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#### Abstract

The issue of nuclear escalation is neither simple, nor straightforward in the context of the South Asian region. This is mainly because this region is a home to two inherently rival nuclear states. Nuclear equation in South Asia is not quite simple to comprehend the changing political and strategic scenario of this region. After 1998, both India and Pakistan moved towards a stage where slight negligence and irresponsible behavior can result huge devastation in the entire region. Moreover, the risk of attaining the nuclear material through espionage in both states can lead to a disastrous outcome where the non state actors and the terrorist organizations are operating to challenge the status quo. Nuclear weapons ensure the security of the state on one hand and on the other, risk of nuclear war casts a deep shadow over the region. Both India and Pakistan has to think out of box solutions to lessen the dangers of a nuclear holocaust. The study concludes that existing nuclear security culture in Pakistan is appropriate .International community should preempt any situation of escalation between the two, rather than engaging in "firefighting."

**Key Words:** Nuclear Escalation, Nuclear War, South Asian security dilemma, disarmament, nuclear proliferation, Regional Stability, Nuclear doctrine

## Introduction

The issue of nuclear escalation is neither simple, nor straight-forward in the context of South Asian region because this region is a home to two rival nuclear states which have enmity since their embryonic stages. Thus there is a dire need to re-formulate the security agenda in South Asia to increase the stability of the entire region. Neither India, nor Pakistan can do it alone. Both will have to negotiate reformulation. International community should also help them in this regard. In the last years, numbers of agreements were signed to increase the military might of India. These moves further added the concern of Pakistan.

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Considering Pakistan's case, the foreign policy options have been restrained because of domestic issues such as the fragile economy, lack of Geostrategic depth, numerically less army and conventional warfare abilities with respect to India. The shadows of insecurity, intolerance and conflict have been hovering over Pakistan since its inception. So Pakistan opted active nuclear weapon program in response to counter external threat which is mainly Indian centric and resultantly the nuclearized South Asia became the most dangerous place on the earth (Matinuddin, 2002:36-40; Ahmad, 1998:6-15; Khan, 2003:59-61).

The regional politics of South Asia is extravagant and complex. The British policy of hast in drawing the frontiers of sub-continent has sowed the seeds of perpetual and enduring rivalry between India and Pakistan since their embryonic stages. The security dilemma that Pakistan faced because of much larger and hostile state of India further exacerbated from the belligerent views of Chankia's ideology that nearest neighbor is an enemy and neighbors' neighbor is a friend. The demonstration of the nuclear technology there is a perpetual risk of war and failure to prolong a peace dialogue and this is guite contrary to cold war strategy between the two nuclear super powers. In case of South Asia, India has a categorical advantage of conventional military over Pakistan and both adversaries are neighbors. Moreover, the conflicts in the era of cold war were not having the territorial, historical or religious dimensions which are present in the scenario of sub-continent. So these unmitigated differences have the potential to accentuate apprehension. Similarly a fragile or robust command and control system can result into multiple and divergent outcomes and it would be a Herculean task to control escalation if the threshold has been crossed. In the backdrop of these geopolitical calamities, this article analyzes the realistic prospects of the rivalry between the two nuclear states and the prevention of possible Nuclear Armageddon (Jones, n.d).

Keeping the technical aspect aside while talking about the nuclear escalation in South Asia, the political aspect is of paramount significance as it underlies the track towards which India and Pakistan are directing the entire region. Whereas upholding a nuclear arms build-up process is hard and costly for a state in every way, curbing the nuclear escalation or tracking back is only harder.

Pakistan and India are the two rival states that share borders, which leaves them with an exceedingly short time for making a rational response if any misinformation triggered a sudden confrontation. Furthermore, both the states have nuclear weapons and any misguided information can escalate the situation because the element of uncertainty plays a decisive role in the escalation of a crisis. Some are believed to voice their conviction regarding

the nuclear arsenal in these guileless words: "use them or lose them." Hence, Pakistan has to keep considering the option of using the nuclear weapons if required.

