, this probability p can be assumed to be the same for all attacks. As we are seeking general insights based on whether p is ‘high’ or ‘low’, variations in p between attacks can be neglected.

A special case of an attempt to destroy a fraction of a total number of launchers is the attempt to destroy all of them.⁹ The probability of doing this is a simple multiplication of the probability p by itself N times. That is, if

Figure 1. Probability of destruction of all launchers for different numbers of launchers and different values of the probability of detecting, searching for, acquiring, tracking and destroying any one launcher



the probability of getting ‘tails’ in a coin toss is 0.5, then the probability of getting tails in two tosses is 0.5 multiplied by 0.5, and for three tosses it is 0.5 multiplied by 0.5 multiplied by 0.5, and so on. So, let us say for the sake of argument that if the probability p of destroying any one launcher is 0.1, then the probability of destroying two launchers out of a total force of two is 0.1 multiplied by 0.1, and so on.

Table 1 presents the probability of destroying all launchers for $p = 0.9$ and different values of N . If N is large, the probability of destroying all launchers, even with a high degree of certainty of destroying any one launcher, is very low. However, if N is small, for example equal to 5, and p is equal to 0.9, then the probability of destroying all launchers is as high as 60%.

Figure 2. Probability of destruction of all launchers for different numbers of launchers and high values of p

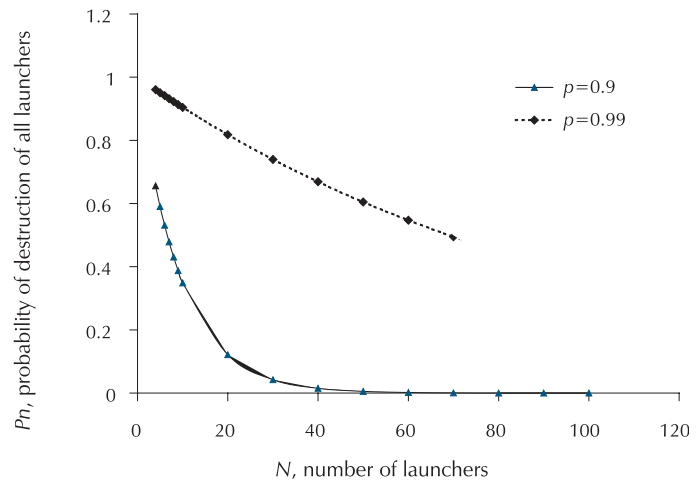


Figure 1 depicts a graph of $P(x)$ for $x = N$, and different values of N . It shows that if the probability of detecting, searching for, acquiring, tracking and destroying any one launcher is small, say $p = 0.5$, then the probability of destroying all launchers is negligibly small, even for a small number of launchers, say of the order of twenty. However, if the probability of destroying any one launcher is extremely high, say $p = 0.99$, then the probability of destroying all launchers will never be negligibly small, even for a large number of launchers. This fact is better illustrated in Figure 2 that compares the probability of destroying all launchers for increasing values of N , and very high values of the probability of detecting, searching for, tracking and destroying any one launcher: $p = 0.9$ and $p = 0.99$.

ESTIMATING P : THE PROBABILITY OF DESTROYING ANY ONE LAUNCHER

The probability of destroying a single missile launcher using a missile can be written as the following product:

$$P = P_d P_s P_a P_t P_{lp} P_k$$

Here, p is the compound probability of destroying a single missile launcher made up of the probabilities of other necessary events given as:

- p_d = single-scan probability of detection of the target by a sensor, such as a radar;
- p_s = the probability of searching for the target;
- p_a = the probability of acquiring the target;
- p_t = the probability of tracking the target;
- p_{lp} = the probability of a successful launch, flight and penetration of the attacking missile;
- and
- p_k = the probability of killing the target using the launched missile and warhead.

Detection occurs when a search is initiated using sensors and the sensors give a positive signal.¹⁰ Searching for the target involves finding the target within a given area, using a specified form of searching technique, such as random or continuous. Acquisition is the repeated detection of a target during several scans. Tracking of the target involves determining its speed and direction. Finally, the probability of destroying the target depends on the successful launch, flight and penetrability of the attacking missile and the probability of a kill. The probability of a kill depends on the probabilities of landing the warhead within a certain radius of the target, and the probability that the effective blast radius of the warhead encompasses the target sufficiently.

To estimate p , we can use and analyse battlefield experience. In Operation Desert Storm, for example, p was approximately 0.5 for attacks by United States' and British forces against radar sites and Scud missile launchers.¹¹ Alternatively, without relying on past battlefield experiences, we can also estimate in the case of India and Pakistan expected ranges for values of p_d , p_s , p_a , p_t , p_{lfp} , and p_k .

ESTIMATING p_{lfp} AND p_k

The probabilities of successful launch of a missile and killing of the target are much easier to estimate than the other probabilities involved—that is, detection, search, acquisition and tracking. It has been estimated that the probability p_{lfp} of successful launch, flight and penetrability of a Prithvi missile is 0.8. This is based on the fact that:

... the Soviet SS-N-4, which uses the same propellant as the Prithvi, was successful in 225 times out of 311 launches, i.e. a success rate of 0.72. [...] The naval version of the Soviet Scud-A was successful 59 times out of 77 launches, and the SS-N-5 was successful 193 times out of 228 launches. Given the similarities between the Prithvi and the Soviet Scud-B, an estimate of 0.7 to 0.9 may well be applicable to the Prithvi as well.¹²

The probability of successful penetration can be assumed to be 1, given that missile defence systems are non-existent in South Asia. Based on these reasons, p_{lfp} has been estimated as 0.8.

To estimate the probability of killing a launcher with a missile armed with a specific warhead, we need to know the circular error probable (CEP) of the missile, and the effective blast radius of the warhead. The CEP is the radius of the area around the intended target into which the missile has a 50% probability of landing. In the case of India and Pakistan, we can assume that a counterforce strike might be conducted using small battlefield nuclear weapons.

As a first approximation, the blast effects of a warhead can be estimated using an equation to predict the radius at which the overpressure is 5 pounds per square inch (psi).¹³ An overpressure of 5 psi will be sufficient to destroy most soft targets. This would be an underestimate of the actual effective blast radius if a nuclear weapon were used, as various other effects will be present in this case, such as thermal and radiation effects. However, this approach provides a good first-order approximation of the effectiveness of a small nuclear weapon.

Using this approach, we can derive the radius at which an overpressure of 5 psi would be achieved for the three sub-kiloton devices tested by India in May 1998.¹⁴ These devices were claimed to have yields of 0.2, 0.3 and 0.5 kilotons. Therefore, we may assume that these sizes of warheads could be mounted on Indian Prithvi missiles. Table 2 provides the 5 psi overpressure radii estimated for each of these yields.

Table 2. Radius of 5 psi overpressure for various yields of nuclear warheads

Yield	Radius of 5 psi overpressure
0.2 kilotons	~ 233 m
0.3 kilotons	~ 267 m
0.5 kilotons	~ 317 m

Knowing the CEP of a missile and the effective blast radius of a warhead, the probability of kill by a missile, P_k , can be estimated.¹⁵ Table 3 presents this probability of killing a target for the effective radius and CEP of two variants of the Prithvi. From Table 3 we can see

Table 3. Probability of destruction of a target for the effective radius of suspected Indian sub-kiloton weapons given the known CEP of the two variants of the Prithvi

Prithvi version	CEP	0.2 kiloton $d_w = 233$ m	0.3 kiloton $d_w = 267$ m	0.5 kiloton $d_w = 317$ m
150 km	150 m	0.8122	0.8887	0.9547
250 km	250 m	0.4523	0.5464	0.6719

that the probability of destroying a target with a sub-kiloton weapon using the Prithvi missile can be in the range of 0.9. A similar probability of kill can be assumed for corresponding Pakistani missiles. Therefore, multiplying $p_{lp} = 0.8$ and $p_k = 0.9$, we see immediately that p has got to be less than 0.72, assuming that the product of $p_d p_s p_a p_t$ will be less than 1.

ESTIMATING P_d : THE SINGLE-SCAN PROBABILITY OF DETECTION BY A SENSOR

The single-scan probability of detection can be estimated for radar sensors by assessing the signal-to-noise ratios, the probability of false alarms and other physical parameters. One of these physical parameters is whether the target has multiple reflecting points, each with somewhat equal back-scattering characteristics. In this case, the target is called a speckled target. Other parameters include the radar cross-section of the target, attenuation effects of the atmosphere, clutter around the target and radar characteristics such as power.

