

# India-Pakistan Nuclear Equation: The Need for an Arms Control and Disarmament Regime

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**A***bstract:* The endless efforts of India and Pakistan to enhance their nuclear and conventional military capabilities have heightened the risk of nuclear holocaust in the region besides putting increased stress on their meagre resources, which are crucially required for human security needs. Their efforts to up-grade their military capabilities have exacerbated each other's security dilemma and given rise to arms race. Accordingly, India's missile tests have invariably attracted response from Pakistan in the form of similar missile tests, which can only be explained by arms race model. From 1998 to July 2012, India and Pakistan conducted almost equal number of ballistic missile tests (60 and 55 respectively), which is not justifiable in the backdrop of asymmetry in their resources and threat perceptions. Pakistan's development of Nasr battlefield nuclear weapon system designed to upset India's Cold Start Doctrine contemplating offensive operations into Pakistan under nuclear overhang and flight test of Ababeel surface-to-surface ballistic missile using Multiple Independent Reentry Vehicle (MIRV) technology as a reaction to India's decision to deploy Ballistic Missile Defence are two apt examples. The situation calls for institution of an arms control and disarmament (ACD) regime for India and Pakistan, which in the past has been non-existent. However, the dynamics of India-Pakistan equation being significantly different from those, which guided the ACD process of the Cold War era, South Asia requires a different model. The model must accommodate the unique security requirements of both countries including India's security calculus, which regards China as its main threat. Likewise, in view of the contemporary ground realities the scope of ACD will have to be expanded by including more types of weapons, technologies, issues (humanitarian, economic and governance), and actors (international organizations, and non-governmental actors).

**Keywords:** Security Dilemma, Socioeconomic Dynamics, Arms Race, Nuclear Posture, Arms Control and Disarmament.

## Introduction

Pakistan and India are the only nuclear-capable neighbours in the world, which have historically remained locked in "enduring rivalry"<sup>1</sup> owing to unresolved disputes; the most complex one is Kashmir issue. Besides fighting three wars within the first twenty-four years of independence (1948, 1965 and 1971) and experiencing frequent military crises, including the small scale armed conflict of Kargil in 1999, they have remained engaged in endless security competition. Admittedly, their efforts to

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enhance nuclear and conventional military capabilities to address their perceived security vulnerabilities have heightened the risk of nuclear holocaust in the region and put increased stress on their meagre resources, which are crucially required for human security needs.

The hypothesis of this study is that both India and Pakistan, seized with perpetual security dilemma, are in a state of quasi-arms race and, thus, need an arms control and disarmament (ACD) regime. Using qualitative approach, the study evaluates the phenomenon of arms race between India and Pakistan and outlines salient features of an ACD model for South Asia. The questions intended to be investigated in the study are:

- a. To what extent can the India-Pakistan nuclear competition be termed as arms race and is there a need for ACD regime?
- b. What is the efficacy of a Cold War type ACD regime in South Asia?
- c. What should be the cardinal features of ACD regime designed to serve India-Pakistan framework?

### **Theoretical Framework**

The notion of arms race is closely linked with that of security dilemma - the former being the direct consequence of the latter – which is the compelling factor pushing India and Pakistan into arms race. Security Dilemma is a structural concept in which, according to John Herz, “the self-help attempts of states to look after their security needs, . . . tend to lead to rising insecurity for others as each interprets its own measures as defensive and measures of others as potentially threatening.”<sup>2</sup> Worried about the “threat of being attacked, dominated, or annihilated” and “to escape from the impact of power of others”, states strive to improve their security against perceived threats, and tend to acquire more and more power.<sup>3</sup> This in turn breeds a feeling of insecurity in others, who feel compelled to adopt measures, which upset the existing equilibrium and generate an endless reciprocal competition. Philip Cerny posits that as the most crucial dynamic of international relations, security dilemma has the potential to undermine power balance and to create a vicious circle of “ever increasing insecurity”.<sup>4</sup> This phenomenon, also referred to as the “spiral model” leads to arms race.<sup>5</sup>

Arms race, in simple terms, is an on-going competition between two or more nations to acquire more potent military forces than the other(s).<sup>6</sup> The phrase is mostly used to describe any competition with the relative goal of staying ahead of the other competitors. In the nuclear arms race experienced by the USSR and the USA during the Cold War, the quest to achieve superiority over the adversary led to

development of large military capabilities and stockpiles of nuclear arsenals on both sides, which, besides increasing the prospects of war with ancillary risks, entailed colossal economic cost. The Cold War adversaries, however, soon realized the ominous consequences of arms race and managed their situation by concluding ACD treaties and agreements.