Therefore, there is a dire need to reformulate the security agenda in this region. However, neither India, nor Pakistan can do this single handedly; both will have to sincerely negotiate the reformulation of the agenda. Considering the conventional / non-conventional issues, such as the debate over terrorism, India calls for a one-point agenda, which is anti Lashkar-e-Taiba, while Pakistan calls for a much broader approach. Pakistan is threatened and concerned at many different levels. Like, evidently faces the harsher blow of terrorism because the loss of human life is more than three thousands in suicidal bombing only, while in the Mumbai Attacks, 166 human lives were lost, in total. With this regard, the option of using the nuclear weapons is presented. The idea of limited war under the nuclear shadow is precarious because limited war for one country may not be completely acceptable to the other. Hence, the threat of escalation is very high in case of surgical air strikes, limited war, or capturing of some Pakistani territory by rapidly moving combat units. Pakistan is likely to respond in the same manner.

The U.S. policy of rolling back Pakistan's nuclear capability has become an unrealistic objective. The United States instead sought to restrict Pakistan's nuclear capability to a minimum deterrence posture and dampen the security competition with India.

## New dimensions of Nuclear Security Culture

The clear cut nuclear doctrine is not given by Pakistani officials. This does not lead to the notion that Pakistan has not doctrine. In fact, different operational plans are declared. Pakistan believes to use nuclear weapons as a last resort. It means the loss of territory or military defeat leading towards the usurpation of large areas by Indian Army can escalate the situation.

While seeing the annals of history, it is evident that Z.A. Bhutto declared the policy of nuclear weapons usage. He stated, "Ultimately if our backs are to the wall and we have absolutely no option, in that event, this decision about going nuclear will have to be taken" (Pakistan Times, 1974; Shahid-ur-Rehman, 1999:1-15).

Lt. General Khalid Kidwai, the director of Pakistan Strategic Plans Division, explained and unfolded the policy over this issue. Kidwai said "Nuclear weapons will be used only the very existence of Pakistan as a state is at stake".

Nuclear weapons are aimed solely at India. In case that deterrence fails, they will be used if:

- India attacks Pakistan and conquers a large part of its territory. (Space Threshold);
- India destroys a large part either of its land or air forces (Military Threshold)
- India proceeds to the economic strangling of Pakistan (Economic Threshold)
- India pushes Pakistan into political destabilization or creates large scale internal subversion in Pakistan (Domestic Destabilization) (Lavoy, 2007; Ahmad, 1998).

It is quite obvious that the last two elements give the allusion of ambiguous prospects of Pakistan's vision to use nuclear weapons in case of an escalation. Economic strangulation and domestic destabilization are the factors that have no clear red lines, the crossing of whom will initiate a nuclear cataclysm by Pakistan. It leads to the assumption that by not pointing the precise factors, Pakistani defence strategist are anticipating to create uncertainty among so that they may restrain their expansionist designs.

Pakistani nukes are also meant for to deter an astounding Indian attack by the conventional forces. Although this may be a controversial notion as in case of a serious break of security, there are chances of surgical military attacks as it was feared after the Mumbai attack in India. But it is an established fact that during the crisis of 1998, 1999 & 2001 & 2002, and in 2010 as well, Pakistan successfully deterred the Indian military escalation. The credibility of this vision is also apparent in the light of president Musharraf's speech of Dec.2002 that "if Indian forces crossed the border, Pakistan would not restrict its response to conventional warfare" (*The News*, 2002).

The perception about defending the state quite universal in the sense that United States in 1945 resorted for nuclear devices to attain the victory in WWII. Similarly Russia (former USSR) tested the nuclear device in 1949 that was having the code name "Joe I" whose design was quite similar the Atom Bomb "Fat Man" that was exploded on Japan. By espionages the design was taken by Russian scientists. It was to counter the US hegemony and military might over the globe.

Nuclear Weapon States	Date of First Test	Still Possesses nuclear Weapons?
Unites States	16 July 1945	Yes
USSR/Russia	29 August 1949	Yes
United Kingdom	3 October 1952	Yes
France	3 December 1960	Yes
China	16 October 1964	Yes
Israel	2 November 1966	Yes
India	18 May 1974	Yes
South Africa	22 September 1979	No
Belarus	N/A	No
Kazakhstan	N/A	No
Ukraine	N/A	No
Pakistan	28 May 1998	Yes
North Korea	9 October	Yes

## **Growth in the Number of Nuclear Powers**

Baylis, John, Wirtz, James J. and Gray Colin S. (2010). *Strategy in the Contemporary World*. New York: Oxford University Press. p. 209.

