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Abbreviations

(AAD)	Advanced Air Defense
(ABM)	Anti-Ballistic Missile
(ARF)	ASEAN-Regional Forum
(ASEAN)	Association of the South East Asian Countries
(CBMs)	Confidence Building Measures
(CD)	Conference on Disarmament
(CPEC)	China-Pakistan Economic Corridor
(CSD)	Cold Start Doctrine
(CTBT)	Comprehensive Nuclear-Test-Ban Treaty
(CTBTO)	Comprehensive Nuclear-Test- Ban Treaty Organization
(DPRK)	Democratic People's Republic of Korea
(EEZ)	Exclusive Economic Zone
(FMCT)	Fissile Material Cut-off Treaty
(GBLM)	Ground-Based Ballistic Missile
(GC)	Gulf Cooperation
(HEU)	Highly Enriched Uranium
(IAEA)	International Atomic Energy Agency
(IISS)	International Institute for Strategic Studies
(IMO)	International Maritime Organization
(IOCA)	Indian Ocean Commission for Arbitration
(IOCA)	Indian Ocean Cultural Association
(IOFTP)	Indian Ocean Free Trade Partnership
(IONFZ)	Indian Ocean Nuclear Free Zone
(IORA)	Indian Ocean Rim Association
(IOSCA)	Indian Ocean Security Cooperation Association
(JCPOA)	Joint Comprehensive Plan of Action
(KCNA)	Korean Central News Agency
(LEMOA)	Logistics Exchange Memorandum of Agreement
(LWR)	Light Water Reactors
(MTCR)	Missile Technology Control Regime

(NNWS)	Non-Nuclear Weapon State
(NPT)	Nuclear Non-Proliferation Treaty
(NSG)	Nuclear Suppliers Group
(NWS)	Nuclear Weapon States
(OBOR)	One Belt One Road
(OIC)	Organization of Islamic Cooperation
(PAD)	Prithvi Air Defense
(PAROS)	Prevention of Arms Race in the Outer Space
(RAW)	Research and Analysis Wing
(RoK)	Republic of Korea
(SEATO)	Southeast Asia Treaty Organization
(SLBM)	Submarine-Launched Ballistic Missile
(THAAD)	Terminal High Altitude Area Defence
(TNWs)	Tactical Nuclear Weapons
(UNCLOS)	United Nations Convention on the Law of Sea
(UNMOGIP)	United Nations Military Observer Group in India and Pakistan
(UNSC)	United Nations Security Council
(UNSCR)	United Nations Security Council Resolution

Contents

PREFACE

Journal of Security and Strategic Analyses (JSSA) is a bi-annual, blind peer-reviewed, academic journal. It deals with the contemporary trends and themes in the fields of security and strategic studies. JSSA with its lucid and coherent orientation provides an in-depth understanding of political, security and strategic processes. It also promotes wide-ranging comprehension of key issues and offers an unbiased, extensive and balanced perspective to the readers. The main purpose of the JSSA is to help build an insight about the current security and strategic challenges and explore various dimensions of national international security environment. The journal offers a rich debate on numerous security notions with profound assessments and critique, simultaneously providing policy oriented recommendations that will contribute in creating an alternative academic narrative on significant contemporary issues.

This issue of JSSA covers crucial subject matters such as the politics of NSG, non-proliferation, nuclearization of Korean peninsula, strategic competition in the Indian Ocean, debate on the role of tactical nuclear weapons in South Asia, contours of deterrence in South Asia, and Stability-Instability paradox in south Asia. These research papers will provide much required critical understanding of global politics and the emerging spectrum of new and complex security and strategic threats around the world. Focus of the JSSA is to establish academic and original empirical research to present a unique account of the critical security and strategic matters. Most of the research articles in this issue employ a qualitative research technique and base their data findings on verifiable evidence. Unstructured data is also analyzed through interpretative approach. Simultaneously various indexes and accurate facts have been used in order to achieve more accurate and generalized findings.

One of the research papers in this volume assesses the politics of NSG with reference to discriminatory attitude of great powers to accommodate India. The Paper highlights that the Nuclear Suppliers Group (NSG), once created in response to the Indian nuclear weapons tests in 1974, emerged as one of the significant cartel particularly in the South Asian context. The paper states that one of the interesting aspects with regard to the NSG is that it includes all recognized nuclear weapons states that matter much when it comes to the politics of the NSG amongst its members. The paper

highlights that the NSG's emergence is significant because of its revised provisions urging both nuclear and non-nuclear weapons states to be party to the Non-Proliferation Treaty (NPT) in order to prevent the transfer of nuclear technology to states that are not party to the NPT. The NSG urges states to abide by the provisions of International Atomic Energy Agency. Although the NSG is a cartel not legally binding upon the states, it is indeed casting its influence on both nuclear and non-nuclear weapons states party to the NPT. Therefore, it also influences nuclear weapons states outside the NPT to eventually secure the benefits of the NSG while becoming party to the NPT. This article talks about the challenges that the NSG confronts and provides options to strengthen the prospects of the emerging cartel, particularly with reference to the South Asian region.

Another paper included in this volume highlights importance of the Indian Ocean in world economy. It states that the Indian Ocean is the ancient human passage through waters and contains immense security and economic values not only for the littoral States of the Indian Ocean but also for the extra-territorial powers. The Indian Ocean had for long remained extremely vital in modern history, and global powers occupied significant positions here to influence their policies. As a new entrant, China wants to further integrate the Indian Ocean for regional trade and socio-cultural connectivity under its Maritime Silk Road Corridor. Pakistan is an integral part of the Maritime Silk Road by providing a geographical access to the landlocked western autonomous region of Xinjiang and Central Asia and even beyond at Pakistan's southern Gwadar Port via road, railway, and telecommunication linkages. This is a great step in the economic integration of the Indian Ocean in the 21st century.

The next paper analyzes the contemporary nuclear related developments in North Korea. It states that since the start of 2016 the Democratic People's Republic of Korea (DPRK) has been working towards further advancement of its nuclear and missile programs. There have been some significant developments that include DPRK's claims to have successfully conducted a Hydrogen bomb test (January 2016) and another nuclear test (September 2016) , a successful satellite launch, formation of a new military unit KN-08 brigade to deploy ICBMs, test-firing of a new anti-tank guided weapon etc. The international community has widely condemned all these developments by unanimously adopting the toughest

United Nations Security Council Resolutions (UNSCRs) against the DPRK. All these UNSCRs focus on the economic and diplomatic isolation of DPRK through a series of sanctions, but DPRK still seems determined to further advance its nuclear and missile program. This research paper gives a rundown of the DPRK's previous nuclear tests and would also list the UN Security Council resolutions adopted against the DPRK. It also provides an analytical overview of North Korea's test conducted in January and September 2016. Moreover, the possible motives behind North Korean nuclear adventurism have also been analyzed. The official responses and the measures taken by the international community on the recent North Korean nuclear tests will also be discussed in detail.

This issue of JSSA also covers an important topic where the objective and aim is to explain the Indo-US concerns and arguments regarding Pakistani tactical nuclear weapons and how far these concerns are justified. This study seeks to analyze the fears of western and regional states against Pakistan's TNWs and endeavors to find the ways in which Pakistani policy makers and opinion makers can best respond to these challenges. It draws on both sides of the argument and discusses whether Pakistan has efficiently tackled the concerns raised by the international community or it has failed to achieve the status of a responsible nuclear weapon state. It states that Pakistan's scientific and military establishment believed that acquisition of nuclear weapons would render India's conventional military superiority irrelevant. However, in less than a year, the 'irreversible accomplishment' was more or less reversed with the limited war in Kargil, Siachen. The aftermath of the military adventurism taught Pakistan Army the single most valuable lesson that would shape its policy in subsequent years: India's conventional superiority could very well assert itself within Pakistan's nuclear threshold. In order to tackle this, Pakistan decided to introduce a nuclear dimension to tactical warfare. The idea, as viewed by different analysts, is either absolutely in genius or absolutely absurd. It has the potential to paralyze Indian Cold Start strategy as a deterrent or it has the potential to provoke a massive nuclear retaliation in the event of a limited war. While theoretically and historically evaluating the efficacy of Pakistan's Tactical Nuclear Weapons (TNWs) as a deterrent, the research paper has found that Pakistan has no intention of using TNWs; rather it is for deterrence purpose and for maintaining the strategic stability. Moreover, Pakistan has proved to be a responsible nuclear weapon state by inculcating changes within its security apparatus.

Another research article examines the changing deterrence contours of Pakistan with respect to its impact on deterrence stability in South Asia. Since the deterrence contours of nuclear power states significantly affect the deterrence environment, therefore Pakistan's changing deterrence postures are taken into account to analyze its impacts on South Asian evolution of deterrence. The need of its maintenance as "necessity" is encompassed in this paper because of its close association with deterrence contours. For broader understanding of deterrence environment in South Asia, evolution of nuclear deterrence and its imperative-maintenance are critical. Primary focus in this attempt is given on the changing deterrence contours of Pakistan because of the fact that it has multi-layered perspectives and perplexity. It is also endeavored to figure out and analyze the rationale behind the changes and character of these changes as "responsive policies".