Arms control is “an umbrella term for restrictions on the development, production, stockpiling, proliferation, and usage of weapons, especially weapons of mass destruction” and aims at “mutual security between partners and overall stability”.<sup>7</sup> In its literal sense, it means “managing, administering or steering military capacities”.<sup>8</sup> It enforces restrictions on developing or acquiring new weapons, which differs from ‘disarmament’ seeking reduction and elimination of particular categories of weapons.<sup>9</sup> It imposes limitations on the consenting states through treaties and agreements, although, it may also enforce restrictions upon a non-consenting country.<sup>10</sup> Many scholars view arms control in a broader sense and associate it with promotion of “knowledge about military capacities through verification, inspection and monitoring”.<sup>11</sup> Fundamentally, the traditional arms control theory is envisaged to act as a means to promote national security and not to achieve reduction of arms *per se* as an end.<sup>12</sup> The basic condition for arms control to be successfully negotiated and implemented is that, notwithstanding political and ideological differences, the parties should share common interest in avoiding a devastating nuclear war and demonstrate readiness to cooperate to achieve that purpose without awaiting resolution of conflicts.

### **Socioeconomic and Security Dynamics of India and Pakistan**

Burdened by problems of “poverty, unemployment, illiteracy and over-population”, both countries are deficient of resources crucially required for alleviation of sufferings of people.<sup>13</sup> According to the UN Human Development Index, India and Pakistan ranked at 130 and 147 respectively among 188 countries in 2015.<sup>14</sup> But, they are investing huge resources on military capabilities and nuclear weapons at the expense of human security needs. The severity of India’s troubles can be gauged from the fact that despite an impressive average economic growth of over 7 percent per year since 1997, it has not been able to address widespread poverty, inadequacy of physical and social infrastructure, scarce access of common citizen to quality education and high level of unemployment.<sup>15</sup> According to a report, as many as 220 districts of India are currently affected by serious internal turmoil owing to socioeconomic disparities and asymmetrical economic growth, which has benefitted less than 20 percent population.<sup>16</sup> On the other hand, Pakistan with low economic growth rate over the past few years (averaging less than 4 percent per year), high inflation, surge in food prices, crippling energy crisis, and high trade deficit, is

confronted by rising poverty, which stands at approximately 30 percent of the population.<sup>17</sup> Equally unsatisfactory is its internal security scene with a simmering disturbance in Balochistan and ongoing counterterrorism operations in Karachi and North-Western region.

Conversely, the conflictual nature of India-Pakistan relationship has kept the two countries entangled in incessant military competition causing colossal strain on their fragile economic conditions. According to a report, India's military expenditure, which accounts for South Asia's 80 percent increased by 64 percent during the last decade in real terms, while that of Pakistan rose by 38 percent.<sup>18</sup> To sustain its regional and global aspirations militarily, India has become the largest importer of arms in the world.<sup>19</sup> In 2003, Rammanohar Reddy projected that at 1998-99 price level India's nuclear program would cost Rs. 700-800 billion per year (equalling US \$ 16-19 billion).<sup>20</sup> Pakistan's situation with its military expenditure of 3.6% of GDP being 50% higher than that of India is worse.<sup>21</sup> Notwithstanding, disproportionately higher expenditures on defence than on human security needs, South Asia remains "the most endangered region" of the world.<sup>22</sup> The only change the region has witnessed after nuclearization of India and Pakistan is that there has been no major war between the two. Contrarily, they have demonstrated no serious willingness in the past to engage in a formal conflict prevention arrangement like arms control, which by promoting transparency and increased understanding of the adversary's nuclear force and that of its strategic dynamics can lessen their burden of defence expenditures and reduce the risk of at least an inadvertent nuclear war.<sup>23</sup>

### **Comparative Nuclear Postures**

The details of nuclear capabilities of India and Pakistan have not been officially made public by either side. Therefore, the data on their nuclear stockpiles and delivery systems compiled by analysts is mostly based on conjecturing. According to some analysts, South Asia's current strategic situation can be termed as mutually destructive. In spite of the fact that both countries are reportedly already in possession of the requisite systems including support infrastructure needed for their declared nuclear policies, their efforts to up-grade their capabilities continue unabated, exacerbating each other's security dilemma. The latest inventory of nuclear warheads that India is believed to possess is approximately 80-100, whereas, Pakistan's inventory is estimated to be 90-110.<sup>24</sup> Although, by the US and Soviet standards nuclear weapons of India and Pakistan are limited in destructive capacity, they are considered to be quite powerful.