The Transporter-Erector-Launchers associated with missile launchers can be expected to behave as speckled targets as they have multiple reflecting points. Curves of probabilities of detection for various signal-to-noise ratios and given probabilities of false alarms for speckled targets exist.¹⁶ The recommended probability of false alarm is 10^{-6} .¹⁷ The signal-to-noise ratio for most modern radars is approximately 14–16dB.¹⁸ Using these numbers, and the curves presented by Hovanessian, the single-scan probability of detection will be of the order of 0.6–0.7.

Assuming p_d to be 0.7, and multiplying p_d , p_{lp} and p_k we can see that p has to be less than 0.5, for $p_d = 0.7$, $p_{lp} = 0.8$ and $p_k = 0.9$, assuming that the product of $p_s p_a p_t$ will be less than 1.

ESTIMATING P_s , P_a AND P_t : THE PROBABILITIES OF SEARCH, ACQUISITION AND TRACKING OF A TARGET

Based on the type of search model (i.e. random, exhaustive) and tracking capabilities, the probabilities of searching, acquiring and tracking a target can be estimated. Here, the size of the search area is important.

The India-Pakistan international border, not including the Working Boundary between the Pakistani state of Punjab and the Indian state of Jammu and Kashmir, the Line of Control that divides Kashmir, and the Line of Contact in the Siachen glacier, is about 2,200km long.¹⁹ Short-range missiles could be assumed to be located within a 150km distance of this international border, as they would have a range of 250km, and have to travel at least 100km into Indian territory. The terrain, climate and other security considerations would probably disallow missiles to be placed along the Working Boundary, the Line of Control or the Line of Contact. Therefore, for the purpose of analysis an assumption of a 150km-depth along a border of 2,000km should be a fair approximation. Technically, a satellite could

be utilized along with a sufficient number of aircraft to search for mobile launchers using thermal-imaging sensors and radar. It appears, therefore, that the ratio of the area searched versus the total area of interest could be made equal to unity, if a sufficient number of aircraft, satellites and appropriate sensors were utilized. If this ratio approaches unity, then the probability of a successful search also approaches unity.²⁰

The Federation of American Scientists has published a study of the remote-sensing and intelligence-gathering capabilities of the United States Army and Air Force in Operation Desert Storm.²¹ This study discusses the Joint Surveillance Target Attack Radar System (JSTARS) that is a joint Army/Air Force air-based large-imaging radar for identifying ground targets, such as tanks and trucks, at long ranges. The study includes the following statement: "The biggest enhancement in capabilities to come out of the war is JSTARS ability to do battlefield surveillance."²² According to this study, a JSTARS aircraft is able to monitor an area roughly 480km by 320km. Therefore, if two JSTARS aircraft fly for two hours, at a velocity of 500km/h along the border, they could cover an area of approximately 2000km by 320km. This would encompass the area of 2000km by 150km that is of interest to us. The time frame in which the launchers are detected will, of course, also depend on the time needed to disseminate and analyse the information gathered. For the United States, using high-speed data transmission and powerful computers, this time frame is approaching almost real-time capability.

When coupled with satellite imagery analyses and the elimination of certain areas for reasons of terrain, the air-based monitoring and data-analysis capability could be significantly enhanced. In fact, one could argue that as the missile launchers are road mobile, all roads (dirt and paved) could be mapped and first searched exhaustively—thus bringing down the total area to be searched. A select area where roads end and along their length could also be searched exhaustively. The point here is not that India and Pakistan have an existing capability to search, acquire and track mobile launchers. Rather, the point is to recognize that it is technically feasible to search the entire area of interest in a short time frame using adequate technological means.

If we assume that the launchers are stationary (along with their retinue of support vehicles), the probabilities of successfully acquiring and tracking a launcher once it has been located would also be of the order of unity. Even if we assume that the targets are moving, the same arguments apply. The launchers will move at slow velocities (approximately 15–30km/h) making it not impossible to acquire and track them. Therefore, the product of $p_s p_a p_t$ has the possibility of being equal to 1, assuming that there is unrestrained growth in the technological capabilities of either India or Pakistan to search, acquire and track a target.

If the product of $p_s p_a p_t$ could be made equal to a value close to unity, then the overall probability p could be of the order of 0.5. As the next section demonstrates, this level of a value of p will always present the temptation of a non-negligibly small probability of a successful pre-emptive strike that could limit damage in return. However, if the product of $p_s p_a p_t$ is kept low, then the overall probability p will be much less than 0.5, and be of the order of 0.1 or so. In this case, the probability of a successful strike to destroy even a small fraction of the opposing forces is always negligibly small.

EFFECTS OF INCREASING P

As p gets higher, the number of launchers each side will need to deploy in order to feel secure about the

Table 4. Probability of success $P(x)$ for different values of N , p and L (x is greater than or equal to D)

	$L = 4$ $N = 5$	$L = 9$ $N = 10$	$L = 45$ $N = 50$	$L = 90$ $N = 100$
$p = 0.1$	0.00046	9.1×10^{-9}	~ 0	~ 0
$p = 0.5$	0.1875	0.01067	~ 0	~ 0
$p = 0.9$	0.91854	0.736	0.5993	0.5804

survivability of a militarily effective number increases significantly. Let us assume that if 10% of the launchers survive, the side attacked would feel reasonably sure that it could retaliate with an effective second strike—one that would cause unacceptable levels of damage.

Table 4 presents the probability of success of destroying greater than 90% of the launchers for a range of values of p and N .

For $p = 0.1$, even for a very small number of launchers, such as five, there is a very low probability of destroying four or more of the launchers. However, as p increases, this probability of destroying four or more out of five launchers quickly becomes not negligible. For $p = 0.5$, this probability is about 20% (0.1875). For $p = 0.9$, this probability of success is very high for a low number of launchers, such as five. This fact creates an incentive for increasing the number of launchers to increase survivability if p is high. However, increasing the number of launchers increases the risks of inadvertence and accidents.

Figure 3 presents in the form of a graph this probability of success of destroying more than a specified number of launchers for a given total number of launchers, and a specified probability of detecting, acquiring, tracking and destroying a target. As can be seen, if p is greater than about 0.8, even going from a force of 50 launcher to a force or 100 launchers does not decrease the probability of destroying 90% of the launchers significantly. However, if p is low, then the probability of destroying 90% of the launchers is negligibly small, even for a very small value of N .

Another more troubling possibility driven by a high p is that a military commander with decision-making power to launch strikes may not be interested in destroying a very large number of opposing launchers—he may simply want to create a high enough attrition rate such that an imminent attack gets blunted or stopped. In this case, the commander may be interested in reaching the attrition point at which the launchers would be pulled out of battle by the adversary. In the nuclear case, the actual consequence of these actions may be to escalate the exchange with devastating consequences—while the military logic may have simply been to try to limit damage or quickly reach the adversary’s break point.

The break point for ground forces (percent attrition at which a unit is pulled out of battle) is often assumed as 30–50%, as described in a study of United States’ capabilities to intervene and stop a major regional conflict.²³

If we assume that an attrition rate of 30–50% would stop an attack, that is, $L = 15-25$ if $N = 50$, and $L = 30-50$ if $N = 100$, the probabilities of success for various values of p ($= 0.1, 0.5$ and 0.9) are displayed in Table 5.

Figure 3. Probability of destroying a specified number of launchers, $X=L$ or more, out of N launchers, versus the probability, p , of destroying any one launcher

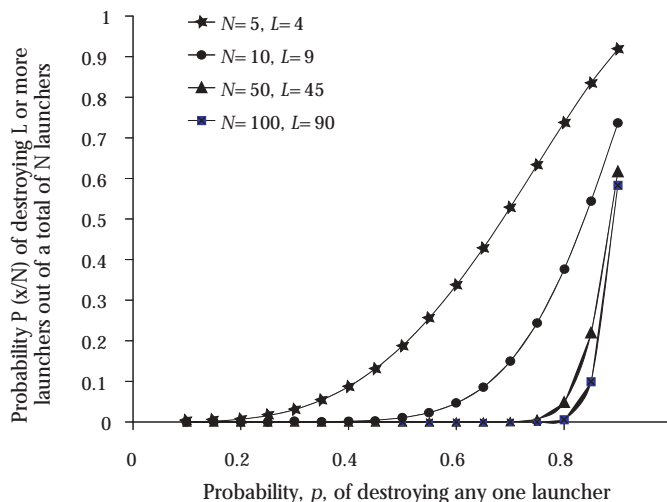


Table 5. Probability of success $p(x)$ for different values of N , p and L (x greater than or equal to L)

	$L = 15$ $N = 50$	$L = 25$ $N = 50$	$L = 30$ $N = 100$	$L = 50$ $N = 100$
$p = 0.1$	0.000074	~ 0	~ 0	~ 0
$p = 0.5$	0.998699	0.556138	0.99984	0.539795
$p = 0.9$	~ 1	~ 1	~ 1	~ 1

Here we see that the probability of destroying 30% of the launchers (that is, $L = 15$ for $N = 50$, or $L = 30$ for $N = 100$) for a $p = 0.5$ is very high. Therefore, with a high p , a military commander may be tempted to consider an attack that destroys 30% of the adversary's launchers in the hope that this would blunt or stop an imminent attack. However, if p is very low, the commander never has any possibility of succeeding in such an attack. Crisis stability in such a case is much more enhanced.