Next paper highlights that nuclear weapons have the capability of maintaining stable relations between nuclear neighbors at strategic level but at the same time prove disappointing at the lower edge of spectrum. This speculation is called 'stability-instability paradox'. This paper investigates the extent to which the theory is applicable in Indo-Pak relations. By drawing a comparison between pre and post nuclear crises between India and Pakistan, the study analyses that post-nuclearized South Asia has been characterized by a number of crises and near crises situations, but the introduction of tactical nuclear weapons has toned down the fragile environment. Further, stability at conventional level is being threatened by some aspirant Indian moves, like Ballistic Missile Defense. The study concludes that new strategic developments by India demands a quantitative and qualitative up-gradation of Pakistan's nuclear weapons and delivery system, survivable command and control system, reliable early warning system and a change of its nuclear posture. The study postulates that if the balance of terror tilts in Indian favor, the prevalent stability-instability paradox will turn into a total instability.

All the articles included in this volume are reflective of the SVI's endeavor to broaden the academic and policy understanding in strategic and security spheres. The articles present authentic and veritable ideas and concepts underlying the security concerns.

JSSA strives to maintain the quality of research according to the standard guidelines and rules of HEC, and devotes significant attention to research, analyses and policy narratives. Hence it is hoped that the comprehensive research work, with a focus on Regional Peace, Security and International Stability found in this Volume of JSSA, will enable the readers to remain updated with the contemporary issues and enhance the knowledge to build linkages with the academia.

RESEARCH PAPERS

NSG Norms: Critical Issues and Criteria

Zafar Khan*

Abstract

Nuclear Suppliers Group (NSG), once created in response to the Indian nuclear weapons tests in 1974, emerged as one of the significant cartel particularly in the South Asian context. One of the interesting aspects with regard to the NSG is that it includes all recognized nuclear weapons states that matter much when it comes to the politics of the NSG amongst its members. The NSG's emergence is significant because of its revised provisions urging both nuclear and non-nuclear weapons states to be party to the Non-Proliferation Treaty (NPT) in order to prevent the transfer of nuclear technology to states that are not party to the NPT. The NSG urges states to abide by the provisions of the International Atomic Energy Agency. Although the NSG is a cartel not legally binding upon the states, it is indeed casting its influence on both nuclear and non-nuclear weapons states party to the NPT. Therefore, it also influences nuclear weapons states outside the NPT to eventually secure the benefits of the NSG while becoming party to the NPT. This article talks about the challenges that the NSG confronts and provides options to strengthen the prospects of the emerging cartel group particularly with reference to the South Asian region.

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Keywords: Nuclear Suppliers Group, Nuclear Cartel, Non-proliferation Regime, International Atomic Energy Agency, South Asia,

Introduction

Although the Nuclear Suppliers Group (NSG) was created in response to the 1974 Indian nuclear test, it is surprising to observe that even the NSG's revised guidelines of June 2013 does not mention India directly whose nuclear weapon test became reason for the creation of NSG in the first place.[1] One may question why NSG hides the fact of its origin when it exempted the same nuclear weapons state, India, which is neither a party to the Non-Proliferation Treaty (NPT) nor CTBT and conducted more nuclear weapons tests in May 1998. Is not this the violation of the NSG's norms for which this was first created? Or is it ok for the NSG to remain flexible in its policy guidelines giving exemptions to a nuclear weapons state not party to the NPT? Should the future NSG's members need to become part of the NPT first? This becomes the utmost critical issue when it comes to the growing normative posture of NSG.

The NSG works on the principle of consensus by following the two prominent sets of its normative posture. One, it is responsible to strictly follow the guidelines for nuclear exports. Two, it also has a role related to the nuclear related exports.[2] It is imperative to note that the first set of NSG guidelines deals with elements such as a) nuclear materials, b) nuclear reactors and equipments, c) non-nuclear materials for reactors, d) plants and equipments for the reprocessing, enrichment and conversion of nuclear material and for fuel fabrication and heavy water production, and e) nuclear technology for each of the above nuclear export elements. The second set of NSG guidelines largely deals with nuclear export related

[1]See the NSG document "The Nuclear Suppliers Group: Its Origins, Role and Activities," INFCIRC/539/Revision 6, IAEA, January 12, 2015 Accessed Feb ,2016 https://www.iaea.org/sites/default/files/infcirc539r6.pdf.

[2]For more technical details of these nuclear-related exports elements, see "Guidelines for Transfer of Nuclear-Related Dual-use Equipment, Material, Software, and Related Technology," NSG Part 2 Guidelines –INFCIRC/254/Rev. 10/Part 2. Accessed May 9, 2016 https://www.iaea.org/sites/default/files/publications/documents/infcircs/1978/infcirc254r10p2.pdf.

materials such as fuel cycle and nuclear explosives for industrial purposes only.[3] Both of these two sets of NSG guidelines are consistent with the provisions of internationally binding treaties in the field of nuclear non-proliferation such as the Non-Proliferation Treaty (NPT), the Treaty for the Prohibition of Nuclear Weapons in Latin America and the Caribbean (Treaty of Tlatelolco), the South Pacific Nuclear Free Zone Treaty (Treaty of Rarotonga), the African Nuclear Weapon Free Zone Treaty (Treaty of Pelindaba), the Treaty on the Southeast Asia Nuclear Weapon Free Zone (Treaty of Bangkok), and the Central Asian Nuclear Weapon Free Zone Treaty (Treaty of Semipalatinsk).[4]

One of the major aims of making the NSG consistent with the international non-proliferation treaties, including that of its consistence with the International Atomic Energy Agency (IAEA), is to make the NSG members binding to follow the peaceful uses of nuclear technology by prohibiting the transfer of nuclear export and nuclear related exports technology that could be diverted from peaceful to military purposes. Therefore, the NSG makes all endeavors ensuring that these two sets of guidelines for ensuring that the nuclear technology be only used for peaceful purposes and all the nuclear related materials need to come under the IAEA's additional safeguards. One of the major consistencies of the NSG is to enforce the IAEA's credibility in the field of international non-proliferation endeavors.

One of the major challenges that may fall within the critical issues of the NSG as it confronts 21st century nuclear politics is the induction of more members especially the states not Party to the NPT. Since the revised NSG's provisions talk about criteria-based principles based on unanimous consensus among the members, it would be challenging to see how the NSG could induct non-NPT states particularly possessing nuclear weapons into the NSG. There are two options. One, the NSG could follow its

[3] Ibid. p. 1.
[4] Ibid. p. 1.

principles, and allow only these non-NPT states that become part of the NPT first before they join the NSG. However, this strict criteria may not be acceptable to, say, India and Pakistan, who are de facto nuclear weapons states, but they have never joined the NPT. Rather these states would like to be recognized; that is, obtain a formal nuclear legitimacy like the P-5 major nuclear weapons states before they could become part of the NPT.[5] Two, the NSG could relax the conditions through mutual consensus that are acceptable for both India and Pakistan as non-NPT members and allowing both India and Pakistan simultaneously into the NSG enjoying the similar rights for peaceful uses of nuclear technology under the IAEA's comprehensive safeguards without compromising on their nuclear weapons status. In contrast, creating exceptions for one state against the interest of another could jeopardize the credibility of the NSG in general and affect the strategic stability of South Asia in particular.

This article talks about the NSG norms and the critical issues it confronts in the 21st century international non-proliferation politics. In addition to mainly talking about the NSG norms, this article talks about the critical issues, and various options the NSG may opt not only to sustain the credibility of NSG and international non-proliferation, but also allow the induction of more states, especially nuclear weapons states not Party to the NPT. It concludes that NSG rises up as one of the leading international non-proliferation regimes that could lose its credibility if it creates discrimination and promotes exceptions allowing one state at the expense of another. However, its credibility could be restored if it makes endeavors ensuring either a specific criteria for all states or relax the bar of restriction in order to accommodate new states without compromising on its credibility.

[5]For an excellent work on the NSG option for inducting more states in future, see Mark Hibbs, *The Future of the Nuclear Suppliers Group*, Washington: Carnegie Endowment for International Peace, 2011).

NSG Guidelines

The formation of the NSG is based on normative principles that it would promote the ideals of non-proliferation while encouraging member states, including nuclear weapons states, to strictly follow the peaceful uses of nuclear technology. The NSG would make sure that its principles are not violated and that, even if it has to increase its membership, it will be based on criteria it sets for. For example, any decisions the NSG members would take will be based on unanimous agreement ensuring its normative principles. Any exemptions or country-specific decision without meeting the provisions of the NSG it could undermine the credibility of the NSG in general and international non-proliferation regime in particular. The revised guidelines based on unanimous agreement make few important provisions binding upon the NSG members.

First, one of the important factors taken into account by the NSG for its membership is that a participant or a member needs to adhere to one or more treaties such as the Non-Proliferation Treaty (NPT) or other international treaties on nuclear weapons free zones with full compliance with obligations of such agreements.[6] This factor can simply be interpreted that the NSG requires a participant/member to become part of the NPT or other international treaties with full compliance of the provisions of these treaties when it comes to the NSG's membership in the first place.