India, having acquired nuclear weapons technology, has been constantly up-grading its capability with missile tests, invariably attracting response from Pakistan in the form of similar missile tests. India has so far tested and operationalized short-

to-intermediate range nuclear-capable missiles, which include 150 km Prithvi-I, 250 km Prithvi-II, Naval-version Prithvi-III (Dhanush - 350 km), Sagarika submarine-launched SRBM, BrahMos cruise missile (300 km), Agni-I (1500 km), and Agni-II (2,000-2,500 km).<sup>25</sup> Agni-III (3,500 km), Agni-IV (5,000 km) and Surya (10,000-12,000 km) are reportedly being developed.<sup>26</sup> Prahaar with 150 km range is the latest addition to Indian surface-to-surface short range capability.<sup>27</sup> The nuclear-capable aircraft on its inventory are “Mirage-2000H, Jaguar S(I), MiG-29 and SU-30K MKI”.<sup>28</sup> India has also made impressive strides in space technology by indigenously developing space launch vehicle (SLV) and launching satellites with military and civilian applications including unmanned missions to the moon and Mars.<sup>29</sup>

On the other hand, the missiles on Pakistan’s inventory include Hatf-I (80-100 km range), Abdali (260-300 km), Ghaznavi (500-800 km), Shaheen-I (750 km), Ghauri-I (1,100-1,500 km), Ghauri-II (2,000 km), and Shaheen-II (2,400-2,500 km). Pakistan has also tested ground-launched Babur cruise missile (500 km) and air-launched Ra’ad cruise missile (300 km).<sup>30</sup> Pakistan is also reported to possess a limited stock of Chinese missiles M-9 (600 km) and M-11 (300 km). Ghauri-III with a range of 3,500 km and Shaheen-III with a similar range are currently under development. The introduction of *Nasr* battlefield nuclear weapon system by Pakistan recently has invited severe criticism from the international community and Indian circles as it upsets India’s Cold Start Doctrine, which envisages offensive operations into Pakistan under nuclear overhang. Additionally, approximately 120 aircraft of various types consisting of F-16, Mirage-III and Mirage-V are known to have been upgraded for delivery of nuclear weapons.<sup>31</sup> However, Pakistan has not made a worthwhile progress in space technology as related to military applications.

India’s declared nuclear policy, termed as credible minimum deterrence (CMD), is primarily configured for the threat from China, which continues to drive the former’s unceasing quest for up-gradation of nuclear arsenal.<sup>32</sup> Another motive behind India’s nuclearization is believed to be its quest to enhance its international status and prestige, which, according to Waltz, is “both a reason for and a consequence of developing nuclear weapons”.<sup>33</sup> Raja Menon describes Indian nuclear weapons less as security mechanism and more as instruments of international influence.<sup>34</sup> George Perkovich argues that in this context domestic factors have been as significant as external security considerations.<sup>35</sup>

Contrarily, Pakistan’s nuclear weapon capability is essentially designed to address its existential threat from nuclear-armed India.<sup>36</sup> Notwithstanding, India’s declaratory policy of No First Use, the Indian version of CMD “based on triad of aircraft, mobile land-based missiles and sea-based assets” is considered existential threat to Pakistan.<sup>37</sup> Pakistani strategic community claims that the clause of India’s

CMD, which envisions an “effective, enduring, diverse, flexible and responsive” nuclear force is meant to achieve “massive expansion of strategic and conventional forces”.<sup>38</sup>

### **Are Indo-Pakistan Nuclear Developments Indicative of an Arms Race?**

The notion of arms race is generally analysed with statistical models in which military expenditures and changes in stockpiles of particular categories of armaments of two countries are scrutinized. However, at times, the data of military expenditures and weapon stockpiles may not be either available or completely dependable. When accurate data is unavailable the analyses pertaining to nuclear weapon countries like India and Pakistan, according to Toby Dalton and Jaelyn Tandler, can be based on missile tests as these tests are comparatively more transparent and reveal additional evidence related to doctrines and postures.<sup>39</sup> However, Dalton and Tandler caution that the missile tests may not be a perfect indicator of arms racing.

Dalton and Tandler have concluded in a study that the pace of developments in Indian and Pakistani nuclear programs does not constitute arms race. They argue that the programs of both countries are “largely decoupled” and that they are not in a “tit-for-tat” competition.<sup>40</sup> According to them, both countries are pursuing “vastly different goals” and do not demonstrate behaviour pattern expected of those, who are engaged in a typical arms race. If comparisons are drawn strictly in accordance with the technical features and operational roles of systems being tested by both countries then the assertion of Dalton and Tandler apparently sounds valid. However, when subjected to close scrutiny their conclusion gets disproved.