The atomic program of United Kingdom also reveals the fact that UK wished for self resilience to defend their territory in case of any danger. Prime Minister Atlee said, "We would not agree that only America should have nuclear energy". Nuclear weapons of France are part of national 'force de Frappe' that was established in 1950's & 60's to make France enable itself to defend itself and have the nuclear deterrence under its own sovereign control.

Chinese history unfolds the same fact that causes the nuclear test in Oct 16, 1964. According to official statement, "China has become a nuclear weapon state after a decade of struggle to strengthen its defense and to oppose the US imperialist policy of nuclear blackmail and nuclear threats".

India Prime Minister Atal Behari Vajpayee wrote letter to the then US President Bill Clinton,

"I have been deeply concerned at the deteriorating security environment faced by India for some fears part. We have an overt nuclear state on our borders. Although our relations have improved in the last decade but an atmosphere of distrust persists mainly due to unresolved problems to add to distrust that country has materially helped another neighbour of ours to

become a covert nuclear weapon state. At the hand of this bitter neighbour we have suffered three aggressions in the last 50 years, and for last 10 years we have been the victim of unremitting terrorism and militancy sponsored by it in several parts of our country" John Lewis Gaddis

So in this backdrop we can say that quest of national security is the greatest desire among others to develop nuclear weapons.

Nuclear weapons prevented the full fledge war between India and Pakistan on several tense situation but it is also a fact that nuclear weapons cannot stop wars in totality. Vietnam, Iraq, Afghanistan etc are source of the examples that exhibit the fact that super powers had not missed the opportunity to adventure. More importantly Afghanistan's attack on Falkland and Egypt's attack on Israel in 1973 are the categorical examples that even a non-nuclear state can attack a state having nukes or those backed by them.

## Pakistan Nuclear Security Culture

Nuclear security culture evolved in Pakistan after the September 11 attacks. Pakistan improved its supervisory procedure for military and scientific manpower. The security division of the SPD established a reporting system for monitoring the movements of all officials (Khan, 2010; Jaspal, 2004:85-90). For the past decade, there has been a National Command Authority (NCA) with a dedicated secretariat (the Strategic Plans Division, or SPD), which is responsible for all nuclear-related activities. Two identical programs for employment security were created: the Personnel Reliability Program (PRP) and the Human Reliability Program (HRP), for military and civilian personnel, respectively.

A security clearance system of annual, semiannual, and quarterly review was created. Counter Intelligence Teams were created to act as the daily eyes and ears of the SPD. Weekly, monthly, and quarterly reports for the security of all organizations are maintained by the SPD to prevent theft, loss, or accident (Khan, 2010; Jaspal, 2004:85-90).

Nuclear Safety Directorate (NSD) is one of the Directorates of Executive Wing of PNRA and is located at PNRA HQ Islamabad. Main functions of NSD include the following:

## Main functions of NSD

	Licensing of nuclear power plants including modifications, periodic safety reviews and re-licensing
b	Licensing and inspections of nuclear grade equipment manufacturing facilities
с	Establishing and maintaining regulatory framework for nuclear safety
d	Reviews and Assessments
е	Self assessment
	Coordinating with Regional Directorates in activities related to nuclear safety
n 1	Maintaining and disseminating information on nuclear safety within PNRA
h	Preparation of regulations, working procedures, and guidelines

## Major on-going activities of NSD includes

	Planning and coordinating safety review of Preliminary Safety Analysis Report of the second unit of Chashma Nuclear Power Plant (C-2)
b	Re-licensing of Karachi Nuclear Power Plant (KANUPP)
С	Coordinating IAEA expert missions for the review of C-2 PSAR
	Preparation of regulations for the licensing of facilities for manufacturing nuclear grade pressure retaining mechanical components
е	Coordinating inspection activities of PNRA HQ during third refueling outage of Chashma Nuclear Power Plant unit-1 (C-1)
f	Planning and preparations for integrated safety review