Conclusions

The conclusions, therefore, can be summed up as follows:

- A high probability, p , of destroying any one launcher and a low total number of launchers, N , is an unstable situation.
- If p is high, then apparently N should be large for stability; however, the probability of destroying a large fraction of N will never be negligible if p is high, and a large N creates problems of inadvertence and accidents.
- If p is low, then the probability of destroying a large fraction of N will always be negligibly small, even for very low N —that is, a low p allows for a lower N , and a more stable situation.

From the attacking side's perspective, with a high p there will always be a temptation to strive for the advantage of striking first as there is a non-negligible probability of a large number of launchers being killed. However, if p is low, this probability of destroying a large number of launchers is always negligibly small, reducing the temptation of ever contemplating such a strike.

If one considers that a military commander may not seek to destroy a large number of attacking launchers but just a sufficient number to reach a break point in the attrition rate at which an attack is called off, the temptation to strike first is even greater.

Clearly, if India and Pakistan establish a restraint regime, and do not continually upgrade their ability to detect, search, track and destroy targets, a smaller number of launchers could provide a fairly high level of comfort of survivability.

Clearly, if India and Pakistan establish a restraint regime, and do not continually upgrade their ability to detect, search, track and destroy targets, a smaller number of launchers could provide a fairly high level of comfort of survivability. Ideally, if both countries cannot detect, search and track even one of the other side's launchers with a high probability of success, the probability of destroying even one of the other side's launchers becomes very low. This then allows each side to have a smaller number of launchers with a higher level of confidence in the survivability of the force. This is a more stable situation. Also, this analysis shows that simply increasing the numbers in a nuclear force is not a panacea for the problem of ensuring survivability. Given a high p , the probability of destroying a significant fraction of the opposing force stays high even if the total number of launchers is large. The probability of success in destroying a significant fraction of the opposing force is negligibly small only if p is very low. To ensure that p is low, a restraint regime is needed. This is especially the case for short-range nuclear-tipped missiles using mobile launchers. Decreasing the ability to find and target such launchers makes the probability of destroying even a small fraction so close to zero that no first strike against the launchers could ever be contemplated.

A possible restraint regime for India and Pakistan to consider could be against developing the sensors and related communication and analytical infrastructure required to detect, search and track small, individual mobile targets to such an extent that they feel that their mobile missile launchers could become vulnerable. Further, they could limit improvements in the CEP of their missiles, for instance by placing limits on the numbers of missile tests they undertake. This would decrease the

temptation to consider the use of missiles against counterforce targets. Finally, realizing that short-range missiles are possibly vulnerable targets, they could eliminate such systems altogether. Their deterrent forces would then consist of long-range missiles hidden over a much larger territory. Longer-range missiles generally have larger CEPs, that is, they are less accurate, and are more expensive to build and maintain. These systems would be less likely to be considered for use as battlefield weapons and would provide less temptation of pre-emption.

Notes

1. Government of India, Press Information Bureau, 2003, *Cabinet Committee on Security Reviews Progress in Operationalizing India's Nuclear Doctrine* (press release), New Delhi, Press Information Bureau, 4 January.
2. G.S. Jones, 2000, *From Testing to Deploying Nuclear Forces: The Hard Choices Facing India and Pakistan*, RAND Issue Paper, available at < www.rand.org/publications/IP/IP192/#fn31 > .
3. A term popularized by Herman Kahn.
4. A. Tellis, 2001, *India's Emerging Nuclear Posture: Between Recessed Deterrent and Ready Arsenal*, New Delhi, Oxford University Press, pp. 477–671.
5. *Ibid.*, pp. 311–312.
6. For example, a story in Pakistan's *Daily Jang* newspaper stated that Pakistani military officials were tracking hostile Indian moves to augment air squadrons and naval ships in what they believed might be preparations for a pre-emptive conventional strike against Pakistan. See Aslam Khan, 2002, Pakistan Says India Planning Pre-Emptive Strikes, *Daily Jang* (Karachi), 30 September.
7. Z. Mian, A.H. Nayyar and M.V. Ramama, 1998, Bringing Prithvi Down to Earth: The Capabilities and Potential Effectiveness of India's Prithvi Missile, *Science and Global Security*, vol. 7, no. 3, pp. 333–360.
8. A definition of these terms and a more detailed discussion is provided in the section 'Estimating p '.
9. To get the probability that x is greater to or equal to a number, L , we simply do a summation over each individual probability for $L \leq x \leq N$. If $x = N$, that is if all launchers are destroyed, then $p(x)$ is simply, $p(x = N) = p^N$.
10. N.K. Jaiswal, 1997, *Military Operations Research: Quantitative Decision Making*, Norwell, Kluwer Academic Publishers, pp. 13–53.
11. Aaron Karp, 1996, *Ballistic Missile Proliferation: The Politics and Technics*, New York, Oxford University Press.
12. Mian, Nayyar and Ramama, *op. cit.*, p. 338.
13. Data from Federation of American Scientists, available at < www.fas.org/man/dod-101/navy/docs/es310/warheads/Warheads.htm > .
14. Let this radius at which overpressure is 5 psi be called d_w . Then, $d_w = d_o (W)^{1/3}$ where, $d_o = 4\text{m}$, the distance at which 1kg of TNT equivalent has an overpressure of 5 psi. W equals the equivalent yield of a weapon in kilograms of TNT.
15. The probability of killing a missile can be estimated by the following expression as presented by J.S. Przemieniecki, 1990, *Introduction to Mathematical Methods in Defense Analyses*, Washington, DC, American Institute of Aeronautics: $P_k = 1 - \exp[-0.693147(d_w/CEP)^2]$.
16. S.A. Hovanessian, 1988, *Introduction to Sensor Systems*, Norwood, Artech House Inc., p. 231.
17. Jaiswal, *op. cit.*, p. 18.
18. M.A. Richardson, et al., 1997, *Surveillance and Target Acquisition Systems: Land Warfare*, 2nd ed. (Brassey's New Battlefield Weapons Systems and Technology Series, vol. 4), London, Brassey's Ltd., p. 171.
19. Major-General Durrani Mahmud Ali (Retd.), 2001, *Enhancing Security Through a Cooperative Border Monitoring Experiment: A Proposal for India and Pakistan*, Cooperative Monitoring Center Occasional Paper no. 21, Albuquerque, Sandia National Laboratories.
20. Jaiswal, *op. cit.*, pp. 22–23.
21. Federation of American Scientists Space Policy Project, Imagery Intelligence, available at < fas.org/spp/military/docops/operate/ds/images.htm#N_307_> .
22. Lieutenant-General Gordon Fornell, commander of the United States Air Force Electronic Systems Division.
23. Paul K. Davis, Richard Hillestad and Natalie Crawford, 1997, Capabilities for Major Regional Conflicts, in David Ochmanek and Zalmay Khalilzad (eds), *Strategic Appraisal 1997*, Santa Monica, Rand. See < www.rand.org/contact/personal/pdavis/chapters/MR826.ch6.html > .

Living with a nuclearized South Asia: rethinking disarmament and security

Iftekhar ZAMAN

South Asia is a region of contrasts and conflicts. The region has the world's largest concentration of people living below the poverty line. It also possesses some of the world's largest and most heavily armed defence forces. The two pivotal states of the region, India and Pakistan, have a bitter history of mutual confrontations, conflicts and wars. When they achieved their self-proclaimed nuclear status in 1998, South Asia became the only region in the world to have two nuclear-weapon states involved in active hostilities. The list of challenges facing South Asia, which is already long, became further compounded when it found itself on the frontline of the post-11 September 2001 war on terrorism.