This study avers that their conclusion is not the outcome of an objective analysis. Dalton and Tandler seem to have been influenced by official pronouncements. For example, Pakistani decision makers, like their Indian counterparts, have expressed from time to time their determination to avoid nuclear arms race. Pakistan’s Foreign Minister Abdul Sattar explicitly reiterated in 2000 that Pakistan’s policy of CMD shall not entail strategic arms race.<sup>41</sup>

Admittedly, the nuclear development objectives are governed by strategic considerations. Accordingly, with acute asymmetry in size, economic capacity, population and military strength, the strategies, strategic objectives and, hence, development goals of India and Pakistan ought to be different. Therefore, the patterns of development and tests may not necessarily coincide precisely. However, the patterns of development as evident from the data of missile tests of Pakistan and India (compiled by Dalton and Tandler and attached as Annex A<sup>42</sup>) can only be explained by arms race model. From 1998 to July 2012, Pakistan and India

conducted almost equal number of ballistic missile tests (55 and 60 respectively), which is not justifiable in the backdrop of asymmetry in their resources and threat perceptions. Likewise, while India is known to have pursued cruise technology since 2001, Pakistan's interest in it surfaced for the first time with Babur's first test in 2005, which considering the lead time required for development of technology seems a direct reaction.

Pakistan's resolve to avoid arms race seems to have been adversely affected lately by various developments. The most significant development is the US-India Nuclear Deal, which serves India's interests in multiple ways: one, it has earned for India the recognition of a *de facto* nuclear weapon state; two, it has given India access into the international nuclear market and opened unlimited opportunities to acquire fuel for its nuclear energy program and advanced nuclear technology; three, the technology so acquired from advanced countries will naturally be available to India for both economic growth and military program alike; four, it will spare India's limited domestic fissile material reserves for military purposes.<sup>43</sup> All this will have the potential to destabilize the strategic equilibrium of South Asia and exacerbate Pakistan's existential threat.

The most profound change in South Asia's strategic landscape after 1998 has been brought about by India's declaration of Cold Start Doctrine under which it retains the option of fighting a limited conventional war against Pakistan in nuclear environment. This development has been a strong incentive for Pakistan to opt for battlefield nuclear weapon "Nasr", which perhaps for the reason of its costliness never figured in its earlier pronouncements. The expensiveness of the weapon system can be discerned from a study, which asserts that, whereas, one 15-KT weapon can destroy 55 tanks with a 100-meter spacing, for a tank spacing of 300-meter, eight such weapons would be needed.<sup>44</sup> Michael Krepon, who otherwise challenges the veracity of this calculation, has questioned the sustainability of battlefield nuclear weapon option for Pakistan.<sup>45</sup> In any case, "Nasr" has radically altered the conflict paradigm in South Asia. Another factor, which could also be considered highly provocative for Pakistan is the Indian hawks' rhetoric of "preemptive strikes" against Pakistan<sup>46</sup> as against its declared policy of No First Use. For Pakistan with its small geographic size and vulnerability to Indian preemptive strike, this rhetoric is hard to ignore.

Another development, which because of its potential to upset the strategic stability of South Asia, has affected Pakistan's resolve to avoid arms race is India's decision to deploy Ballistic Missile Defence (BMD), which is set to be launched soon.<sup>47</sup> Some scholars argue that India's plan to acquire BMD capability is linked with that of China, which in turn is coupled with the US National Missile Defence

(NMD) System and Theatre Missile Defence (TMD) in Asia-Pacific Region.<sup>48</sup> Pakistan's first flight test of *Ababeel* surface-to-surface ballistic missile, which is capable of delivery nuclear warhead using Multiple Independent Reentry Vehicle (MIRV) technology is a direct reaction to India's decision to deploy.<sup>49</sup> According to Gregory Koblentz, India's efforts to build missile defence systems have prompted a new phase in the missile race in South Asia.<sup>50</sup>

From the nuclear development efforts of Pakistan since 1998, Krepon infers that the requirements fixed by Pakistan for its deterrence have "expanded" over the years. To substantiate his viewpoint, he argues that the construction of Pakistan's fourth plutonium production reactor commenced in 2011 after the US-India Nuclear Deal. He avers that while it may have been included in the original plan, it is more probable that it materialized due to the "added Pakistani concerns over the US-India civil nuclear agreement, as well as heightened concerns about India's improved ties with the US".<sup>51</sup> Consequently, instead of traditional phraseology of "credible minimum deterrence", and notions like "full spectrum deterrence" and deterrence "at all levels of the threat spectrum" have started to appear in official pronouncements of Pakistani strategic circles.<sup>52</sup>