Source: Pakistan Nuclear Regulatory Authority, http://www.pnra.org/ns.asp

Next, a system of sensitive material control and accounting was introduced. The system was derived from modern training, possibly modeled on U.S. national laboratory procedures. The system involved regular and surprise inspections to tally material production and waste in order to maintain transparency and accountability. Under a careful, secret plan instituted by the SPD, professional guards at static sites and escorts with tight security procedures are involved during transportation. Special theft- and tamper-proof vehicles and containers are used. In peacetime, nuclear weapons are not

mated with their delivery systems and are not operationally deployed. Operational secrecy precludes specific discussion of management of nuclear arsenals, but a two-man rule and, in some cases; a three-man rule is followed, with physical safety and firewalls built into the weapon system to prevent any unauthorized launch (Krepon, 2010).

The inception of the Nuclear Security Action Plan (NSAP), organized by the Pakistan Nuclear Regulatory Authority (PNRA), was a very important development in Pakistan's nuclear security management. The PNRA is an independent body responsible for civilian programs, but it coordinates closely with the SPD. The two organizations complement each other by sharing best practices. The official duties are categorized as:

- 1. Management of Radioactive Sources:
- 2. Locating and Securing Orphan Radioactive Sources
- 3. Provision of Radiation Detection Equipment at Strategic Points
- 4. Nuclear Security Emergency Coordination Center (NuSECC)
- 5. Nuclear Security Training Center (Pakistan Nuclear Regulatory Authority).

The main task of the NSAP is to manage all nuclear activities and radioactive sources that are under regulatory control and to develop a sustainable national system. Nuclear security emergency centers and procedures to secure orphan radioactive sources and to secure borders against any illicit trafficking have been put in places.

A Nuclear Security Emergency Coordination Center has been established in Islamabad, which is the focal point of coordination, by all the government agencies. The effectiveness of the nuclear security culture is difficult to measure, which is true for all nuclear powers, including the United States. It involves institutionalization of standing operating procedures and practices beyond individuals. No matter how good a system is, it will require constant improvement (Bidwai, and Vanaik, 1999:241-250; Chakma, 2009:104-126).

Despite widely known limitations, Pakistan has done remarkably well in establishing a nuclear security regime and an evolving nuclear security culture that requires encouragement and support. It has been quite liberal in briefing U.S. officials, academics, and even journalists about its nuclear management. Over several years, Pakistan has sent officials, technicians. and administrators to receive training on modern technical solutions and management under the aegis of mutually acceptable arrangements that cater to each side's sensitivity. Non-weaponized deterrence is there, keeping the nuclear warheads separate from their means of delivery is important. They both are border state, so in case of urgency the response time is much shorter, so there is great need to improve the information system, the

response time and to maintain the present status of nuclear weapons that they are not in deployed form. The assembling and deployment should remain separate the response time may increase and political side can be more effective decision mankind process (Cheema, 2010:315-357).

#### Nuclear Deal

It is established fact that Pakistan's purpose to go nuclear was to deter India. The quest for security has been remained the basis of Pakistan's priority Pakistan's nuclear & missile technological advancement is a quid pro quo to the Indian Counterpart and any effort from the international players to enhance Indian prospect will ultimately destabilize the regional strategic balance. It is evident from the nuclear deal between USA and India. On 8<sup>th</sup> October 2008, President George W. Bush signed on the nuclear deal with Indian entitled as "United States-India Nuclear Co-operation approved and Non Proliferation Enhancement act". However this deal is not astonishing for the researchers across the world as it was a logical outcome of the policies adopted by USA Secretary of State for Foreign Affairs, Condoleezza Rice said, "The sky can be limited but US-Indian friendship is above all limits" (Rajain, 2005:197-200).