Second, when it comes to the special controls on sensitive exports that largely include the Enrichment and Reprocessing Nuclear Technology (ENR), the NSG's revised guidelines clearly depicts that the Suppliers should not authorize the transfer of these sensitive materials if the recipient does not meet at least all of the following criteria:

[6]For more technical details of these nuclear-related exports elements, see "Guidelines for Transfer of Nuclear-Related Dual-use Equipment, Material, Software, and Related Technology," NSG Part 2 Guidelines –INFCIRC/254/Rev. 10/Part 2. https://www.iaea.org/sites/default/files/publications/documents/infcircs/1978/infcirc254r10p2.pdf..

1. The recipient is a Party to the NPT and is in full compliance with the NPT provisions;
2. The recipient is not identified as breaching the International Atomic Energy Agency (IAEA)'s safeguard agreement;
3. The recipient follows the NSG's guidelines and implements effective export controls as identified by Security Council Resolution 1540;
4. The recipient has concluded an inter-governmental agreement with the supplier which includes assurances regarding non-explosive use, effective safeguards in perpetuity (lasting) and retransfer;
5. The recipient has made a commitment to the supplier to apply physical protection of the transferred nuclear technology based on the current international guidelines as agreed between the Suppliers and Recipient;
6. The recipient has committed to the IAEA's safety standards and adheres to the international safety conventions.[7]

Third, in addition to these criteria based provisions, the NSG's guidelines also mention that the Suppliers should not transfer the enrichment and reprocessing nuclear materials that enable the recipient to produce greater than 20% of enriched uranium. To satisfy the non-proliferation measures, the NSG's guidelines for the Suppliers envisages that their transfer of these nuclear technologies would not contribute to the proliferation of nuclear weapons or other nuclear explosive devices or be diverted to acts of nuclear terrorism. The NSG makes sure that the Suppliers have legal measures when it comes to the effective implementations of the NSG's guidelines including "export licensing", "enforcement measures" and "penalties for violations".[8]

[7]See the revised NSG's revised guidelines, "Guidelines for Nuclear Transfer," NSG Part 1 Guidelines INFCIRC/254/Rev.13/Part 1. Accessed June 2016. https://www.iaea.org/sites/default/files/publications/documents/infcircs/1978/infcirc254r13p1.pdf.

[8]Ibid. p. 6.

As part of the NSG's guidelines, it claims to increase its membership on the basis of mutual consensus. However, the NSG is not substantially clear whether the factors for future membership be based on criteria or country-specific exceptions, with special exceptions granted. For example, if India goes into the NSG, it will be a nuclear weapons state, not Party to the NPT. This will go against the NSG's revised guidelines when it comes to norms and specific criteria of the NSG unless otherwise the NSG brings some structural reforms for new members especially that are nuclear weapons states, not signatory to the NPT. It is not clear how this could affect the norms of the NSG in the 21st century nuclear politics. This raises more questions than answers: Will this be good enough for NSG or a failure for international community which would in turn undermine the strategic stability of South Asia in general and international security in particular? What options the NSG will then have in order to restore the balance making sure that India's inclusion into the NSG alone could not trigger new arms race? Can Pakistan be accepted as a member of the NSG after it grants India a membership? Has the NSG thought of the strategic consequences about India's inclusion into the NSG as a non-NPT member leaving Pakistan behind?

NSG plays an absolutely essential role that governs the set provisions for both nuclear exports and nuclear-related exports. Gradually, the NSG makes sure that it keeps itself updated, effective and credible. Currently, NSG seems to have increased its credibility much more making sure that its members would follow the strict guidelines by not exporting the nuclear related technology to both nuclear and non-nuclear weapons states if they are sure that these nuclear related items/technology/materials could be diverted for nuclear weapons program. NSG confronts critical issues with regard to its long lasting efforts for meeting the principles of non-proliferation and peaceful uses of nuclear technology. This is discussed next.

NSG and the Critical Issues

The NSG currently confronts critical issues as majority of its members have already provided certain exemptions in terms of providing nuclear technology to India. Most of the NSG major powers possessing nuclear weapons have shown commendable amount of leniency to India including the recent Grossi Formula paving the ways for India to secure a smooth entry into the NSG. Creating exceptions in most of the cases for India, whilst ignoring the set criteria by lowering the restriction bar, undermines the credibility of the NSG and the international non-proliferation regime. Since the NSG rises up as one of the important cartels in the field of non-proliferation, it is not free from a number of critical issues it confronts.

First, the US-India nuclear deal and the NSG's nuclear exemptions to India has become a critical issue for the NSG in terms of sustaining its credibility. This indicates that NSG undermines its own credibility by violating its own set guidelines; raising the question if and for how long the NSG would continue to follow the criteria and guidelines making the provision that any new state becoming part of the NSG need to be Party to the NPT. Although India theoretically claims to follow the IAEA's additional protocol by accepting its safeguards, it is not clear whether or not India is following the comprehensive safeguards. India states that it would follow the principles in phases in terms of bringing its nuclear reactors under the IAEA's safeguards.[9] The phased-manner implementation of IAEA's safeguards in terms of bringing its nuclear reactors under the IAEA's safeguards could provide India opportunity to exploit the IAEA's additional protocol, thereby, undermining the credibility of the NSG and the IAEA's safeguard agreement when India would have already acquired much fissile materials for making nuclear warheads out of its currently 8 nuclear reactors not under the IAEA's safeguards. India also claims to retain its nuclear moratorium that it will not carry out more nuclear weapons tests, but the evidences show at Karnataka that India could go for more nuclear

[9]Kamran Akhtar, "NSG Membership of Non-NPT States," *Islamabad Papers*, 2016, Institute of Strategic Studies Islamabad.

weapons tests including building more nuclear reactors for its nuclear submarines.[10] Nuclear moratorium is not binding and that can be broken as France did in 2005 by carrying more nuclear weapons tests for its deterrent force modernization undermining the provisions of the NPT and its provisions towards the international non-proliferation regime.[11] If India goes for more nuclear weapon tests, as it desires to, it would undermine the credibility of the NSG where India is trying hard to become part of it and NSG may not have any provisions to act against India then. The NSG is not clear on the implications for India if it conducts more nuclear tests after becoming part of the NSG and how this could affect the credibility of the international non-proliferation regime. Despite the NSG's exemptions, India tends to remain outside the CTBT and the NPT at large. It tends to keep many of its civilian nuclear activities outside the IAEA's comprehensive safeguards, reflecting that it could acquire more deterrent forces.[12] India has already aspired for a grand nuclear strategy and such a grandiose journey would require India to build more nuclear reactors and produce more fissile materials that could suffice its aspiration to be the regional rising power. This development would have implications on the strategic stability of South Asia where there could be a new arms race between India and Pakistan. Also, this could create a security dilemma in the South Asian region.[13]

Second, NSG is not clear about how and when it would need to increase its membership. Whether or not, it would include India as a

[10]Adrian Levy, "Experts, Locals In The Dark As A Massive New Atomic City Rises In India," huffingtonpost, December 17, 2015, http://www.huffingtonpost.in/2015/12/17/india-new-fuel-h-bombs_n_8816564.html

[11]Oliver Meier, "Chirac Outlines Expanded Nuclear Doctrine," *Arms Control Today*, (March 2006). Also, see "France: Nuclear" Nuclear Threat Initiatives, May 2016: http://www.nti.org/learn/countries/france/nuclear/.

[12]For interesting analysis on this, see Adeela Azam, Ahmed Khan, Syed Muhammad Ali and Sameer Ali Khan, *India Unsafeguarded Nuclear Program: An Assessment*, (Islamabad: Institute of Strategic Studies Islamabad, 2016).

[13]Zafar Khan, "India's Grand Nuclear Strategy: a Road towards Deployment of Ballistic Missile Defense System," *Regional Studies*, Volume XXXIV, No. 1, (winter, 2016), pp. 48-64.

nuclear weapon state, not party to the NPT. Also, it is not clear if it intends to bring both India and Pakistan into the NSG simultaneously by widening its scope of nuclear politics, as not Party to the NPT. As both India and Pakistan prepare the grounds for joining the NSG, the cartel needs to bring Pakistan when and if India becomes part of it. India, without Pakistan, into the NSG would have far reaching implications on the strategic stability of South Asia. And this will completely go against the norms and values of the NSG. Once the NSG accepts India's membership for whatever reasons leaving Pakistan behind, it could make Pakistan's membership into the NSG more complex and hard because then India will have veto power to block Pakistan's chances for membership, which means that Pakistan may not be able to acquire nuclear technology for peaceful purposes as its energy requirements demand. If the NSG needs to sustain and strengthen its norms and non-proliferation values, it should not allow India in the first place to become part of the NSG as a nuclear weapon state not party to the NPT. If it does show flexibility in terms of allowing a member in possession of nuclear weapon and not Party to the NPT, then the NSG will need to allow Pakistan too to help prevent the adverse strategic consequences for South Asia.