The India-Pakistan arms race can, thus, be largely attributed to India, because it is much bigger in size and power potential with respect to its neighbours. According to an Indian analyst, Monica Bhanot, South Asia's problems, pervasive hostility, and mutual distrust are mainly the "products of the contradictions in security perceptions of India" with respect to other countries of the region which it considers as an "integral part of [her] own security system".<sup>53</sup> This author concurs with Bhanot's assertion and considers the conclusion of many others including Peter Lavoy that Pakistan's nuclear developments are reflective of its attempt to address the "growing imbalance in conventional capability reinforced by Indian superiority in nuclear forces" as valid.<sup>54</sup>

### **The Cold War Experience of ACD**

The concept of arms control expounded during the 1950s and 1960s and adopted as a key element of national policy by the Cold War antagonists, was not a new phenomenon. The practice of seeking negotiated solutions to security predicaments on the part of adversaries had remained in vogue in the past. The risks of death and destruction associated with nuclear weapons, the increased fragility of strategic stability due to uncontrolled nuclear build-up, and staggering economic cost of nuclear competition prompted the policy makers of the USA and the USSR to rise above their political motivations and cooperate on arms control.<sup>55</sup> The experts on both sides re-evaluated defence and foreign policies and concluded that the post-war disarmament objective being pursued since 1945 on traditional pattern was not

achievable. They realized that instead of seeking general and complete disarmament as had been the approach earlier, there was a need to first consider “limited” and “partial measures”, which would ultimately promote confidence in cooperative security arrangements.<sup>56</sup>

The earlier deliberations of arms control set three goals: “to reduce the risk of war”; “to reduce the destructiveness of war should it break out”; and “to redirect the resources devoted to armaments to other ends”.<sup>57</sup> Practically, however, the primary emphasis of arms control remained on reduction of the risk of war. After the Cuban missile crisis, there emerged a consensus between interlocutors that without ensuring crisis stability and addressing mutual fear of nuclear attack, the risk of war could not be reduced.<sup>58</sup> Consequently, these two concerns became the basis of arms control, which was basically intended for all states covering complete range of weapon systems. The scope of arms control gradually became rather narrow and it assumed the character of 'nuclear arms control' with its main focus restricted to the concept of security anchored on equilibrium of nuclear forces, that too between a few countries, i.e., the superpowers.<sup>59</sup>

After the Cuban missile crisis, a number of international, regional and bilateral ACD treaties, agreements and cooperative arrangements were concluded, which according to some scholars failed to achieve stipulated objectives because of various reasons. Some of the oft-quoted failures in this context are: the failure of the 1972 ABM Treaty; the inability to achieve reduction of nuclear weapons of states other than the USA and Russia; the acquisition of nuclear weapon technology by countries like Pakistan, India and North Korea; refusal of certain countries including the USA to accept the CTBT; and the in-effectiveness of ACD treaties to abolish chemical and biological weapons. Michael A. Levi and Michael E. O'Hanlon argue that arms control regimes have not been able to eliminate conflict in the developing countries or to significantly reduce the nuclear stockpiles and conventional forces of the superpowers.<sup>60</sup>

Notwithstanding, the above criticism, the elimination of 20,000 nuclear weapons and approximately 60,000 conventional heavy weapons in Europe and former Central Asian Republics of the erstwhile USSR in the recent decades owing to arms control agreements, is not an insignificant achievement.<sup>61</sup> As a result of the Intermediate-Range Nuclear Forces (INF) Treaty, the Soviet Union and the USA agreed to destroy 1,750 and 846 nuclear armed ballistic missiles respectively, establishing a rule that for the sake of strategic stability “asymmetrical reductions . . . were acceptable . . .”<sup>62</sup> This agreement also created a highly intrusive verification regime. The ABM Treaty and many hotline agreements concluded by the USA and the USSR reduced the risk of crises escalating into potentially devastating nuclear

conflicts.<sup>63</sup> Likewise, the NPT prevented “runaway proliferation” during the first two decades of its enforcement.<sup>64</sup>

Keith Krause and Andrew Latham have identified many normative dividends of arms control: first, it has provided a solid foundation for arms control and promoted international security by strengthening nuclear deterrence and preventing inadvertent nuclear conflagration; and second, it has introduced a new tradition of conflict management and resolution and contributed towards the maturity of the “science” of negotiation.<sup>65</sup> The most important achievement of arms control, according to Keith Krause and Andrew Latham, has been the universal recognition of the importance of “transparency” in military capabilities and of the associated concept of “confidence- (and security-) building measures (CSBMs)”.<sup>66</sup> The concept from its original narrow scope has grown into a comprehensive paradigm of measures meant to “regulate the size, technical composition, investment patterns, and operational practices of all military forces by mutual consent for mutual benefit”<sup>67</sup> and has made valuable contribution toward the international security architecture.