Good news from South Asia is rare. The beginning of 2004 was, however, slightly different. Following a series of reconciliatory gestures on both sides, on the sidelines of the summit held in January by the South Asian Association for Regional Cooperation (SAARC), India and Pakistan pledged that they were moving towards a process that could establish peace in the region. Many analysts would wish to see a seriousness of purpose this time on the part of the leaders of both countries, Indian Prime Minister Atal Bihari Vajpayee and Pakistani President General Pervez Musharraf. Other observers are conscious of the fact that, though perhaps not on the same scale, the region has seen many such attempts in the recent past, only for their expectations to end up with an all-too-familiar deception.

Be that as it may, these overtures stand against a dismal backdrop for peace defined by crisis after crisis in which the implications of nuclearization of the region were never lost. The confession by the Pakistani nuclear hero A.Q. Khan that he leaked nuclear secrets to Iran, Libya and North Korea might only be the tip of the iceberg of a global non-proliferation nightmare. In this context, this paper attempts an analysis of the South Asian nuclear problematic by presenting a future outlook with a specific focus on the prospect of global nuclear disarmament and rethinking the security of South Asia.

In the wake of 11 September 2001

The international order at the beginning of the twenty-first century was fluid, which in the post-September 2001 context has become even more unpredictable and volatile. The terrorist carnage of those attacks and the events that followed in Afghanistan and Iraq brought into sharp focus the complex and intractable nature of new sources of threats to international and regional security. Although the war against Afghanistan was led by the lone superpower with other major international actors, including

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the Russian Federation and China, as well as a majority of nations from the rest of the world, it was clear that such a coalition provided no sustainable basis for international peace and stability. This became more than evident in the case of Iraq. The war against terrorism succeeded in imposing a façade of transformation in Afghanistan and Iraq, while the real objective of combating international terrorism remained as elusive as ever.

Expectations that with the end of the Cold War the risk of nuclear annihilation would be gradually eliminated suffered a most serious setback when India and Pakistan conducted their nuclear tests in 1998. However, there was more to follow. The terrorist strike of September 2001 came as a blessing for the nuclear protagonists in both India and Pakistan. The United States' concern over the nuclearization of South Asia, especially Pakistan's nuclear capacity, was reversed in the wake of these attacks. While

The American focus on further development of its military capacity, including deep penetration weapons, had made its advocacy of non-proliferation in South Asia more awkward than ever.

Washington's concern about further proliferation and nuclear devices falling into the hands of terrorists or 'hostile leadership groups' became accentuated, the American government clearly backtracked from its earlier position that India and Pakistan should be made to sign the Comprehensive Nuclear-Test-Ban Treaty (CTBT). Additionally, the American focus on further development of its military capacity, including deep penetration weapons, had made its advocacy of non-proliferation in South Asia more awkward than ever. To some observers, the fact that the United States has endorsed President Musharraf's decision to pardon A.Q. Khan has implied that, depending on the perpetrators and benefactors, even a blatant act of proliferation can be glossed over with impunity.¹

At a broader level, the implication of these considerations for South Asia is that political and military leaders have become even more reluctant to face the day-to-day realities. An arms race is growing unabatedly, no matter how inconsistent this is with the region's prevailing social, economic and political context. The military doctrines of both India and Pakistan are now closely dovetailed with their nuclear strategies. Meanwhile, poverty, deprivation and social exclusion continue to worsen, with the communities most at risk facing even greater challenges and dangers. There has been an unprecedented growth in social tensions and conflicts linked with intolerance, extremism and fundamentalism. Some of the basic values of democracy, such as civil liberty, human rights, secularism and pluralism, are under greater stress in this region than ever before.

Nuclear brinkmanship

Critical to peace in South Asia is the evolving political and strategic order in the region, in which a key determinant is Indo-Pakistan relations.² Both India and Pakistan are engaged in a dangerous form of brinkmanship. Both followed up their nuclear jingoism with 'tit-for-tat' missile testing. The Kargil conflict proved to be one of the most intensely fought recent clashes between the two, although no full-scale war broke out. Several months after their nuclear tests India announced its nuclear doctrine, under which a triad of land-, sea- and air-based 'minimum credible deterrence' is to be ensured by deploying some 350–400 nuclear weapons over the next three decades.³ It was all too obvious that Pakistan would respond with an equally escalatory response.⁴ Pakistan has not officially announced a formal document enumerating its nuclear doctrine. Nevertheless, the key element in Pakistan's strategy is to keep the first-use option open mainly to offset India's superiority in both nuclear as well as conventional forces. Pakistan's nuclear-weapons programme is India-specific; Pakistan will remain unwilling to sign the Nuclear Non-Proliferation Treaty (NPT) and the CTBT unless India does so. It is also believed that Pakistan's nuclear delivery system will, by all indications, be mainly land- and air-based.

Most of the international reactions and responses to the nuclear tests conducted by India and Pakistan have been based on the conventional wisdom of linking the South Asian nuclear problem

with the conflict between these two traditional rivals. The tests are also viewed as a sequel to the Sino-Indian rivalry. However, in reality the Indian move was only partially a response to perceived threats from its immediate neighbours—China and Pakistan. The tests were also an expression of India's determination to force itself into the 'exclusive club' of nuclear-weapon states and to establish itself as a power of global as well as regional influence. India played according to the membership rule of the club—*might is right*. Pakistan replied in kind as a show of its own ambition to achieve parity with its archrival.

India's nuclear aspiration as an instrument to ensure its long-standing desire to emerge as a power of global importance is nothing new. Nehru gave expression to this perceived great-power role of India. Although he was a genuine supporter of nuclear disarmament, from him originated the inspiration for successive generations of political leaders to be too proud to accept any status for India lower than that of the countries with whom India considers itself on a par. There is also apparently widespread popular support for India's nuclear programme.⁵ Prime Minister Vajpayee indeed echoed Nehruvian determination to achieve major-power status when he said in his *suo moto* statement in the Parliament:

India is now a nuclear-weapon state. This is a reality that cannot be denied. It is not a conferment that we seek; nor is it a status for others to grant. It is an endowment to the nation by our scientists and engineers. *It is India's due, the right of one-sixth of humankind.*⁶ [emphasis added]

Although the five recognized nuclear-weapons states never openly admit it, the status attached to the possession of nuclear weapons cannot be underestimated. Robert O'Neill argues:

There can be no denying that nuclear-weapons states have more clout in the international system just because they have nuclear weapons. They attract more attention, they take each other more seriously, their defence establishments think about each other in a more significant way, and they form an identifiable club, whose members include those states that other nations wish most to have close relations with or gain the attention of. And it is a club whose membership is not controlled by those who already wear the tie. New members simply have to be willing to make their own tie and wear it. The other members then have no choice but to recognize them.⁷

It is notable that the Indian nuclear doctrine is silent on identifying specific sources of nuclear threat. The strategy is targeted at all nuclear powers, not just Pakistan and China. It clearly states that India's weapons will be deployed against 'any state or entity' that may threaten India, and hence the ambit of 'minimum' and 'credible' deterrence it talks about is inclusive of all states that possess nuclear weapons. Hardly anyone in a responsible position in India would condone the actual use of these weapons against any of these powers; it is basically the urge to achieve the status of being equal to them that motivates the Indian policy. In the case of Pakistan, India-focused as it is, the strategy is to acquire the 'requisite' number of warheads that will not only deter India, but also be effective in the event that it exercises the first-use option. This means that the magic number will always be subject to change.

The terrorist threat

As indicated earlier, a renewed wave of concern has surfaced about proliferation of weapons of mass destruction (WMD), including nuclear weapons, in the wake of the 2001 terrorist attacks against the United States. Although no definite evidence is yet to hand, many analysts and strategic experts

suspect that terrorist organizations, like Al-Qaeda, may have access to WMD or already have such capacity. Such a possibility could turn out to be even more devastating than 11 September 2001—a crude nuclear bomb may kill as many as 100,000 people instantly, leaving thousands more vulnerable to a slow death from radiation poisoning. There have been reports that Al-Qaeda had plans for creating a Hiroshima-like disaster in the United States. Equally disturbing were reports about former Pakistani nuclear scientists who had links with Al-Qaeda. Although experts are of the opinion that nuclear weapons are difficult to steal, and the possibilities of terrorist organizations obtaining a ready-to-use nuclear device are slight, the need for stricter security and control of nuclear arsenals and capacities is more pressing today than ever before.

No less worrying is the possibility of a lethal radiological attack by terrorists. Terrorists could easily construct a radiological (or 'dirty') bomb by using explosives to disperse radioactive material. The radioactive material required for a dirty bomb is more readily obtainable than the uranium and plutonium needed for a nuclear bomb. A radiological bomb would not be as devastating as a nuclear bomb, but could kill thousands of people depending on the density of the population in the target area, rendering it an unliveable zone for months and with the threat of cancer prevailing for decades.