The recent two-page Grossi formula prepared by the former Chair of the NSG, Ambassador Rafael Mariano Grossi, has been rejected by Pakistan[14], because the so-called Grossi formula remains discriminatory by lowering the restriction bar and paving ways for India that can then theoretically claim to have a smooth entry into the NSG without actually fulfilling the existing provisions of the NSG.[15] The Grossi formula forms the basis for exceptionalism.

If the NSG members unanimously consider India's NSG's membership, then it is equally imperative for NSG to consider Pakistan's membership as

[14]Baqir Sajjad Syed, "Pakistan rejects new formula for NSG membership," *Dawn*, December 30, 2016: http://www.dawn.com/news/1305297/pakistan-rejects-new-formula-for-nsg-membership.

[15]Daryl G. Kimball, "NSG membership proposal would undermine nonproliferation," *Arms Control Today*, December 21, 2016.

well. This scenario brings the NSG into a complex decision making dilemma. Because, once India and Pakistan go into the NSG, then Israel, who has not yet tested its nuclear capability nor announced its nuclear policy, could also become a claimant for membership of the NSG and so would North Korea as a non-NPT member. Perhaps, the NSG would buy more time to consider both India and Pakistan's membership. However, unless otherwise the NPT accepts both India and Pakistan as recognized nuclear weapons states, it would be a difficult decision for both India and Pakistan to join the NPT as non-nuclear weapons states in order to secure a membership in the NSG. Since the NSG's guidelines create a bar for both India and Pakistan to become members of the NSG without being Party to the NPT, there are a couple of options for both the NPT and the NSG.

Options for NSG: Sustaining its Credibility

The NSG can strengthen its prospects as one of the major and influential cartels leading towards a formal and serious treaty formation by accommodating more states Party to the NPT. The NSG could also pave the ways by devising acceptable formula for nuclear weapons states not Party to the NPT that would both allow these states to become ultimately part of the NSG and commit themselves that they would use nuclear technology for peaceful purposes and would not undermine the principles of the NSG. Moreover, certain options may also be considered. One, the NPT would recognize both India and Pakistan as nuclear weapons states before they think of joining the NPT. Presumably, as India and Pakistan get more maturity in their nuclear weapons program, the NPT and NSG could eventually recognize these nuclear weapons states with the ultimate motive to strengthen the non-proliferation regime. Nevertheless, there are both merits and demerits to this perspective. For instance, bringing Pakistan and/or India into the NPT as nuclear weapons states would strengthen the prospects of nuclear non-proliferation regime rather than keeping them outside the NPT. The more India and Pakistan, as nuclear weapons states, remain outside the NPT, the more there is a risk of a

consistent arms race in South Asia affecting deterrence stability in the South Asian region. And the more this could risk major military escalation leading to a nuclear level. However, as the international non-proliferation regime makes serious endeavors for bringing both India and Pakistan into these non-proliferation regimes, the more the world goes towards an international arms control regime. But, there are still those who could argue that the induction of both India and Pakistan as nuclear weapons states party to the NPT could encourage other nuclear weapons states, say, North Korea and Israel, to get recognized by achieving the nuclear weapons status by the NPT. Also, it could open the Pandora Box for non-nuclear weapons states to quit the NPT, declare themselves to be the next nuclear weapons states paving the ways for a third atomic age and demand for nuclear legitimacy before the international non-proliferation regime. This dilemma would continue to stay unless major structural reforms are brought into the international non-proliferation regime both by sustaining the life and spirit of the international non-proliferation regimes and by encouraging India and Pakistan to ultimately become part of the NPT/NSG.

Two, currently, it may not be acceptable for both India and Pakistan to join the NSG as non-nuclear weapons states, party to the NPT. In international politics in general and nuclear politics in particular, states would always go for effective cost and benefit analysis as to how much they are winning and losing before becoming part of a treaty. In the realist paradigm, states would prefer to have maximum gain out of something. That being said, neither India nor Pakistan could agree to stringent criteria of the NSG that would not allow by consensus or by the revised guidelines both India and Pakistan to become part of the NSG unless they join the NPT. Rather, India would desire to have a complete nuclear legitimacy and entrance into the NSG to enjoy the acquisition of nuclear technology. By following certain non-proliferation guidelines and principles, Pakistan can also pave the ways and means to become part of the NSG as a nuclear weapons state. The inclusion of both India and Pakistan into the NSG as nuclear weapons states and including that of all major nuclear weapons

states recognized by the NPT would enhance the NSG's stature as one of the strongest cartels in the field of non-proliferation and the peaceful use of nuclear technology. The prospects for turning the NSG as a cartel into a formal treaty could get enhanced.

Three, one of the fundamental critical issues for the NSG in general and the non-proliferation regime in particular, is the NSG's principle of non-proliferation and the use of peaceful nuclear technology. The issue of disarmament still remains at large, however. The promise that the major nuclear weapons states would one day make endeavors for a complete disarmament is not happening anytime soon as they still continue to possess and modernize their deterrent forces in the 21st century nuclear politics. Nuclear weapons are still considered to a broader part of deterrence theory and the prospects of a complete disarmament remain a dream. Although the US President, Barrack Obama, made statements that he would desire a world free from nuclear weapon during his historic Prague speech in April 2009, but at the same time he stated in his speech that this would not be possible in his life time.[16] This reflected the stark difference between the desirability and a reality. This had also shown the complexity of the matter with regard to a complete nuclear disarmament.

Four, the Fissile Material Cut-off Treaty becomes a proposed treaty. The international community particularly the major nuclear weapons states, have failed to convince the smaller nuclear weapons states to enforce the proposed FMCT because of the outstanding issues that the proposed FMCT confront. One, there is still no agreement on the existing fissile materials reduction which would then pave the ways for the future fissile materials cut-off. Many states, in accordance with the so-called Shannon Mandate, are opposed to only future fissile material cut-off whilst ignoring the existing materials. That being said, those states who are in greater possession of the existing fissile materials would talk about the

[16]"Barack Obama launches doctrine for nuclear-free world," *The Guardian,* April 5, 2009, https://www.theguardian.com/world/2009/apr/05/nuclear-weapons-barack-obama

future reduction, thereby, putting themselves into an advantageous positions against those whose fissile materials volume are lower. The difference could generate a security dilemma and begin a new arms race especially between the two or more than two rival nuclear weapons states. In addition to this, the CTBT is yet to be enforced. The Prevention on Arms Race in the Outer Space (PAROS) is still an outstanding issue for the non-proliferation regime. Therefore, all nuclear weapons states party to the NPT and the NSG have not kept their promises that these nuclear weapons states would one-day disarms. These nuclear weapons states not only retain their deterrent forces, but also modernize both of their conventional and nuclear force posture impacting other nuclear weapons states' strategies.

Last but not least, despite the gradual increase in membership, the non-proliferation regime particularly the NPT and the NSG have got loopholes. Despite the big membership, they failed to convince both China and France to ratify the NPT in the early years of its creation with the given nuclear weapons status. Both France and China joined the NPT in 1992. They failed to stop France from carrying out more nuclear weapons tests in 2005 when France broke its nuclear moratorium on modernizing its deterrent forces. This could happen to the NSG as well when India would carry out more nuclear weapons tests thus undermining the credibility of the NSG and other non-proliferation regimes India would become part of. They failed to stop India from carrying out nuclear tests first in 1974 and later in 1998. They failed to follow their own normative posture and values by giving India the NSG's exemptions against whom the regime was created in the first place. They will fail their normative posture by allowing India a membership when India has not yet joined the NPT and the CTBT and it still lags behind from following the IAEA's comprehensive safeguards. Moreover, they have failed to prevent North Korea quitting the NPT and testing its nuclear weapons capability for many times. The non-proliferation regime failed to restructure itself by crafting a mechanism for punishment once they find a state either quitting the nonproliferation regime or be suspicious of diverting the nuclear

technology into building a nuclear weapons program. Either the NPT including (that of the NSG) unravels or brings structural reforms to strengthen the normative aspects of the international non-proliferation regime and addresses the critical issues that undermine, say, the credibility of the NPT in general and the NSG in particular.

Currently, both the NSG, as a cartel group, and the existence of the NPT have become extremely imperative for peace and security of international community. However, at the same time, they confront critical issues to actualizing the imperatives of non-proliferation, disarmament and the peaceful uses of nuclear technology to all states without any discrimination. The non-proliferation regime will need to promote the ideals of strategic restrain regime, conventional balances and avoidance of nuclear war. It is with these normative postures that the non-proliferation regimes (including that of the NSG) will have the chances of survival.