The honeymoon was the outcome of USA new world order policy assigning India an important role with ambitions to counter China so as to act "as policeman" to consolidate her hold in the region of South Asia. Initially a part was signed with Indian on 27 June 2005 in Washington aimed for defense cooperation, joint weapon production and lifting ban on US exporter for dual use of technology. Both countries could able to cooperate in missile defense and other military research activities while Congress passed the Nuclear Cooperation Promotion Act on 26 July 2006. By the nuclear agreement, India showed willingness and acceptance to separate the civilian nuclear reactors from the military installation Indian designs are to make her a major power in 21<sup>st</sup> century and this pact gives enough hope to the Indians to get a permanent seat in the Security Council. And in the recent visit of USA president, Barrack Obama has ratified the Indian ambitions and gave support to the Indian ambitions to get the permanent seat in the United Nations Security Council (UNSC). Along with it, India wants to establish its naval control over the Arabian Sea, Indian Ocean and Strait of Malacca in order to get control over the important strategic and trade routes. Through this agreement, India will able to utilize atomic fuel for its nuclear reactors meant for military purposes. It is quite contrary to the restriction of NPT and NSG policy.

This deal has not only destabilized the region of South Asia but also it has given impetus to the Pakistani policy makers to work endeavoursly to fill this gap. United States has its own designs and ambitions in the aftermath of

dismemberment of USSR. This agreement will enhance the influence of United States over this region by backing Indian military might. It establishes the very fact that United States has never treated India and Pakistan on equal footing and USA has accepted that India is a dominant power in this region (Tasleem, 2007).

As evident from the speech of US President Barrack Obama during his visit to India "India is not an emerging power but India has emerged". It can also be said that this enhance cooperation is to contain the emerging Sino-Russian alliance in Asia. USA wants to give share to India in war against terrorism so it wanted to make it a strategic ally. It will not only give support to US weapon industry but also enhance the economic prosperity of USA by creating more than 50,000 jobs (Khalid, 2011).

In this whole scenario Pakistan has shown its concerns. Pakistan cannot remain secluded from the effects of this deal these developments have a long lasting imprints on political, economic and strategic milieu in the whole region. Pakistan has been a traditional ally of USA in this region. Pakistan remained a front line state during the Afghan war and again now during the ongoing war on terrorism. The sidelining of Pakistan raises important question in the minds of policy makers of Pakistan. If Eastern borders are secured, only then Pakistan can work efficiently on the Western border to counter terrorist activities and safe heavens of militants. The unconditional Pakistani support during the war on terrorism and a biased response from the American counterparts demands a complete overhauling of the Pakistan Defense policy. Some major Pakistani concerns are that India will emerge a dominant power and the South Asian strategic balance will jeopardize. The deterrence of Pakistan will exposed to the Indian advanced technology and Indian acquisition missile technology will undermine the Pakistan's doctrine of minimum credible nuclear deterrence. Last but not the least. Kashmir issue is also linked with the Indo-Pak rivalry and equitable settlement will not occur due to this development.

## Recommendation

In order to come out a new destiny Pakistan has to draw new policy options.

- Pakistan must strengthen its relationship with China. Relationship with Russia also requires to be improved.
- United States has to acknowledge the fact that stability in this region will only ensure perpetual peace so Pakistan ahs to assert its role in fight against terrorism.
- Pakistan must approach to new forums e.g. Shanghai Cooperation Organization. Pakistan has to strike for its permanent membership to play its role more positively.

Pakistan has to play a very balanced role in the ongoing crisis in the Middle East. To have good brotherly relations are necessity of time.

The biased and dual attitude of United States is also evident from the fact that the administration of United States declares India as a 'responsible state' as announced on July 18, 2008 over the US-India expanding relations. It seems to be a diplomatic necessity of United States but the reality is quite contrary to it. It was quite ironic on the part of United States of America, that it declared India a responsible nuclear state while India was sanctioned over its ostensible peaceful nuclear explosion of 1974. Similarly, Nuclear Supplier group was forced to support the trade of nuclear material with India which was having a flawed track record.

India has opposed the resolution of Pakistan in United Nations General Assembly that was about to establish a Nuclear Weapons free zone in South Asia in 1974. As far as the matter of signing CTBT (Comprehensive Test Ban Treaty), Pakistan was of the opinion not to sign it unilaterally but India's views were quite astonishing. According to an article published in Dawn Oct 1, 2005, Indian representative vowed that her country would never sign this unequal treaty, not now, not later".

In addition to the above fact, Indian nuclear doctrine also shows the negative and aggressive strategy on which India is following. It gives Indian nukes a pre-emptive role if Indian forces are threatened with chemical and biological weapons anywhere in this world. So the word, "anywhere" has a threatening consequences.