The primary challenge in this regard is to prevent proliferation, thefts or the black-market purchase of nuclear or radioactive materials. To address this concern regionally, India and Pakistan could conclude comprehensive safeguard agreements with the International Atomic Energy Agency (IAEA). Their nuclear installations and capacities—both civilian and military—would be obliged to meet the IAEA's strengthened safeguards systems. India and Pakistan should also commit themselves to observe strict export-control

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measures. It is also equally important to pledge to provide physical protection and security measures to nuclear materials and facilities according to the recommendations and guidelines of the IAEA. This is imperative to prevent the passage of materials and technologies to non-state actors. The way India and Pakistan proceeded with renewing their agreement to refrain from attacking each other's nuclear installations indicates that there is the possibility of some sort of cooperative arrangement on nuclear safety and security in accordance with IAEA standards. Having a small non-weapons-grade nuclear capacity for civilian use, Bangladesh also needs to reinforce its own safety and security measures to prevent any undesired developments.

Towards nuclear disarmament

If nuclear tests by India and Pakistan are any indicator for the future, it must be concluded that the current nuclear non-proliferation regime cannot be sustained without real progress on nuclear disarmament. A basic commitment underlying the international non-proliferation regime, particularly the NPT and a number of other initiatives, including the CTBT, the Fissile Material Cut-off Treaty (FMCT) and nuclear-weapon-free zones (NWFZs), is the total elimination of nuclear weapons, as provided for by Article VI of the NPT. The Canberra Commission reported:

Nuclear weapons are held by a handful of states, which insist that these weapons provide unique security benefits, and yet reserve uniquely to themselves the right to own them. This situation is highly discriminatory and thus unstable; it cannot be sustained. The possession of nuclear weapons by any state is a constant stimulus to other states to acquire them.⁸

The Indian and Pakistani nuclear tests provide a clear testimony to this statement. The Advisory Opinion of the International Court of Justice (ICJ), with reference to Article VI of the NPT, calls upon parties to reach an agreement on general and complete nuclear disarmament: "There exists an obligation

to pursue in good faith and bring to a conclusion negotiations leading to nuclear disarmament in all its aspects under strict and effective international control'.⁹ No significant movement has taken place in this direction. The United States and the Russian Federation did take some steps to reduce their nuclear arsenals, but the two of them are still left with a significant advantage over other nuclear-weapons states. For their part, this latter group is unlikely to take any tangible nuclear-weapons reduction steps until the stockpiles belonging to the United States and the Russian Federation are reduced to a level comparable to theirs—also a remote possibility. Hence, the vicious circle. The goal of genuine non-proliferation cannot be achieved as long as the 'recognized' nuclear-weapons powers continue to pay lip-service to their commitment under Article VI of the NPT.

What needs to be understood in this context is the gap between the desirable and the possible. It is obviously most desirable (although unlikely) that India and Pakistan roll back of their own free will to a pre-1998 situation—whereas it is possible to explore ways of preventing a further worsening of the situation. A roll-back scenario is unlikely as Pakistan will not renounce its nuclear option unless India does the same, whereas India is unlikely to do so before China and other nuclear-weapon states make definite progress towards the complete elimination of their nuclear weapons. While Pakistan's nuclear-weapons programme is a direct response to India's, the latter's nuclear ambition is only partially addressed to security threats from any particular country. It is to a far greater extent linked with the global nuclear-weapons problem. India has made it abundantly clear that the existing adverse nuclear asymmetry was not acceptable to it.

One way forward is for India and Pakistan to freeze their nuclear programmes at current levels without weaponizing or deploying them for an agreed period, while during this same period the five nuclear-weapon states could undertake a specific commitment and action plan on a phased timetable for universal nuclear disarmament. All nuclear-weapons states could agree on an upper limit to the number of nuclear explosive devices to be available by a specific date. Under the terms of this agreement, the next step could be to reduce their respective arsenals by an agreed factor in each successive period, leading eventually to the achievement of level zero.

This may appear ambitious and even unrealistic given that none of the nuclear-weapon states has so far shown any serious interest in moving towards elimination of nuclear weapons. However, nuclearization by India and Pakistan has clearly demonstrated that if the global non-proliferation movement with the NPT at its core is to make any sense, it is the burden of the nuclear-weapon states to translate their commitment towards complete elimination of nuclear weapons into reality. For the same reason, if the NPT review process is to be anything more than a ritual, and the 2005 Review Conference is to be meaningful, it can no longer limit its efforts only to preventing proliferation outside the nuclear-weapon states. It needs to focus attention more specifically towards Article VI of the NPT and develop a roadmap to the complete elimination of nuclear weapons.

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In the interim period before achieving this level, while India and Pakistan cannot be clearly recognized as nuclear-weapon states under the existing framework of the NPT, they could be persuaded to sign a protocol under which they would commit themselves to the obligations of the NPT, including safeguards and export controls. It might even be possible to work towards establishment of a South Asian Nuclear-Weapon-Free Zone (SANWFZ) that could comprise the territory of the seven South Asian states—Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka—with the possibility of expanding the zone to cover Afghanistan, Iran and further to the proposed Central Asian Nuclear-Weapon-Free Zone.

Pakistan is concerned about China's nuclear-weapons capacity; India is also concerned about China, as much as it is about any of the recognized nuclear-weapon states. A SANWFZ is suggested with the proviso that this will be preceded by a definite time-bound commitment on the part of the nuclear-weapon states to Article VI of the NPT—a trade off for South Asia, particularly India, as they freeze, roll back and eventually create a NWFZ. Notwithstanding their post-test status, India and Pakistan could agree, together with other members of the SANWFZ, to refrain from developing, manufacturing, stockpiling, deploying, or otherwise acquiring or having control of any nuclear weapon or nuclear explosive device anywhere. Parties could also pledge to adhere strictly to their commitment not to carry out any nuclear tests or other nuclear explosions, or to assist others in doing so. They could agree not to allow the disposal of radioactive waste from other states on any part of the territory of the SANWFZ.

None of this can be achieved without a much greater level of confidence between India and Pakistan to replace the existing equation of mistrust. Few and insufficient instruments are available to build mutual confidence, communication channels and transparency of information between the two actively hostile neighbours. More importantly, very little of what is available has been implemented. India and Pakistan are far from arriving at a peaceful and workable framework for a relationship that could accommodate each other's grievances associated with the partition of the subcontinent in 1947. Efforts that began in January 2004 in Islamabad to politically and diplomatically address the whole range of outstanding issues between the two must be sustained. At the same time, measures to promote economic and trade relations between the two countries can develop shared stakes and function as building blocks for mutual confidence. India and Pakistan could also engage in public diplomacy, informing each other about perspectives and concerns on key issues with a more positive approach so that there is greater understanding of each other. Media—both print and electronic—can play an important role, departing from the tradition of demonizing each other to take a more forward-looking approach. Bilateral confidence-building measures also need to be complemented by those of a regional nature. The prospect for a rejuvenated SAARC process in the wake of the Islamabad summit augurs well in this context and concerted efforts must be made to carry this forward.

The Indian and Pakistani ventures into nuclear tests have underscored the need to redouble international efforts towards a universally binding international legal instrument to provide specific and complete security assurances to non-nuclear-weapons states. The muted response of the region's smaller states to the nuclear tests was largely because they have no capacity or will to antagonize India or Pakistan, especially as they are concerned about the risk of being penalized in their bilateral relations. But their response was also tempered by the absence of any legally binding international instrument providing security assurance against the use or threat of use of nuclear weapons against non-nuclear-weapons states. The absence of such an instrument is particularly unjustified in the face of the Advisory Opinion of the ICJ.

Rethinking security

The nuclear doctrines and strategies of India and Pakistan are grossly inconsistent with reality. India proposes the creation of a triad of forces on land, sea and in the air. But the triad—and the complex of delivery systems associated with it—is proposed not so much because it had been carefully determined that such a structure would ensure India's security and stability, but rather in an effort to emulate the more senior nuclear-weapons powers.

By not specifying what a 'minimum deterrent' is, and by calling for a robust and functioning second-strike force, this doctrine opened up the possibilities for limitless growth in capacities. Someone

will always be able to argue that x number of weapons is not sufficient. On the other hand, India's forces are not being developed in isolation. Pakistan, and possibly China, will respond, leading to a counter-response by India, and so on. The result will be a leapfrog race, with each side's actions—adopted in the name of increasing security—leading to more insecurity for the other.