Conclusion

The rise of the NSG is one of the important and influencing cartels promoting the cause of non-proliferation. It intends to encourage India to become part of it bypassing the historical fact that the NSG was created against the Indian nuclear weapons test. Major powers possessing nuclear weapons have already given certain exemptions to India in terms of trading with India in the field of nuclear technology transfer. However, these special exceptions by the NSG members are not consistent with the so-called provisions of the NSG that does not allow a state unless it is part of the NPT and fully follows the provisions of the NPT. This goes against the revised provisions of the NSG and thereby undermines its credibility as one of the important cartels that consists of all major recognized nuclear weapons states. These special exceptions to India reflect the nuclear politics in the broader field of nuclear non-proliferation where political and economic interest and even geo-political interest could undermine the set provisions of any treaty. If this remains the case, the international community has to look into this prevailing matter of concern when India

has an arch rival Pakistan who is also a nuclear weapon state and strongly presents its case for the NSG membership. Nevertheless, it appears that a discriminatory approach is played against Pakistan where NSG becomes criteria specific for Pakistan and country-specific when it comes to India's bid for joining the NSG.

It is encouraging that the NSG could extend its membership by inducting more states that may include states either party to the NPT or those who have not yet joined the NPT. However, it will have to calculate, say, if it allows India what the consequences will be in South Asia when Pakistan is left behind. Arguably, without pondering and determining the consequences in South Asia, India could completely bar Pakistan from acquiring nuclear technology for peaceful purposes because of the fact the 'no' decision at the NSG could be undertaken without a unanimous vote. Therefore, the NSG has got a couple of options: one, it could allow India leaving Pakistan behind, but then this could have critical consequences of arms race and increased reliance on nuclear weapons in the South Asia. This may not be in the best interest of the NSG members when their geo-economic and geo-strategic stakes are high in the South Asian region. Two, the NSG could relax its provisions unanimously agreeing that it could eventually pave the ways for both India and Pakistan to join the NSG.

However, both would remain legitimate and responsible nuclear weapons states by following the essential parameters of the international non-proliferation regime including that of the additional protocol of the IAEA. Three, the NSG remains strict to its provisions without showing any flexibility by not allowing both India and Pakistan to become part of the NSG unless they fully satisfy guidelines of the NSG, particularly joining of the NPT. This may not be favorable to the NSG as this would show NSG as too rigid, discriminatory, and limited by not increasing its membership. Therefore, making both India and Pakistan obligatory to the essential parameters of non-proliferation, increasing its membership, and promoting the cause of non-proliferation the NSG could enhance its credibility in the field of non-proliferation, and the transfer of nuclear technology only for peaceful purposes.

The Indian Ocean Security: Challenges and Opportunities for Pakistan

Ahmad Rashid Malik*

Abstract

The Indian Ocean is the ancient human passage through waters and contains immense security and economic values not only for the littoral States of the Indian Ocean but also for the extra-territorial powers. The Indian Ocean had for long remained extremely vital in modern history, and global powers occupied significant positions here to influence their policies. As a new entrant, China wants to further integrate the Indian Ocean for regional trade and socio-cultural connectivity under its Maritime Silk Road Corridor. Pakistan is an integral part of the Maritime Silk Road by providing a geographical access to the landlocked western autonomous region of Xinjiang and Central Asia and even beyond at Pakistan's southern Gwadar Port via road, railway, and telecommunication linkages. This is a great step in the economic integration of the Indian Ocean in the 21st century.

Keywords: Indian Ocean Security, Power Play, Regional Integration, Pakistan's Maritime Perspectives, China-Pakistan Economic Corridor (CPEC), One Belt One Road (OBOR), Maritime Silk Road, String of Pearls.

Introduction

This study focuses on Pakistan's position and perspective regarding the Indian Ocean as a small littoral power seeking maritime security and

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cooperation to enhance its role in regional security of the Indian Ocean as well as expanding its merchandise trade. The paper will throw light on the significance of the Indian Ocean in world politics. The issue of maritime security will also be analysed beside power play among big nations in the Indian Ocean especially between India and China. The paper will look at the Pakistan-India rivalry in the Indian Ocean. The paper will take up the significance of the Indian Ocean in the geo-economics and geo-politics of Pakistan, its security measures of multilateral cooperation among nations, the warm-water approach for the Russian access to the Arabian Sea, and providing commercial conduit to China to link up its western region of Xinjing with the Gwadar deep sea port under the China-Pakistan Economic Corridor (CPEC). A number of recommendations have also been put forward in the paper to integrate the Indian Ocean for regional connectivity, merchandise trade expansion, and for socio-cultural cohesion.

Significance of the Indian Ocean

The Holy Quran is full of the knowledge of Oceanography and modern science can not contradict it. Rather, more research could be conducted on the truth of seas and oceans as expounded in the Holy Quran. Take just one verse: the Holy Quran says that seas are full of wealth and natural resources[1] and they (seas) never transgress with each other.[2] They (seas) keep their distinctions. Many nations in this world solely depend on sea resources, especially island nations. The Oceans' significance for littoral as well as for the landlocked States is equally vital. The Indian Ocean is an arc from the Indian Sub-continent to East Africa and Australia, and is the third largest Ocean after the Pacific and Atlantic Oceans. The facts about the Indian Ocean are revealing. From times immemorial, Indian Ocean had served as a great conduit for human travel

[1] *Al-Quran*, "Surah An-Nahl", 16:14. And it is He (God) who subjected the sea for you to eat from it tender meat and to extract from it ornaments which you wear. And you see the ships flowing through it, and [He (God) subjected it] that you may seek of His (God) bounty; and perhaps you will be grateful.(trans)

[2] *Al-Quran,* "Surah Ar-Rahman", 55: 19-20.He (God) released the two seas, meeting [side by side]; Between them is a barrier [so] neither of them transgresses. (trans)

and trade across Asia, Africa, and Australia. Today around 10,000 vessels crisscross each year in the Indian Ocean.[3] The Indian Ocean has always remained as the busiest mercantile trade way among many powerful and small nations. Four critically important access waterways namely: Suez Canal (Egypt), Bab-el-Mandeb (Djibouti-Yemen), Strait of Hormuz (Iran-Oman), and Straits of Malacca (Indonesia-Malaysia), are located in the Indian Ocean. The Indian Ocean provides routes to East Asia, Australia, Africa, Europe, and the Americas. The Indian Ocean appeared to be the first human water passage in the history. Many wars were fought among the nations to dominate the Indian Ocean passage. There are several choke points such as the Straits of Hormoz, Bab el-Mandeb, Suez, Malacca, Sunda, Lombok, and the Mozambique Channel.

The Arabs remained the most motivating factor in opening up many routes of the Indian Ocean. The Arabian mercantile trading activities in goods, spices, and transportation started long before the Europeans. The European discoveries by the Dutch, French, and Spaniards came much later. Long after the Arabs invaded India through sea route, the Europeans took at least eight centuries to "re-discover" according to their perceptions of sea routes to India via the Indian Ocean. One can read an abundance of literature on the civilizational aspects of the Indian Ocean,[4] and this paper does not intend to go into the details of history. The region contains one-third of the world's population. An estimated 40 per cent of the world's offshore oil production comes from the Indian Ocean alone. The combined reserves of the Gulf and Central Asia account for 72.5 per cent of the world's total oil and 45 per cent of gas. Apart from the above-mentioned

[3]Saji Abraham, "India's Maritime Policy," China's Role in the Indian Ocean: Its Implications on India's National Security, VIJ Books India, pg. 77, https://books.google.com.pk/books?id=AoFNCgAAQBAJ&pg=PA77&lpg=PA77&dq=Today+around+10,000+vessels+crisscross+each+year+in+the+Indian+Ocean.&source=bl&ots=8p-1p1xajB&sig=bLOHM1pbn89b7dW6dBbz4oBt_9A&hl=en&sa=X&redir_esc=y#v=onepage&q=Today%20around%2010%2C000%20vessels%20crisscross%20each%20year%20in%20the%20Indian%20Ocean.&f=false

[4]K N Chaudhuri, *Trade and civilisation in the Indian Ocean: An Economic History from The Rise of Islam to 1750* (New York Cambridge University Press, 1985).

natural significance of the Indian Ocean, the United States, China, Japan, South Korea, Europe India, and Pakistan, and many other nations import a substantial amount of their requirements of energy and merchandise imports and exports through the Indian Ocean. Around 70 percent of global petrol export passes through the Indian Ocean.[5] Ports play an important role in the Indian Ocean. There are around 157 ports and harbours in the Indian Oceans with India having 40 ports, Australia 20 ports, and Saudi Arabia 11 ports.

The United Nations Convention on the Law of Sea (UNCLOS) of 1982 (Article 57) protects nations' sovereign rights of seas and utilization of their resources and determines the sea limit of maritime nations by bringing justice and equality irrespective of their size, population, and power.[6] To protect the right of a littoral State, a limit of 200 nautical miles has been drawn from coastline as an Exclusive Economic Zones (EEZ) and the Continental Shelf (under seas resources) that goes up to 350 nautical miles from the coastline. There are 36 littoral States of the Indian Ocean, comprising three Continents namely; Asia, Africa, and Australia. The mother region of South Asia comprise of 5 States, South East Asia 6 States, the Middle East and Africa (12 States each region), Australia and a few Islands under foreign control.