According to a research, there had been over 32 cases uranium smuggling involving Bhar, Jarhand, Orissa and West Bengal. Moreover United State has Sanction on Indian company that was helping Iraqi Chemical & Biological weapon program, the name of company is NEC Engineers Private Ltd.

Similarly Indo-Iranian nuclear cooperation goes back to 1980s when India helped Iran in establishment of Blusher Plant. India was also involved in transferring and benefiting North Korea regarding nuclear technology use. In 2003, Aug, Taiwan seized a ship possessing the material that can be used in nuclear technology and it was made in India. So the allegations pointed by the west about the irresponsible behavior of Pakistan are not based on entire truth. It is a fact that Dr. A.Q. Khan had showed an irresponsible behavior but according to the official statements, it was his unilateral act and it is nothing to do with govt. of Pakistan. Moreover, Pakistan has sacked him and other individuals that were involved in such crime (Bunn, 2010:329-367; Montgomery, 2010:413-447).

In fact after the nuclear tests of 1988, it was the need of hour for Pakistan to manage the nuclear program on institutional way along with renewing the national security policies .Pakistan establishes an effective nuclear Command and Control Authority to regulate all the nuclear related activities. The Structure of Pakistani nuclear command authority is based on 3 dimensions. The first one is National Command Authority which is the highest policy making authority. Second is the strategic planning division which is also the secretariat and last one is strategic force command. It is thus responsible for planning, control and operation of the nuclear activities. It is important to note that this structure is similar to what is present in USA and other European Countries.



Source: President promulgated National Command Authority Ordinance, Retrieved from:

http://www.sassu.org.uk/pdfs/National%20Command%20Authority%20Ordian ce.pdf

India announced the establishment of its Nuclear Command Authority in January 2003. This consists of a political council, an executive council and a tri-service strategic force command. Any decision to launch a nuclear attack will be taken by the political leadership and executed through the nuclear command. The Executive council provides inputs for decision making by the NCA and executes the directives given to it by the Political Council. Strategic Forces Command is responsible for the administration of the nuclear forces. Export controls have also been strengthened through the introduction of new and comprehensive export control laws, by Pakistan in 2004, and by India in 2005.

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# **Indian Nuclear Command and Control**

**Source:** Nuclear Command and Control in South Asia, Research Paper No. 13 by Swaran Singh. *China-India-Pakistan: Nuclear Command and Control in Southern Asia.* 

The nuclear equation in South Asia is not simple. The rivalries and suspicious attitudes can result into such instable condition where both countries can go at the brink of nuclear cataclysm. Although the confidence building measures are continuously taken to lessen the tension between the two states but the presence of hawks on both sides gives the alarming picture of the fragile relations between the two countries. Pakistan's nuclear and security designs are Indian centric but Indian nuclear doctrine is not to counter Pakistan only. In fact, Indian policy makers want to curtail the military and economic might of China thus to become a hegemon in this region. In this prospect, United States and the Western attitude towards India can be term as an appeasement and it is quite threatening for the peace and security of the whole region. Pakistan can never afford an arms race with India due to the de stable and fragile economic situation of the country. But to maintain the security of the state, Pakistan follows the policy of minimum credible deterrence by which the territorial integrity and national security can be maintained. President of Pakistan Mr. Asif Ali Zardari also ensured the Indian counterpart in an interview that Pakistan assures the non first use policy of the nuclear weapons. Thus, it is clearly evident that Pakistani designs are not aggressive but only to defend the territory. International community should step forward in this regard to promote peace and stability in this region. In the current scenario. Nuclear disarmament and formation of nuclear free zone seems to be a Utopian Idea but still one can say where there is will, there is a way. The country launching a nuclear strike cannot escape itself from the radiation resulting from it and more over in the guid pro it cannot prevent the other to go for nuclear retaliation (Rizvi, 2005:97-109; Hoyt, 2005:110-136; Chari, 2003, Bunn, 2012, Sethi, 2009).