More important, this doctrine is not in conformity with contemporary knowledge about the national security problematic. Ignoring the whole gamut of other factors, this approach is preoccupied with only the quantitative and the qualitative aspects of nuclear deterrence. What India and Pakistan need is not a nuclear doctrine, but a national security strategy that would include multi-dimensional aspects of security concerns—political, social and economic, as well as defence. The security discourse in India and Pakistan, and in the rest of South Asia, has always been distorted because defence or military build-up has been perceived as the instrument of self-assertion and as the currency of status and power. This is wrong and outdated. South Asian states need to adopt non-offensive defence strategies that would move away from the policy and practice of using defence preparedness as an instrument of power projection and confrontational foreign and security relations.

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Debate on the nature of the evolving world order is likely to remain inconclusive for some time to come. In the meantime, the conventional approach in international and security discourse has yielded to a process of rethinking. Interpreting human interests in purely geopolitical terms means that international relations are traditionally reduced to those between states, which often results in the viewpoint of the people being overlooked. The state-centric nature of the discourse has, however, become increasingly incomplete and insufficient in the new context. The agenda has expanded to include transnational challenges, like international terrorism on the one hand, and a whole range of development issues on the other, such as internal political stability and democratization, issues of domestic conflicts especially in plural societies, human rights, environmental protection and other related issues. Each of these areas calls into question the capacity of the state, and each has spawned an array of non-governmental actors exercising power, pursuing political objectives, catering to people's interests, and influencing state practices and policies—including foreign policy.

The progressive development of a transnational civil society in global politics has the opportunity to bring about significant changes. These are the new social movements that champion human rights, civil liberties, social justice, environmental protection, conflict resolution and peace beyond traditional political structures. There are indications that these social movements will play increasingly important roles in influencing the behaviours of the state, and hence the international system.

The fallout of this on international relations discourse is a shift of emphasis from traditional state-centric, 'high politics', exclusivist and elitist positions towards a much broader and deeper agenda where the perspectives and concerns of citizens and non-state actors, such as civil society organizations, become important. There is a need to rethink security and foreign policy from a citizen's perspective, where the interests and concerns of non-state actors become critical rather than peripheral in determining the agenda and approaches in foreign policy and diplomacy.

Nuclearization has made India and Pakistan—and thereby the rest of South Asia—more insecure than ever before. Whatever these weapons are supposed to do, they certainly cannot address the security concerns of the average South Asian, nor can they help the cause of regional stability, development and cooperation. The option in this context is to strengthen the regional civil society movements. NGOs and other civil society actors in the region are becoming increasingly vocal and effective. Civil society organizations and NGOs could play an important role, for example, in mobilizing public opinion in favour of establishing a NWFZ in South Asia. NGOs can work to convince governments that security can be better ensured by ridding the world of nuclear weapons—not by holding on to them.

Civil society can also take the lead in bringing to the fore the enormous challenges faced by the countries of South Asia, including India and Pakistan, in developing their economies and bringing about social change. Nuclearization of the region and growing military spending inevitably mean the diversion of resources, which will weaken the capacity to pursue sound economic and social policies. The general public in the region needs to be informed about the cataclysmic risks of nuclearization. The civil society organizations should bring sustained pressure on governments to refrain from the risks of confrontational relationships and instead promote peace and stability conducive to development and social change. As a starting point, civil society movements could demand greater public debate and transparency with regard to defence spending, with particular emphasis on opportunity costs. Civic initiatives may not succeed in freeing the region of nuclear weapons in the foreseeable future, but they can at least help efforts to rethink security and promote a human-centred security discourse.

Notes

1. The United States Secretary of State Colin Powell said 'This is a matter between Mr Khan, who is a Pakistani citizen, and his government.' He added 'The action he [Musharraf] took is something that he felt was appropriate for him to do, and he has explained his position thoroughly'. *The Daily Star* (Dhaka), 8 February 2004.
2. On key strategic and political issues in South Asia, see Iftekhar Zaman, 1998, *South Asian Security: Multi-Dimensional Concern and Approach*, in Paul Stares (ed.), *The New Security Agenda: A Global Survey*, Tokyo, Japan Center for International Exchange and Brookings Institution Press.
3. The draft nuclear doctrine—which was widely viewed more as an instrument for gaining pre-election political mileage—in addition to the weaponization and deployment plan to ensure minimal credible deterrence, includes the well-publicized Indian pledge of no first use, and not to use nuclear weapons against a non-nuclear-weapon state. The cited number of weapons was given by Bharat Karnad, a member of the National Security Advisory Board, who was involved in preparing the doctrine, quoted in *The Daily Star* (Dhaka), 23 August 1999.
4. Kanti Bajpai, 1999, A Flawed Doctrine: Undermining India's Nuclear Posture, *The Times of India*, 7 September.
5. See, for example, Amitabh Mattoo, 1999, India's Nuclear Policy in an Anarchic World, in Amitabh Mattoo (ed.), *India's Nuclear Deterrent: Pokhran II and Beyond*, New Delhi, Har-Anand, pp. 11–18.
6. Statement by Prime Minister Shri Atal Bihari Vajpayee in Parliament on 27 May 1998, para. 10, circulated by the Indian High Commission in Sri Lanka.
7. Robert O'Neill, 1998, The Problem of Nuclear Weapons Proliferation, p. 8. Paper presented at the Conference on Urgent Actions on Nuclear Non-Proliferation and Disarmament, jointly organized by the Japan Institute of International Affairs and the Hiroshima Peace Institute, Tokyo, 30–31 August 1998.
8. Canberra Commission on the Elimination of Nuclear Weapons, 1996, *Report of the Canberra Commission on the Elimination of Nuclear Weapons*, Canberra, p. 7, at < www.dfat.gov.au/cc/cchome.html >.
9. Jayantha Dhanapala, 1996, A Strengthened Review Process for the NPT. Unpublished paper presented at an International Seminar held in Kyoto, December 1996.

Assistance for curbing small arms and light weapons in Cambodia: the result after four years of field work

In December 1998 the European Union (EU) member states agreed on joint action as the EU's contribution to combating the destabilizing accumulation and spread of small arms and light weapons. The Royal Government of Cambodia (RGC), which had already started its own weapons-collection programme, was one of the first countries to declare its willingness to engage with the EU in a comprehensive programme for curbing small arms and light weapons. In March 2000 the EU Assistance on Curbing Small Arms and Light Weapons in Cambodia (ASAC) started its work in Cambodia.

On 15 November 2001, the EU Council of Ministers extended the project for a second year, with further action conditioned on a prior evaluation. This was carried out in May 2002 with clearly positive findings. Thereupon, on request from the RGC, the EU Council in November 2002 extended the programme for another year. The continued success and high profile of the programme led to a third one-year extension in November 2003.

Programme components

The EU ASAC programme now consists of six mutually supportive components that have evolved since the initial project design of 1999:

- Arms law and supporting regulations;
- Registration and safe storage of military and police weapons;
- Raising public awareness and strengthening the capacity of civil society organizations to counter the dangers of weapons and violence;
- Voluntary weapons-collection programme, including community development incentives, police support/training and commune council capacity-building;
- Weapons destruction (collected and surplus weapons); and
- Recovering and destroying weapons caches in remote areas.

ARMS LAW

The draft arms law prepared by the RGC between June and August 2000 is intended to unify and replace Sub-Decree 38 of April 1999 and the United Nations Transitional Authority in Cambodia (UNTAC)¹ anti-gun law of 1993. It has been the subject of broad governmental and civil society debate, with EU ASAC support. The draft was approved by the Council of Ministers on 16 May 2002 and sent to the Cambodian National Assembly on 10 October 2002 by Prime Minister Hun Sen. The draft implementing regulations were submitted to the Ministry of the Interior and the Ministry of National Defence in April 2002. Following a long pause for national elections in July 2003 and negotiations on forming a new government, it is hoped that the law will be passed in 2004 and that agreement will be reached on the implementing regulations very quickly thereafter.

REGISTRATION AND SAFE STORAGE OF MILITARY AND POLICE WEAPONS

Illegal lending, use, theft and sale from official, collected and surplus stocks represent the greatest remaining threats to security in Cambodia. Reducing such 'leakage' is a priority for any comprehensive weapons-management programme.

Since 2001, computerized registration and safe storage of military weapons has been completed in two military regions, and two national depots have been partly renovated. In August 2003, EU ASAC signed a new agreement concerning the expansion of the project to another military region. The RGC aims to complete safe storage in the remaining three military regions and the Royal Gendarmerie, Navy and Air Force within the next three years. As of February 2004, EU ASAC has provided safe storage facilities for over 90,000 military weapons. For the first time, the RGC will know exactly what stocks of weapons and ammunition it controls and where they are located.