[5]Robert D. Kaplan, 'Centre Stage for the Twenty-first Century: Power Plays in the Indian Ocean' in *Foreign Affairs*, vol. 88, no. 2 (March-April 2009).
[6]The United Nations, *Convention on the Law of Sea (CLOS) of 1982*. (The United Nations, the Division for Ocean Affairs and the Law of the Sea, Office of Legal Affairs, 2001), p. 40.
Ibid.

Indian Ocean Littoral States				
South Asia	**South East Asia**	**Middle East**	**Africa**	**Australia**
India Pakistan Sri Lanka Bangladeh Maldives	Burma Thailand Malaysia Singapore Indonesia Timor-Leste	Egypt Israel Jordan Saudi Arabia Yemen Oman UAE Qatar Bahrain Kuwait Iraq Iran	South Africa Mozambique Madagascar Mauritius Comoros Tanzania Seychelles Kenya Somalia Djibouti Eritrea Sudan	Australia

As for power play within the Indian littoral States is concerned, India naturally emerges as the most powerful country among 36 littoral States, cooperated by Australia and some South East Asian littoral States besides the United States and Japan. The Indo-US collusion has made China wary about the strategic balance in the Indian Ocean.[7] This gives natural hegemony to India in sharing regional security in the Indian Ocean.

Maritime Security

The term "maritime security" is bound to various explanations depending on who is using it and for what purpose, whether it is used for military purpose or commercial purpose.[8] For one nation, it could be a 'maritime security', for another, it could be a 'maritime insecurity' both at, at the same time. Apart from this, it is drawing a distinction between "maritime safety" and "maritime security". Klein and Mossop maintain

[7]Sohail Amin (ed), Major Powers' Interests in the Indian Ocean: Challenges and Options for Pakistan (Islamabad: Islamabad Policy Research Institute, 2015), p. 2.

[8]Natalie Klein, Joanna Mossop, Maritime Security: International Law and Policy Perspectives from Australia and New Zealand (London Routledge, 2010), p. 5.

that "maritime safety" refers to preventing or minimising of occurrence of incidents at seas as stipulated under the International Maritime Organization (IMO) while "maritime security" refers to the UNCLOS of 1982 for settlements of disputes and issues related to the maritime security.[9] This, however, does not clearly define the term 'maritime security'.[10]

New threats to States are not just military-oriented that convert security as more complex and cumbersome. Today, these threats or threat-perceptions might stem from within States such as the internal political disorders, economic crunch or sharpening of differences, societal cleavages, ecological or environmental landscapes or threat perceptions as maintained in a widely referred study of Bary Buzan.[11] In this regard, maritime security can entertain a single or a variety of these threats. Plagues, vulnerabilities, drugs, smugglings, piracy, and terrorism also pose a threat to maritime security from an operational point of view of vessels.[12] Vessels also bring new culture, know how, language, products, technical communications, influence, and conflict. This needs to be reconciled. One can safely assume that maritime security means military, political, and economic capabilities of States to use seas and oceans for certain common objectives of many nations involved in a given period of time. Therefore, a collaboration of like-minded allies is required for enhancing maritime security of nations for strategic, political, and economic reasons.

The Power Play

The United States, Great Britain, Russia and Japan used to be the extra-territorial powers in the Indian Ocean up to the end of World War II. Japan dominated the Indian Ocean by defeating Great Britain and maintaining its

[9]Ibid., p. 6. See also the UN Convention on the Law of Sea, 2 December 1982, 1833 UNTS 3.
[10]Ibid., p. 6.
[11]Barry Buzan, *Peoples, States and Fear: An Agenda for International Security Studies in Post-Cold War Era* (New York: Harvester Wheatsheaf, 1991), pp. 116-33.
[12]Michael McNicholas, *Maritime Security: An Introduction* (Amsterdam & London: Elsevier /Butterworth Heinemann, 2008).

hegemony by capturing Singapore and Burma and giving setbacks to other European powers, which eroded the European hegemony of the Indian Ocean. There had been a long confrontation in the Indian Ocean after World War II until the demise of the Cold War and the former Soviet Union by 1989. With this end, a new dimension occurred in the Indian Ocean as to who would dominate this Ocean.

With the rise of China, a new factor has been emerging to share power hegemony and to provide a safe water passage for merchandise trade equally shared by all stakeholders in the Indian Ocean. Historically, the ancient Silk Road on the hinterland was well connected with the Indian Ocean, giving access to landlocked and faraway Asian lands and peoples to the Indian Ocean. This assertion, however, created a rift in the region and disturbed peace efforts as many traditional powers do not intend to accept the entry of another extra-territorial power - China.

Most of the adversaries also opposed the presence of China in the South China Sea in the Pacific and the Indian Ocean, which makes it a "Two Oceans Power" - in the Pacific and the Indian Ocean simultaneously. China is being contested in the Indian Ocean most strongly by giving a pivotal role to India by the United States, Australia, Japan, and some other South East Asian allies. Interestingly, with the increasing rapprochement between China and the Philippines after the verdict given by the Permanent Court of Arbitration (PCA) at The Hague on 12 July 2016, the situation has become much calmer for China in assuming a peaceful role in the Pacific. This might have some implications for the Indian Ocean where some countries might not perceive China as a future hegemonic power in the Indian Ocean.

India's Growing Naval Expansion

There is intense naval rivalry taking place between China and India in the Indian Ocean nowadays. India has been competing with China's growing maritime modernization and expansion and developing its conventional naval capabilities and ballistic missiles submarines, air craft carriers, and state-of-the art anti-submarines warfare capabilities. Moreover, United States and India have recently signed the Logistics Exchange Memorandum

of Agreement (LEMOA) on 29 August 2016.[13] The purpose of the LEMOA was to enhance their naval capabilities in the Indian Ocean and in the Pacific theatre (especially in the South China Sea) under the US ''pivot to Asia'' strategy. The United States would deploy around 60 percent of its ships in the Indo-Pacific region[14] - a new term designed to accord unprecedented weightage to India.

China has also been expanding its maritime capabilities to respond to any eventuality that might take place in Taiwan and disturb its maritime interests in the South China Sea and the Indian Ocean. China has been building airfields and artificial islands to beef up its defence in the South China Sea.[15] China has been developing its military logistics to an unprecedented level of over 400 percent to protect its maritime lifelines and its growing interests.[16] Presently, there are around 20,000 Chinese naval personnel that would increase to 100,000 to protect Chinese maritime interests from Gwadar to Djibouti in the Horn of Africa, where China has been contracting its naval base.[17] The LEMOA would have bearings on China, containing its strength, and to opposing the China-Pakistan maritime cooperation. The Gwadar, CPEC, OBOR could act as agents of regional connectivity between China, the Middle East, and Africa that is also highly beneficial for promoting the Pakistani naval interests in the Indian Ocean. Pakistan and China, however, are likely to face opposing positions to be taken by India and the United States.[18]

[13]Anwar Iqbal, "US-India defence pact to impact Pakistan, China", *Dawn* (Islamabad), August 30, 2016.
[14]Charles Tiefer, "China And Pakistan Should Note - This Week, India And US Sign The LEMOA Pact", *Forbes* (Washington), August 28, 2016.
[15]"Island Building in the South China Sea", *SouthFront: Analysis & Intelligence*, July 2015. https://southfront.org/chinas-artificial-islands-south-china-sea-review/#promo
[16]Minnie Chan, 'China plans 400 per cent increase to marine corps numbers, sources say', *The South China Morning Post* (Hong Kong), March 13, 2017.
[17]Ibid.
[18]See also for a similar view in Sardar Masood Khan, "Indian Ocean region: Challenges and Strategies", *The Observer* (Islamabad), February 22, 2017.

Pakistan's Perspective

A. Strategic Significance

Pakistan is one of the littoral States of the Indian Ocean having a costal line of 900 km of which 700 km or 75 per cent in length lies in the Makran coastal line in Balochistan. The rest of 25 per cent of Pakistan's coastal line rests in Sindh – Karachi, Thatta, and Bidin Indus Delta. For Pakistan, and like many other countries of the Arabian Sea in the Indian Ocean, the passage is the major source of its oil imports and merchandise trade. Pakistan has two most operational ports, Port of Karachi, and Bin Qasim Port. The state-of-the art Gwadar Port is now under a limited operation since November 2016 after its inauguration.[19] Other small ports and harbours are: Keti Bandar, Jiwani, Gadani, Ormara, and Pasni that could be developed into future big ports. Importantly, being an Indian Ocean littoral State, with the third largest population asset of 180 million people in the region, and the nuclear State of region, maritime security is a vital element of Pakistan policy. The importance of the Indian Ocean is further vital for Pakistan because it is the fourth largest State in terms of having ports and harbours in the Indian Ocean after Saudi Arabia, Australia, and India respectively. Another significant aspect is that the largest river flowing into the Arabian Sea in the Indian Ocean is the mighty Indus River.