India cannot meet the standards as that of China in the foreseeable future. But in the way forward to achieve this aim, it is exacerbating the Pakistanis security concerns and upsetting the regional balance of security. The dynamics of the Central Asian heartland and the ongoing war on terrorism are changing the global political arena. Both India and Pakistan want their share in the changing power equation but their role will be positive only if they will accommodate themselves as according to IAEA Director General Mohammad Al Baraei "Though innovative and out of box solution". The dictum of Napoleon that "God is on the bigger battalions" is now obsolete by the presence of nuclear weapons. Nuclear holocaust can result a massive destruction. It is imperative for both of the states to mitigate their conflicting areas and to enhance cooperation so that this region can be saved from a nuclear nightmare as observed in Hiroshima and Nagasaki in 1945.

#### Western Perspective

Western fears about Pakistani nuclear security range from valid to odd. The more valid concerns involve theft of material, sabotage, unauthorized use of nuclear weapons, and insider-outsider collaboration,

West perceived that, over here, nuclear facilities, power stations, research reactors and laboratories are vulnerable to act of sabotage and could cause the release of dangerous amount of radioactive materials. West also talks about the danger of theft of nuclear weapon and radioactive material. Any misstep against a nervous nuclear-armed country would be a greater mistake than any made in Iraq (Khan, 2013; Lavoy, 2007; Jaspal, 2004).

Fears about the nuclear security in Pakistan exist in the Western World. Some of the concerns are quite genuine and most of them are bizarre. There are issues that nuclear material can be stolen, a complete sabotage of the nuclear site, terrorists infiltration or accidental use of nuclear weapons. It is quite bizarre allegation that Pakistan armed forces can perform such activity along with Taliban or Al-Qaeda members. Practically it is impossible as Pakistan army is the custodian of the nuclear weapons and they are the guardian of the whole nuclear program. The hype of the issue of nuclear insecurity in Pakistan by Western media intensifies the gravity of the situation. Moreover fragile democracy, weak economy and exacerbating domestic insecurity give room to enemies of Pakistan to propagate against it.

Pakistan's nuclear program is a deterrence against India expansionist designs. Pakistan developed its whole nuclear program as a reaction against Indian nuclear buildup. The concerns about insecurity of the nuclear installation of Pakistan were present since this was in embryonic stages. After 9/11 fears grew about terrorists attack or their try to steal it among various international circles. Pakistan is confronting both internal and external challenges about the issue of nuclear security. Fears of preventive strikes on nuclear installation or physical invasion of foreign country, especially India, are present in the security agencies of Pakistan. Along with it the collaboration of an insider and outsider enemy is the most dangerous situation to deal with. The selection of site of nuclear installation is also an important security issue for Pakistan as both Eastern and Western borders are unsafe because of presence of India and Afghanistan respectively. Details of these cannot be given in public because of security environment in Pakistan.

While analyzing the ground realities and the regional environment of the South Asia, When one applies the realist approach in the strategic environment of this region then it is clear that being conventional army's superiority Indian will not go for nuclear option at the first stage while during war with Pakistan, but

the limited strategic depth and conventional military inferiority, Pakistan will be forced to use the nuclear option when the red lines are crossed by India. These red lines may be the invasion of large part of the territory, Pakistan can utilize it in/as the last resort for the sake of its survival.

Western allegations about the involvement of the military with the terrorist elements or their total control over the nuclear program which can lead to the fear of the usage of nukes in case of tense situation is baseless. Pakistan has established a command and control system and further more their training is done on professional grounds making them the most suitable organization for the custodian of the nuclear program. So the organization approach cannot be fit in case of Pakistan nuclear security environment. Similarly individual and global strategic culture is also important while doing the overall analysis. South Asian region has a history of continuous tensions and wars between the two nuclear states. Nuclear deterrent is thought to prevent the war but at the same time presence of hawks in both sides can escalate the tense situation. Thus nuclear security issue increases its importance while observing the South Asian geo-strategic environment (Freedman, 2003:21-28; Dixit, 2002: 415-417; Raman, 2006:100-110; Salik, 2009:282-289).

## **Pakistan Perspective**

Pakistan is passing through an extremely delicate phase in its history.

Two main dangers emanate from the hype on nuclear insecurity in Pakistan.

The first danger is that the grossly exaggerated threat perception in the West may prompt the United States into policy choices it would later regret.