Registration and safe storage is also a priority for the National Police. Through an EU ASAC pilot project in 2003, the Ministry of the Interior has been provided with a national depot for long-term storage, and three provinces (Phnom Penh, Kandal, Kampong Speu) have been equipped with small, medium-term storage depots and computer registration systems. Each police post in the three target provinces has been equipped with short-term storage racks for secure storage of weapons.

RAISING PUBLIC AWARENESS AND STRENGTHENING CIVIL SOCIETY

Indigenous civil society organizations² are still at an elementary stage in Cambodia, apart from those linked to Buddhist pagodas. Since 1998, Village Development Committees have been established through the Seila process³ in most of the country's twenty-four provinces. In addition, there are many active and effective local and national NGOs that stem from individual Khmer initiatives or that reflect an initial donor influence.

Each of these groups brings value to Cambodian society. EU ASAC has worked closely at every level in securing wide collaboration with the programme. Public awareness and the rule of law are best fostered through a wide range of voices, and each of the nation's components has to play its part. In this respect the EU ASAC partnership with key national NGOs has proved especially effective.⁴

In late 2003, EU ASAC began a pilot programme of Commune Council⁵ capacity-building focusing on internalizing security-related activities within civil institutions. In the continuing unsettled political climate, Commune Councils have not yet been able either to develop standards for security or establish

their authority with respect to the police. To move this forward is a compelling priority, specifically because of the widespread local security danger from weapons and explosives, including landmines. On the immediate agenda, therefore, EU ASAC has entered into partnership with the Cambodian Mine Action Centre—the official RGC mine-clearance programme—to produce practical guidelines for the Commune Councils and police.

VOLUNTARY WEAPONS-COLLECTION PROGRAMME

Voluntary weapons-collection programmes (VWCPs) usually require some sort of incentive. EU ASAC has experimented with providing community development projects in exchange for surrendered weapons. This is known as ‘weapons-for-development’ (WfD). Following a three-province feasibility study in 2000, a WfD project in Kracheh⁶ and Pursat⁷ provinces presented the best option for a successful trial. Two pilot projects were implemented between February 2001 and November 2002. Specific target areas were selected on the basis of RGC priorities, local levels of insecurity, the cooperation of the provincial authorities, the availability of professional development partners and the expected willingness of local communities to hand in weapons voluntarily to the authorities.⁸

Both projects adopted a fully integrated approach consisting of four interdependent components: public awareness, the programme itself, support to local police, and community development incentives. Weapon destruction was also a part of the agreement with both provincial governors. Resident Khmer field managers oversaw the two pilot projects, which succeeded in persuading local communities to hand in approximately 6,000 weapons and 20,000 rounds of ammunition to the local authorities.

A full amnesty on weapons handed in to the authorities (provided they do not suspect the weapon or the individual of involvement in serious crime) is fundamental to the success of any voluntary programme.

A generalized apprehension among the civil population over the capacity of local police to provide security led to widespread retention of illegal weapons. Reinforcing police capacity through training and basic equipment (radios, motorbikes and bicycles, simple office equipment) became an integral element of the EU ASAC response. Training is directed toward improving professional skills as well as police–community relations and communication. A nine-province training programme for district and commune-level officers began in October 2003, organized jointly by the Ministry of the Interior, EU ASAC and three national NGOs.⁹

Income-generating aid to police families—to reduce excuses for corruption—was tried in Kracheh and Pursat. This is now being offered in Preah Vihear province where police families receive nutrition education and community homestead gardens through a partnership between Helen Keller International, EU ASAC, the Japan Centre for Conflict Prevention and the local authorities.

In 2002–2003, smaller-scale projects were implemented in selected districts in nine provinces where fighting had been heaviest. Public awareness activities implemented by local and national NGOs highlighted the illegality of weapons, raised trust in the increasing competence of the police and ensured that rural policemen and target communities understood the weapons amnesty. Small numbers of weapons were collected in these places.

Community networks in Khmer society are weak. The networks formed through this programme emphasize broad issues of ‘human security’ rather than narrow definitions of ‘physical security’. All community stakeholders, including the political and security authorities, civil society and villagers participate in meetings which are often the first forum communities have ever been offered to discuss security-related issues with the police and local authorities.

Large quantities of unexploded ordnance, such as small arms ammunition, grenades, rockets, mortars and mines, are handed in to the police across Cambodia. EU ASAC is integrating some of its public awareness activities with those of de-mining agencies.¹⁰ Of particular concern are the inadequate storage facilities available to local police for both weapons and explosive ordnance, and the need for local communities to protect themselves.

WEAPON DESTRUCTION

The RGC weapon-destruction programme began on 5 May 1999 with the Prime Minister overseeing the public crushing of some 4,000 firearms. In March 2000 the RGC's priority for this effort tapered off after 36,505 weapons had been destroyed. The destruction programme restarted with EU ASAC support of a symbolic 'Flame of Peace' in Pursat in February 2001.

In April 2001 a Flame of Peace destroyed 8,471 weapons in Kompong Thom province. This served as a catalyst for negotiations in other provinces. As of 30 September 2003 EU ASAC had assisted the RGC in destroying a total of 74,656 weapons in twenty-four ceremonies in thirteen provinces. This brings the total number of firearms destroyed by the RGC since 1999 to 112,170. In December 2002 the present Programme Manager, David de Beer, presented the Deputy Prime Minister and Co-Minister of the Interior, H.E. Sar Kheng, with the 100,000th weapon destroyed.

Every Flame has been attended by thousands of local people, as well as by national and provincial government representatives. The public destruction ceremonies encourage people to believe in long-term peace and security, and to give up their own firearms. Wide coverage in the Khmer and international media has given the Flames a high profile and the frequent presence of Deputy Prime Minister Sar Kheng demonstrates a high level of political support for the process.

Weapon-destruction events are an important indicator of success for a peace-building programme. Ideally, local public destruction of illegal civilian weapons at the point of collection would boost confidence in the peace process, but practical and political considerations can intervene. Sometimes it is necessary to combine weapon stocks, for a big fire is needed to generate enough heat to distort steel weapons. Burning is only effective as a method of destruction for 2,000 weapons or more.

Political processes are rarely smooth. Destroying surplus Ministry of Defence weapons requires delicate negotiations with the head of the relevant military region; while destroying illegal weapons collected from the civil population, held by the Ministry of the Interior, requires similar negotiations with individual provincial governors and provincial police commissioners. Neither ministry will consent to joint destructions. Permission to destroy any weapon is required from the National Commission for Reform and Management of Weapons and Explosives in Cambodia, which was created by the RGC with EU ASAC support to provide a central clearing house for inter-ministerial discussions of small arms management issues. Despite the efforts of the National Commission, political considerations and the schedules of high government officials often delay planned destruction ceremonies.

DESTROYING WEAPONS CACHES

As peace has stabilized in Cambodia, weapons caches remain a serious threat to national and local stability. Most were hidden by the various warring factions of the 1990s in remote mountainous areas. Their recovery and destruction is a new programme priority. The remote locations, the risk of booby traps and the presence of mines and unexploded ordnance require EU ASAC to consider new

methods of on-site destruction. A mobile weapon-cutting workshop has been created, capable of destroying weapons at the point of collection as and when ex-combatants reveal them. EU ASAC signed an agreement with the RGC on 21 May 2003 to begin this weapons-cache programme.

Integrating Weapons for Development into the wider development framework

How should we evaluate a micro-disarmament project? The primary indicators concern improved physical security and better human security: measured by numbers of weapons destroyed, fewer instances of violent crime, and increased economic development. Nearly four years after work started in the field, EU ASAC can be fairly happy with the success of weapon destruction. Crime trends and economic investment are less easy to measure and may not be solely attributable to EU ASAC's efforts.

Improvements in human security need to be judged by social and economic indicators. The doctrine of 'security first' recognizes that violent conflict causes huge economic disruption. Violence halts trade and reduces agricultural and industrial output, destroys infrastructure and displaces populations in large numbers. Establishing security emerges as a precursor for generating economic activity. Once security has improved, measuring increases in economic activity can provide a valuable indicator of success.