In short, although much remains unachieved, the accomplishments of arms control during the last fifty years have not been insignificant and, hence, can be replicated in principle in future endeavours. Recent arms control treaties have incorporated stringent measures for enforcement as well as “verification”.<sup>68</sup> With a view to making arms control arrangements more effective, analysts suggest expansion of the framework to include political, economic, and military measures. Some of the suggestions in this regard, as proffered by scholars, are: the avoidance of radical changes in the structure; and continuation and supplementation of the processes that are still not complete.

### **Contours of a Possible South Asian Arms Control Regime**

On the basis of evaluation of some of the measures taken by India and Pakistan in the past to address their mutual security and political concerns, and not pursued with seriousness, Bhumitra Chakma concludes that the prospects of success of arms control between the two countries at the moment are non-existent.<sup>69</sup> He equates the current situation of South Asia with the one that prevailed between the USA and the USSR in the 1950s and early 1960s. This is a rather narrow and negative view. India and Pakistan do not have to necessarily adopt the same learning curve as the two superpowers in the absence of any past precedents were constrained to follow. In the dark chapter of India-Pakistan antagonism, there is a silver-lining that foretells the prospects of success of a regional arms control arrangement. They have implemented many CSBMs in the past, which helped keep the temperatures cool even in intensely tension-driven moments. Dr. Tughral Yamin has compiled a list of

about 120 CSBMs<sup>70</sup> instituted by India and Pakistan, most of which were implemented fairly successfully. Some analysts feel that with their “comparable nuclear forces meant to contain each other”, like those of the USA and the erstwhile Soviet Union, Pakistan and India are “well positioned to embark on a bilateral arms control”.<sup>71</sup> Lately, a discernible desire to promote peace through increased people-to-people contact has been noticed at the civil society level in both countries, which has the potential to exert pressure on the governments to seriously pursue the cause of peace.

The dynamics of India-Pakistan equation being significantly different from those, which guided the ACD process of the Cold War era, South Asia requires a different model. As asserted earlier, because of the unresolved contentious issues South Asian environment is marked by historical antagonism, general lack of trust, divergence of political and ideological perceptions and frequent occurrence of crises and conflict situations. Neither have the two countries ever demonstrated any willingness to engage in arms control process in the past. The strategic considerations that propelled nuclear weapons programs of Pakistan and India are not identical. In the realm of conventional military capabilities, Pakistan and India are in a state of acute asymmetry, which in the nuclear paradigm has the potential to get further compounded. As highlighted earlier, in the strategic landscape of South Asia another significant player, which has a direct role in India-Pakistan nuclear equation, is China’s nuclear weapon capability, which figures prominently in Indian threat perception. On the other hand, China’s nuclear weapon program is also linked with the weapon capabilities of the USA and Russia. Therefore, any arms control arrangement for India and Pakistan must accommodate the unique security requirements of both countries.

Likewise, the objectives of ACD processes designed in the past, according to many analysts, are narrow and do not possess the requisite capacity to adequately address contemporary ground realities of South Asia. Some experts argue that the arms control agenda needs to be made more comprehensive by including “more types of weapons (small arms and light weapons), more types of equipment (non-lethal high technology), more issues (humanitarian issues, economic issues and governance issues), and more actors (international organizations, and non-governmental actors)”.<sup>72</sup> They argue that the enlargement of the arms control scope is of overriding importance even at the cost of modifying or terminating the prevalent arrangements to spare means for the additional effort.

## **Conclusions**

With India striving for maximization of power, and Pakistan maximizing its security in a bid to restore the balance,<sup>73</sup> the resultant security dilemma is causing an arms

race, which, for its nuclear overtones, is ominous for India and Pakistan. Another corollary of the arms race is disproportionately high military expenditures on both sides at the cost of crucial human security needs, which, in real terms, has made them more insecure.

As Indian missiles with ranges longer than that of Agni-I also affect, besides Pakistan, other regional countries and many more beyond the region, it is evident that Pakistan factor is not the sole factor of India's military development targets. The strategic panorama of South Asia is not simply the outcome of India-Pakistan nuclear competition and, instead, has complex multi-lateral linkages requiring intricate approach. With India's threat perception being China-specific and Pakistan's perception being India-specific, arms control arrangement will need to accommodate their mutually exclusive security concerns.