The country's coastal line used to be 1,644 km long with an access from Jiwani to the Bay of Bengal when East Pakistan was not separated from West Pakistan.[20] The separation of East Pakistan also meant the strategic loss of 654 km long or 40 percent of the coastlines as the ports of Chittagong and Khulna were lost in 1971. Therefore, a geographical coastline affect could also be realised in the new Pakistan's maritime policy after 1971, which strikingly reduced its maritime presence in the Indian Ocean.

[19]Ahmad Rashid Malik, "Inauguration of the CPEC', *Pakistan Today* (Islamabad), December 16, 2016.

[20]See general information on marine in Pakistan in J.C. Pernetta, *Pakistan in Marine Protected Area Needs in the South Asian Seas Region* (Gland: IUCN, 1993).

Pakistan is deeply concerned with the emerging security situation in the Indian Ocean as a littoral State. Maritime security is the prime concern of Pakistan to tackle the issue of counter-terrorism, piracies, armed robberies, drug trafficking, and crimes. The peaceful use of the Exclusive Economic Zone (EEZ), Continental Shelf, increasing maritime connectivity, future ports development, and Gwadar Economic Zone are the prime considerations for an upward trajectory of Pakistan's maritime policy.

B. Multilateral Security Measures

Strategically speaking, Pakistan focuses on its maritime policy through a number of multilateral ventures with a number of countries. Pakistan's joining of the US-led anti-Communist treaty, Southeast Asia Treaty Organization (SEATO)[21], signed on 8 September 1954 at Manila and formally launched at Bangkok in February 1955, was aimed to strengthen Pakistan's land, air, and naval defence. Thailand and the Philippines were the only South East Asian countries that joined the treaty with Pakistan as the only country from South Asia that had joined the treaty along with Australia, New Zealand, Great Britain, and France with South Korea and South Vietnam as Dialogue Partners under the US flag and Truman's anti-Communist doctrine. After the separation of East Pakistan, the significance of SEATO largely disappeared for Pakistan, and the country got disinterested in the activities of the SEATO as it could not save the country from the Indian naked aggression in collaboration with the Soviet Union, the leader of Communism, against Pakistan in its eastern wing. The Soviet bloc saw SEATO as a curse erected against it and its allies.[22] Pakistan withdrew from the SEATO on 7 November 1973 and France on 30 June 1974. Resultantly, the treaty was eventually dissolved on 30 June 1977, and new maritime security measures were being developed in the Indian

[21]See the text of the' Southeast Asia Collective Defence Treaty (Manila Pact), September 8, 1954' Yale Law School, Lillian Goldman Law Library, New Haven, 2008. <http://avalon.law.yale.edu/20th_century/usmu003.asp#1> Accessed 17 January 2011.

[22]See for instance, Rustom Khurshedji Karanjia, *SEATO: Security or Menace?* (Bombay: Blintz Publications, 1956).

Ocean. The SEATO was an alliance in failure[23] and its repercussions were seen within to years of its collapse in 1979 in the shape of the Soviet occupation of Afghanistan.

In the post 9/11 era, Pakistan joined the Japan-led Operation Enduring Freedom-Maritime Interdiction Operation (OEF-MIO) during 2001-2010 to counter terrorism in the Indian Ocean along with other 36 countries.[24] The operation ran successfully but, because of domestic issues in Japan, it was discontinued in January 2010. Pakistan remained an active participant of the OEF-MIO.[25]

C. The Warm-Water Theory

In connection with Pakistan's maritime policy, there is a need to explain the "warm-water" theory. The warm-water theory stemmed from the desire of the old time Czars in Russia to occupy ports facility in the Indian Ocean via today's Pakistan. Although occupying huge territory across Europe and Asia and becoming a Eurasian power, Russia always lacked an access to the warm-water ports–a dream that was never fulfilled. Furthermore, the entire course of later Russian military advances in Asia was motivated by its long-standing desire to gain warm-water ports.[26] Russian Asian territories in Central Asia also did not reach the Indian Ocean waters at any point at any time in its long history. The Russian penetration into Central Asia started with this theory of southward reach to the warm-waters. Had the Revolution in 1917 not intervened,

[23]See Leszek Buszynski, *SEATO, the Failure of an Alliance Strategy* (Singapore: Singapore National University Press, 1983).
[24]Richard Tanter, "The MSDF Indian Ocean deployment – blue water militarization in a "normal country" ", Nautilus Institute for Security and Sustainability, March 30, 2006 & Sandra L. Hodgkinson *et al*, Challenges to Maritime Interception Operations in the War on Terror: Bridging the Gap', *The American University International Law Review*, vol. 22, no. 4, 2007.
[25]Ahmad Rashid Malik, "Japan's Anti-Terrorism Efforts: The Implications for the Refuelling Mission in the Indian Ocean", *Report*. Tokyo: The Japan Foundation, March 2011.
[26]Alex Marshall, *The Russian General Staff and Asia 1800-1917* (London: Routledge, 2006), p. 2.

their southward push might have reached the Persian Gulf.[27]

The Soviet occupation of Afghanistan in 1979 was also marked by a tragedy of the un-fulfillment of its warm-water dream. The repercussions of its push into Afghanistan since that time have taken a new turn in the shape of fundamentalism and terrorism against the West nowadays not only in Afghanistan but also throughout the region from Central Asia to the Persian Gulf and Russia, thus making the issues of maritime security more complicated for Central Asia to be linked to the Arabian Sea and Persian Gulf. After long history and rivalry, now Gwadar Port is ready to cater to the needs of Central Asia, Russia, China, and Mongolia but the situation in Afghanistan is still not ripe to undertake such facility. Pakistan has invited Russia to use the Gwadar Port for commercial purposes,[28] complicating Indian efforts for seeking hegemony in the Indian Ocean.

D. Gwadar Port and the CPEC

The development of the Gwadar Port should not be taken as a kind of strategic collaboration between Pakistan and China against other nations but needs to be seen as a development process of the sea resources of the Indian Ocean and a natural access for China and the landlocked Central Asian States to get sea access to the Arabian Sea for energy and merchandise trade. In the early 1970s, Pakistan first offered this facility to the United States to help develop the port for naval purposes but because of some reasons the United States did not grab this opportunity and refused.[29] It was China that much later had shown interest in Gwadar and

[27]Harm J De Blij; et al, *The World Today: Concepts and Regions in Geography* (5th ed) (New Jersey: Hoboken, 2011), p.98.

[28]Khalid Mustafa," Russia allowed use of Gwadar Port", *The News International* (Rawalpindi), November 26, 2016.

[29]Prime Minister Zulfikar Ali Bhutto offered Gwadar Port facility to President Richard Nixon to build as a US. navy base during a trip to Washington. China also supported the idea. Afghanistan was training Baloch separatists at that time and pushing the stunt of Pushtoonistan on behalf of the USSR. India and Iraq were also behind Balochistan's separation. Perhaps for these reasons, the United States did not positively respond to Pakistan's offer of Gwadar to avoid confrontation with the USSR, which wanted to push the idea of an access of the warm-water port through Pakistan via Afghanistan. See Dr. Zulfqar Khan,"A Retrospective Perspective on Pakistan-United States Relations: 1947-

offered a loan of US$ 245 million in 2001 to construct the Gwadar Port for commercial purposes. Moreover, the emergance of the landlocked Central Asian Republics in the early 1990s further pushed the significance of the Indian Ocean manifold, because the shortest and cheapest outlet to global markets available to the Central Asian Republics was through the Gwadar Port as a gateway to Central Asia to increase their merchandise trade.

The global power politics in the Indian Ocean by India, United States, Japan, and their collaborators could only estrange the development strategies of Pakistan and China, which is trying to find out alternative ways of developing their economies. The United States' military presence in Diego Garcia[30] and its collaboration with India and Japan made China and Pakistan wary about the strategic imbalance in the India Ocean. Gwadar is a pure commercial port, and Pakistan does not offer any military facility such as anchoring of PLA's naval vassals or jet aircraft landing and takeoff facilities to overlook the Arabian Sea and beyond. Gwadar Port is not going to become another Diego Garcia or Malta that might be controlled by China. Undeniably, Gwadar Port is not a military base. Gwadar would develop on the pattern of the ports of Hong Kong, Singapore and Dubai. Nor has China ever made such a plea to Pakistan to use Gwadar for the PLA's naval, air, or land forces. Against the largely propagated misperception of the "String of Pearls" theory that intends to describe the growing maritime power of China in the Indian Ocean, Gwadar Port would only serve the commercial needs of Pakistan, China, and Central Asian states and countries beyond. No parallel could be drawn between the US pivot to Asia and the "String of Pearls" as Pakistan is not a part of any such policies to oppose or support.

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1977" in *IPRI Journal*, vol. 13, no.2, (Summer 2013), p. 37, Johann Chacko "For CPEC peace", in *Dawn*(Islamabad), 24 July 2016, & Usman Shahid, "Balochistan: The Troubled Heart of the CPEC", in *The Diplomat* (Tokyo), 23 August 2016.

[30]Diego Garcia is an atoll in the south of the Indian Ocean, about 1000 miles from south of India, under US administration since 1966 after Great Britain made an agreement on lease basis until 2016. The United States adopts more cruel regulations violating human rights on the Diego Garcia Island than Guantanamo Bay Island.