The presence of small arms among civilians complicates the task of poverty alleviation, from funding to programme design, implementation and monitoring and evaluation. Small arms misuse can affect the reallocation of development assistance to relief and humanitarian assistance and distort programme and community priorities.¹¹

EU ASAC is not a development agency. We have been encouraging organizations, such as Deutsche Gesellschaft für technische Zusammenarbeit, CARE Australia, Church World Services, the Lutheran World Federation, United States Agency for International Development, Swedish International Development Agency, World Food Programme of the United Nations, United Nations Development Programme, Seila and others to integrate small arms reduction and conflict-prevention activities into their ongoing development programmes. This has been a clear objective of the EU ASAC programme since 1999 and stems directly from the EU development-security imperative. It is fundamental that all development projects in Cambodia integrate weapon and unexploded ordnance awareness as one measure of conditionality and performance. EU ASAC will eventually have no further role in Cambodia yet illegal firearms and explosives will remain, and they constitute an important public health hazard. Local communities must take over responsibility for voluntary weapon collection. Although the 'mainstreaming' of small arms management has been recognized as important, at present our work priorities represent little more than 'appendages to existing programmes' as opposed to 'small arms concerns being mainstreamed into planning, implementation and evaluation'.¹² EU ASAC's effectiveness in integrating small arms control into existing community programmes will foster long-term sustainability.

Lessons learned in Cambodia

- Curbing small arms and light weapons requires a multifaceted, integrated programme assertively backed by the national government. Disarmament and peace-building are primarily political actions.
- Funding allocated on an annual basis limits the scope and efficiency of a programme. Donors should set objectives and allocate adequate resources for three to five years in advance, subject to progress.

- Every country needs an equitable and clear legal framework—reinforced by coherent implementing provisions—governing ownership and use of small arms and light weapons. This will strengthen confidence between the government and the population. Laws must be drafted in accord with basic international and regional legal arms principles.
- Creating a governmental focal point is important for getting things done.
- Training and strengthening the local police, and improving the relations between them and the local community, encourages citizens to hand in illegal weapons voluntarily.
- Mobilizing civil society is important for a successful VWCP. Weapons are a security and a public health issue. Local communities must become responsible for human and physical security, since weapons, landmines and explosives will remain a problem for years to come.
- Achieving human security (development) is as important as increasing physical security (reducing violence), and any peace-building programme must aim to improve both.
- ‘Security first’ should be considered a development cost. Improved security in previously unsafe areas allows economic activity to restart, encourages trade and investment and permits development agencies to start operating where they are most needed. Improving economic indicators are proof of better security and a growing public confidence in peace.
- An effective management system, with registration and safe storage of all military and police weapons and ammunition, is essential for curbing the supply of weapons to arms smugglers and criminals. It improves the control of weapons collected from demobilized soldiers, and facilitates the destruction of collected civilian—and surplus military—weapons and ammunition.
- Publicly destroying illegal and surplus weapons increases public confidence that weapons handed in will not be sold, or recycled for criminal use. Weapons collected are a key measure of disarmament, but a more important indicator of success is the number of weapons destroyed.
- A successful peace-building programme must strive to make all social stakeholders, including the national government, contribute to ensuring security in their communities.

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Notes

1. UNTAC was established to ensure implementation of the Agreements on the Comprehensive Political Settlement of the Cambodia Conflict, signed in Paris on 23 October 1991. UNTAC’s mandate ended in September 1993 with the promulgation of the Constitution for the Kingdom of Cambodia and the formation of the new government.
2. Civil society includes all types of voluntary interest groups, non-governmental organizations and community-based organizations, including village development committees.

3. The Seila project was established by the RGC with assistance from the United Nations Development Programme and aims to decentralize rural governance in relation to development planning and provision. The Khmer word *seila* means 'foundation stone'.
4. Among the major NGO partners for public awareness and human rights training have been the Working Group for Weapons Reduction in Cambodia, the Cambodian Human Rights and Development Association (ADHOC), the Cambodian Institute for Democracy and Human Rights, and the Cambodian Human Rights Task Force.
5. Commune Councils were elected for the first time in Cambodia in February 2002. Since they are elected and have some 'power', they are technically a part of political, rather than civil, society.
6. Kracheh is in the east of Cambodia, bordering Viet Nam; five communes were covered in Snuol district.
7. Pursat is in the west of Cambodia, bordering Thailand; five communes were covered in Bakan district.
8. The Kracheh project was funded by the Dutch and Canadian governments, the Pursat project by the German and Japanese governments, with UN World Food Programme assistance and overall programme support from the EU in both cases.
9. ADHOC, the Cambodian Human Rights Task Force and the Cambodian Institute for Human Rights and Development. This programme is funded by Deutsche Gesellschaft für technische Zusammenarbeit.
10. The Cambodian Mine Action Centre and EU ASAC have already combined activities in Pailin, Battambang and Banteay Meanchey provinces. EU ASAC is currently negotiating with demining NGOs, such as Mine Action Group, Handicap International and Halo Trust, to cooperate in Preah Vihear and Pursat provinces.
11. Small Arms Survey, 2003, *Small Arms Survey 2003*, Oxford University Press, p. 149.
12. *Ibid.*, p. 151.

Safeguarding Space for All: Security and Peaceful Use

On 25-26 March 2004, UNIDIR, the Canadian Department of Foreign Affairs and International Trade, the Simons Centre for Peace and Disarmament Research, Project Ploughshares Canada, the Henry L. Stimson Center and the Union of Concerned Scientists co-organized the workshop *Safeguarding Space for All: Security and Peaceful Use*. The workshop was financed by the Simons Foundation and the Government of Canada.

The workshop aimed at developing a community of interests capable of safeguarding the global benefits derived from peaceful activities in space. Speakers approached a variety of issues, such as the current peaceful uses of outer space by the range of stakeholders, including the private sector, civil users, the military and the scientific community. Current uses were also assessed in view of the latest technological developments and their impact on peaceful uses. Participants engaged in a discussion on the means to ensure space security. Approaches to mitigate or resolve threats include no-first deployment declarations, confidence-building measures, codes of conduct and rules of the road, minimization of space debris, and other norms for space-faring nations.

The panel on international legal approaches and the role of the Conference on Disarmament (CD) examined the existing legal regime governing outer space in its totality and thus identifying the gaps and the steps that must be taken to secure space. Participants also evaluated the relative role of different forums in designing norms and enhancing the legal framework for space activities. Finally, the workshop considered the question of possible confidence-building measures and verification. The practical aspects of verified compliance with international legal instruments and the prospects for using space-based assets to verify terrestrial non-proliferation, arms control and disarmament measures were discussed.

Over one hundred participants from permanent missions to the CD, NGOs and research institutes attended the workshop and the lunch, where Heather Couper, the British astronomer, writer and broadcaster, made an impassioned plea for space to remain in peace for exploration by future generations.

A report on the workshop will be published.

In each issue of *Disarmament Forum*, UNIDIR Focus highlights one activity of the Institute, outlining the project's methodology, recent research developments or its outcomes. UNIDIR Focus will also describe a new UNIDIR publication. You can find summaries and contact information for all of the Institute's present and past activities, as well as sample chapters of publications and ordering information, online at < www.unidir.org > .

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NEW PUBLICATION

After Non-Detection, What?

What Iraq's Unfound WMD Mean for the Future of Non-Proliferation

For over a decade, Iraq was widely considered to be Exhibit A in the case against the multilateral global non-proliferation regime, a blatant example of how even highly intrusive inspections could not prevent significant cheating by determined proliferators. The stunning failure to find significant evidence of Iraq's weapons of mass destruction (WMD) programme appears to have called much of this argument into question. Nonetheless, while the mystery of Iraq's unfound WMD is profoundly disturbing to the basic assumptions of arms control and non-proliferation sceptics, those who might conclude that classic non-proliferation mechanisms have thus proven their adequacy should not take too much comfort from the Iraqi case, for the basic problems with the system remain as serious as ever. At the same time, the Iraq experience points the way to a potential renewal of international cooperation against WMD proliferation.

The collective multilateral non-proliferation regime has been badly cracked and broken for over a decade. With the Indian and Pakistani nuclear tests of 1998, developments in North Korea and now the highly suspicious Iranian nuclear activities, the non-proliferation regime remains in its frame like a broken safety glass window that needs only one final blow to fall into a thousand tiny shards. The pieces still hold together, but for how long?

Iraq, on the other hand, was to have been the one piece of good news in this dismal account. The smashing of Saddam Hussein's dictatorship and with it his ambitions to use WMD to make Iraq the pre-eminent power in the Middle East was not only to have rolled back one determined proliferator, but also to have sent the strongest of signals to the other 'rogues' that clandestine and illegal activity would henceforth not be tolerated. An important part of this message was the new American determination not to allow the formal mechanisms of the multilateral non-proliferation regime to be used by proliferators to avoid any serious consequences for their actions.

This essay, written by a former US Department of Defense official, examines what the lack of discovery of WMD in Iraq means for the international non-proliferation regime and poses significant questions regarding the validity and legitimacy of ad hoc actions for dealing with problems of proliferation.

After Non-Detection, What?

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Michael Friend

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