The lessons of Cold War arms control suggest that with numerous complex issues as those of India and Pakistan and to avert a nuclear holocaust in South Asia, the prior resolution of conflicts should not be made a prerequisite for initiation of dialogue on arms control. In view of the seriousness of the situation, a beginning needs to be made without awaiting the resolution of those conflicts.

The objectives of ACD processes designed in the past may not adequately address contemporary challenges of South Asia, which warrant a more comprehensive approach. There is a need for arms control scope to be expanded so as to include more types of weapon systems and equipment (non-lethal high technology), political and governance issues, social aspects including humanitarian issues, and economic initiatives with wider participation (international organizations, and non-state actors)".<sup>74</sup> It may be worthwhile to even consider military initiatives which can play a meaningful role during crises. Whereas, total nuclear disarmament may not be politically feasible option, an arms control regime on the lines of Cold War models can successfully prevent an arms race in the region and reduce the likelihood of nuclear catastrophe besides reducing financial burden on the parties. However, in view of the reduced credibility of the previous arms control related measures and CSBMs, any initiative on this account will require seriousness of purpose.

**Figure 1: Missile Tests of Pakistan and India**<sup>75</sup>

Country	Date	Type	Missile
Pakistan	6 April 98	Ballistic	Hatf-5 (Ghauri-I)
India	11 April 99	Ballistic	Agni-II
Pakistan	14 April 99	Ballistic	Ghauri-II
Pakistan	15 April 99	Ballistic	Hatf-4 (Shaheen-I)
Pakistan	24 June 99	Ballistic	Hatf-5 (Ghauri-I)
Pakistan	7 February 00	Ballistic	Hatf-1
India	11 April 00	Ballistic	Prithvi-III (Dhanush)
India	16 June 00	Ballistic	Prithvi-I
India	17 January 01	Ballistic	Agni-II
India	31 March 01	Ballistic	Prithvi-I
India	12 June 01	Cruise	BrahMos
India	12 June 01	Cruise	BrahMos
India	21 September 01	Ballistic	Prithvi-III (Dhanush)
India	13 December 01	Ballistic	Prithvi-II
India	25 January 02	Ballistic	Agni-I
India	28 April 02	Cruise	BrahMos
Pakistan	25 May 02	Ballistic	Hatf-5 (Ghauri-I)
Pakistan	26 May 02	Ballistic	Hatf-3 (Ghaznavi)
Pakistan	28 May 02	Ballistic	Hatf-2 (Abdali)
Pakistan	4 October 02	Ballistic	Hatf-4 (Shaheen-I)
India	9 January 03	Ballistic	Agni-I
India	12 February 03	Cruise	BrahMos
India	26 March 03	Ballistic	Prithvi-I
Pakistan	26 March 03	Ballistic	Hatf-2 (Abdali)
India	29 April 03	Ballistic	Prithvi-I
Pakistan	3 October 03	Ballistic	Hatf-3 (Ghaznavi)
Pakistan	8 October 03	Ballistic	Hatf-4 (Shaheen-I)
Pakistan	13 October 03	Ballistic	Hatf-4 (Shaheen-I)
India	29 October 03	Cruise	BrahMos
India	29 October 03	Cruise	BrahMos
India	9 November 03	Cruise	BrahMos
India	9 November 03	Cruise	BrahMos
India	23 November 03	Cruise	BrahMos
India	23 November 03	Cruise	BrahMos
India	23 January 04	Ballistic	Prithvi-I
Pakistan	9 March 04	Ballistic	Hatf-6 (Shaheen-II)
India	19 March 04	Ballistic	Prithvi-II
Pakistan	29 May 04	Ballistic	Hatf-5 (Ghauri-I)
Pakistan	4 Jun 04	Ballistic	Hatf-5 (Ghauri-I)
India	13 Jun 04	Cruise	BrahMos
India	4 Jul 04	Ballistic	Agni-I
India	29 Aug 04	Ballistic	Agni-II
Pakistan	12 Oct 04	Ballistic	Hatf-5 (Ghauri-I)
India	27 Oct 04	Ballistic	Prithvi-III (Dhanush)