The second danger is that continuing media focus on this issue stokes Pakistani paranoia about U.S. intentions. These fears and suspicions about U.S. intervention inside Pakistan could provoke that country to take defensive actions against foreign intervention rather than focusing on the possibility of reducing internal threats to nuclear security and could further fan anti-U.S. public sentiment (Tabassum, 2003; Vanaik, 2001:169-180; Khan, 2013; Bunn, 2010; Montgomery, 2010; Cheema, 1993:56-60; Chari, Cheema and Cohen, 2007).

**Pakistan's strategic doctrine is undeclared**, and will probably remain so describing the guiding principle as minimum credible nuclear deterrence, high-level officials' statements point to four policy objectives for Islamabad's nuclear weapons:

- 1 deter all forms of external aggression;
- 2 deter through a combination of conventional and strategic forces,

- 3 Deter counterforce strategies by securing strategic assets and threatening nuclear retaliation; and stabilize strategic deterrence in South Asia.
- 4 Pakistani officials have also indicated that this nuclear posture is designed to preserve territorial integrity against Indian attack, prevent military escalation, and counter its main rival's conventional superiority

The senior officials describe Pakistan nuclear security as fool proof multi layered security system. A complete compartmentalization and secrecy is present over here.

Pakistan's strategic force goals are designed to redress its vulnerabilities and to restore strategic balance. Matching warhead to warhead or accumulating fissile stocks for military purposes is not the goal. The objective is to ensure deterrence stability by calculating a minimum deterrence posture that is related to the increasing capabilities of its adversary, namely India.

# Nature of Threats

States managing a nuclear weapons program typically have three main types of nuclear security concerns.

- First, every nuclear-capable state worries about the external threat of a preventive strike by hostile powers against its nuclear facilities
- Second, such states worry about physical invasion of the state by a hostile neighbor.

The third and probably the most dangerous concern is insider-outsider collaboration. Pakistan has lived with all three categories of threats since the inception of its nuclear program. Like every state, Pakistan's program places great emphasis on secrecy and compartmentalization. In the past, no single office, organization, or authority held ultimate responsibility for supervision.

Under this situation Pakistan has developed a comprehensive nuclear security culture to counter these concerns. Some future recommendations are there.

## Recommendations are made at different levels.

- 1 International community should preempt any situation of escalation between the two, rather than engaging in "fire-fighting."
- 2 Pakistan is behind in conventional arms build-up (in the category of number) so;
  - a. Constant diplomacy between Pakistan and India is necessary.
  - b. Strong interaction of international community is also required, not only with the high level officials but also with the leaders that mobilize the public opinion, the media persons, and most

importantly the university teachers and students because social awareness through dialogue can prove to be supportive in handling the situation before it escalates to an uncontrollable one.

- c. Pakistan India should develop separate forum for consulting issues like nuclear proliferation as no country can even imagine for going towards a nuclear war.
- 3 Exchange of information regarding nuclear installation should be done on regular bases in an efficient way to prevent any accidental attack.
- 4 No 1<sup>st</sup> use agreement can be signed provided guarantees are given to Pakistan about its territorial integrity.
- 5 Nuclear escalations can be prevented if causes of rivalries between two states are efficiently resolved.
- 6 Hot line between Pakistan and India should be effectively utilized.
- 7 At operational level, in Pakistan, military has established a system; there is a need to train political leadership.
- 8 There is need to change the mindset of people of South Asia, because the ingrained conflicts between Pakistan and India always pressurized the leadership to take emotional steps rather than to take rational decisions.
- 9 A long term but effective effort is needed to bring change in the process of socialization of the people of Pakistan and India, how much dangerous can be the nuclear weapons are? There is a dire need to create awareness among the people regarding this perspective.

# Conclusion

Nuclear war is not winnable hence not fightable. India and Pakistan are nuclear states that have taken strong measure to secure their nuclear arsenals. Both of the states are responsible and their officials are mature, but one cannot rule out the theoretical possibilities and accidental cases that may provoke a disastrous confrontation. Therefore, there must be a more mature and comprehensive approach to deal with the issue by considering extensive, consistent, and sincere diplomatic ties build-up instead of arms build-up.

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