*India-Pakistan Nuclear Equation*

India	3 Nov 04	Cruise	BrahMos
India	7 Nov 04	Ballistic	Prithvi-III (Dhanush)
Pakistan	29 Nov 04	Ballistic	Hatf-3 (Ghaznavi)
Pakistan	8 Dec 04	Ballistic	Hatf-4 (Shaheen-I)
India	21 Dec 04	Cruise	BrahMos
Pakistan	19 Mar 05	Ballistic	Hatf-6 (Shaheen-II)
Pakistan	31 Mar 05	Ballistic	Hatf-2 (Abdali)
India	16 Apr 05	Cruise	BrahMos
India	12 May 05	Ballistic	Prithvi-I
Pakistan	11 Aug 05	Cruise	Babur
India	30 Nov 05	Cruise	BrahMos
India	1 Dec 05	Cruise	BrahMos
India	28 Dec 05	Ballistic	Prithvi-III (Dhanush)
Pakistan	21 Mar 06	Cruise	Babur
Pakistan	29 Apr 06	Ballistic	Hatf-6 (Shaheen-II)
Pakistan	6 May 06	Ballistic	Hatf-6 (Shaheen-II)
India	1 Jun 06	Cruise	BrahMos
India	11 Jun 06	Ballistic	Prithvi-II
India	9 Jul 06	Ballistic	Agni-III
Pakistan	16 Nov 06	Ballistic	Hatf-5 (Ghauri-I)
India	19 Nov 06	Ballistic	Prithvi-II
India	27 Nov 06	Ballistic	Prithvi-II
Pakistan	29 Nov 06	Ballistic	Hatf-4 (Shaheen-I)
Pakistan	9 Dec 06	Ballistic	Hatf-3 (Ghaznavi)
India	5 Feb 07	Cruise	BrahMos
Pakistan	23 Feb 07	Ballistic	Hatf-6 (Shaheen-II)
Pakistan	3 Mar 07	Ballistic	Hatf-2 (Abdali)
Pakistan	22 Mar 07	Cruise	Babur
India	12 Apr 07	Ballistic	Agni-III
India	23 Apr 07	Cruise	BrahMos
Pakistan	26 Jul 07	Cruise	Babur
Pakistan	25 Aug 07	Cruise	Ra'ad
Pakistan	11 Dec 07	Cruise	Babur
Pakistan	25 Jan 08	Ballistic	Hatf-4 (Shaheen-I)
Pakistan	1 Feb 08	Ballistic	Hatf-5 (Ghauri-I)
Pakistan	13 Feb 08	Ballistic	Hatf-3 (Ghaznavi)
India	26 Febr 08	Ballistic	Sagarika
Pakistan	19 Apr 08	Ballistic	Hatf-6 (Shaheen-II)
Pakistan	21 Apr 08	Ballistic	Hatf-6 (Shaheen-II)
India	7 May 08	Ballistic	Agni-III
Pakistan	8 May 08	Cruise	Ra'ad
India	12 Nov 08	Ballistic	Sagarika
India	18 Dec 08	Cruise	BrahMos
India	20 Jan 09	Cruise	BrahMos
India	5 Mar 09	Cruise	BrahMos
India	30 Mar 09	Cruise	BrahMos
Pakistan	6 May 09	Cruise	Babur
India	30 Jul 09	Cruise	BrahMos
India	7 Feb 10	Ballistic	Agni-III

India	21 Mar 10	Cruise	BrahMos
Pakistan	8 May 10	Ballistic	Hatf-3 (Ghaznavi)
Pakistan	8 May 10	Ballistic	Hatf-4 (Shaheen-I)
India	6 Sep 10	Cruise	BrahMos
Pakistan	21 Dec 10	Ballistic	Hatf-5 (Ghauri-I)
Pakistan	10 Feb 11	Cruise	Babur
Pakistan	11 Mar 11	Ballistic	Hatf-2 (Abdali)
Pakistan	19 Apr 11	Ballistic	Hatf-9 (Nasr)
Pakistan	29 Apr 11	Cruise	Ra'ad
India	21 Jul 11	Ballistic	Prahaar
Pakistan	28 Oct 11	Cruise	Babur
India	15 Nov 11	Ballistic	Agni-IV
India	2 Mar 12	Cruise	BrahMos
Pakistan	5 Mar 12	Ballistic	Hatf-2 (Abdali)
India	28 Mar 12	Cruise	BrahMos
India	19 Apr 12	Cruise	Agni-V
Pakistan	25 Apr 12	Ballistic	Shaheen 1A
Pakistan	10 May 12	Ballistic	Hatf-3 (Ghaznavi)
Pakistan	29 May 12	Ballistic	Hatf-9 (Nasr)
Pakistan	31 May 12	Cruise	Ra'ad
Pakistan	5 Jun 12	Cruise	Babur
India	13 Jul 12	Ballistic	Agni-I

## Endnotes

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