Moreover, Pakistan also needs to effectively devise its ''Vision East Asia'' to respond to India's ''Act East'' policy. Pakistan is more inclined toward the OBOR preferences. Additionally, Pakistan is one of the conflict-ridden countries and badly at the crossroads of terrorism in the region. It would not like to become once again a "frontline State" in the Indian, Ocean promoting the interest of any power including China. For Pakistan, it is high time to reassert for economic globalization of economies in the Indian Ocean. Although Pakistan has gained a middle power status in the Indian Ocean, it is the second declared nuclear weapon state in the Indian Ocean, which is another strategic distinctive feature of Pakistan's significance in the Indian Ocean. Under the growing competitions and rivalries, it is natural for Pakistan to enhance its maritime security through multilateral maritime security activities that included the SEATO in the 1950s, ASEAN-Regional Forum (ARF), and the OEF-MIO. As the OEF-MIO was discontinued in 2011 and Japan has developed much stronger maritime links with India, this compelled Pakistan to seek more naval collaboration with China. It should be pointed out that there is no ''String of Pearls" policy as such. Rather, Pakistan's strong military ties with a number of Persian Gulf states also enhance its maritime security and commercial activities.

The Indo-Pakistan Rivalry at Sea

The ''Indian Ocean" is not ''India's Ocean'', but India anticipates to dominate the Ocean for ''natural'' reasons as a big, populated, and nuclear country. India faces challenges posed by Pakistan and also by China for its maritime postures and militarization of the Indian Ocean. Both Pakistan and China are hindrances to India's hegemony in the region. The main distinction between the Pakistan-India rivalry in the Indian Ocean is that Pakistan does not intend to seek hegemony and domination in its maritime policy or even militarization, whereas India wants to dominate the region by seeking American, Japanese, Australian support to counter Chinese rise in the region. The ''Indo-Pacific'' and "Indo-West Pacific" concepts were coined in order to aggravate Indian designs from the Indian Ocean to the Pacific in collaboration with Japan and Australia under the umbrella of the

United States and like-minded partners.[31] India also flexes its muscles in the Indian Ocean through its vibrant "Act East" policy. On the contrary, Pakistan wants to maintain a balance in the Indian Ocean and, for achieving that end, it is continuously struggling on balancing act, as illustrated in the following Table.

Comparison of Pakistan and India Navy Capabilities

	India	Pakistan
Personnel	53,350	23,800
Submarines - Tactical	14	8
Frigates	13	10
Combatants	96	18
Landing Craft	34	4

Source: The International Institute for Strategic Studies, *The Military Balance: An Annual Assessment of Global Military Capabilities and Defence Economics, 2015*. London: Routledge, 2015.

Pakistan's policy of creating a balance and conditions for peace in the Indian Ocean has been quite successful and well responded to by a number of countries. The bright example is the 5th AMAN (Peace) 2017 naval exercises "Together for Peace'' hosted by Pakistan Navy in February 2017, and responded to by as many as 35 countries.[32] These exercises have been carried out after every two years since 2007 with the main objective of anti-terrorism and to fight maritime threats in the sea to promote peace, cooperation and stability in the Indian Ocean. Bilaterally, Pakistan Navy also conducts joint exercises with some partner countries especially with the Chinese People Liberation Army (PLA's Navy) and Russian Navy to

[31]To understand this concept see Rory Medcalf, "A Term Whose Time Has Come: The Indo-Pacific', *in The Diplomat* (Tokyo), 4 December, 2012.

[32]"Over 35 countries to participate in 'Aman-17' naval exercise", *Dawn* (Islamabad), 8 February 2017.

secure the maritime passage of the CPEC and to eliminate piracy and maritime crimes and threats. In the foreseeable future, both China and Russia are likely to increase their political footprints in the western Indian Ocean[33], while China and Pakistan will enhance their merchandise interests in the sea. These are the basic reasons for India's growing anxieties about Pakistan and China in the Indian Ocean

India feels threatened because of the close partnership between Pakistan and China and the efficient capabilities of Pakistan naval forces. For India, Gwadar Port would be used for maritime purposes by China[34] and it will help strengthen Pakistan's maritime position through what they call "String of Pearls", policy, which China and Pakistan categorically refused.[35] They, on the contrary, refute all such Indian claims time and again, and state that Gwadar Port will be used for mercantile trade and connectivity under the OBOR. Indian apprehensions, however, continue, and it is trying to build influence in the region through a number of ways including an increase in naval presence to counter perceived Chinese and Pakistani threats. The intrusion by an Indian nuclear submarine in Pakistan's waters on 4 November 2016, just ahead of the Gwadar inauguration, was a clear illustration of Indian fears of Pakistan-China maritime collaboration at Gwadar. Pakistani authorities believed that the Indian submarine was "Gwadar bound" to sabotage the CPEC shipments.[36] India, on the other hand, refuted any such claims.[37] The tussle, however, continues between the two countries in the Indian Ocean.

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[33]Muhammad Azam Khan, "AMAN 17 and the balance of power in the Indian ocean', in *Pakistan Today* (Islamabad), 9 February 2017.

[34]"Chinese navy ships to be deployed at Gwadar: Pak navy official", *Times of India* (Mumbai), 25 November 2016.

[35]See Ashay Abbhi, "String of Pearls: India and the Geopolitics of Chinese Foreign Policy", July 26 2015. Available at: http://www.e-ir.info/2015/07/26/string-of-pearls-india-and-the-geopolitics-of-chinese-foreign-policy/

[36]"Pakistan Navy repulses Indian sneak submarine", *Daily Times* (Lahore), 19 November 2016. See also Ahmad Rashid Malik, "Sabotaging the CPEC", *Issue Brief*, 1 December, 2016. Islamabad: Institute of Strategic Studies Islamabad, 2016.

[37]Imtiaz Ahmad , "Pak navy claims it 'blocked' Indian submarine, New Delhi says it's a lie", *Hindustan Times* (New Delhi), 19 November, 2016.

Recommendations

Looking at the dynamics of political, security, economic, and cultural diversity of the States of the Indian Oceans, and to help resolve some of the outstanding issues prevailing for centuries, decades, and years, the following eight concrete measures could be adopted to address such issues. These recommendations are as under:

I. The Indian Ocean Integration

The Indian Ocean littoral States are not well integrated. Regional organizations such as the South Asian Association for Regional Cooperation (SAARC), Association of the South East Asian Nations (ASEAN), Gulf Cooperation (GC) and other Middle Eastern littoral States, and East African States of the Indian Ocean should form a wider regional association to integrate the entire region.

II. The Indian Ocean Rim Association (IORA)

The Indian Ocean Rim Association (IORA), launched in 1997, is a good initiative but it is limited to just ten Indian Ocean countries. The IORA should be expanded to all 36 countries to achieve better outcomes for regional integration and connectivity.

III. The Indian Ocean Security Cooperation Association (IOSCA)

A comprehensive multilateral security forum is required to handle the security and defence issues of the Indian Ocean littoral States. Earlier, security fora were time-barred and directed against particular forces to seek hegemony. The ASEAN Regional Forum (ARF) is a good example but it does not cover all the littoral States

of the Indian Ocean.[38]

IV. The Indian Ocean Free Trade Partnership (IOFTP)

Similarly, an economic forum should be created amongst all the littoral States of the Indian Oceans to expand trade and economic cooperation among member States. A regional Free Trade Agreement i.e., the Indian Ocean Free Trade Partnership, (IOFTP) should be initiated to form an economic union for trade integration among the Indian Ocean littoral States.

V. The Maritime Silk Road

The Chinese initiative of the 21st century Maritime Silk Road is a novel idea and it offers immense opportunities to a number of the Indian Ocean littoral States to integrate and promote trade, commerce, connectivity, and social-cultural cohesion. This initiative should be comprehensively promoted. Under this plan, marine life and biodiversity protection should also be initiated to address environmental issues.

VI. The Indian Ocean Cultural Association (IOCA)

A cultural forum should also be formed to promote diverse cultures namely; Indian, Islamic, Arab, South East Asia, African, and Australian cultures and languages. A Cultural Research Centre of the Indian Ocean littoral States should be formed to promote cultures and education. The Perth-based Indian Ocean Centre should be revitalized for conducting diverse research on the Indian Ocean by enhancing scholarship and fellowship programs.

[38]Cooperative Peace and Security In The Indian Ocean Region, *The Department of Foreign Affairs and Trade, Australia*, http://foreignminister.gov.au/speeches/1996/indocean.html

VII. The Indian Ocean Commission for Arbitration (IOCA)

A commission should also be proposed to sort out territorial disputes and differences among the Indian Ocean States in line with the international arbitration rules and regulations and before referring to international mediation. The Sir Creek dispute between Pakistan and India is just a case in point.

VIII. The Indian Ocean Nuclear Free Zone (IONFZ)

The massive military, nuclear, missiles, and conventional build up in the Indian Ocean severely dims the prospects for peace. India and Pakistan are the only nuclear powers in the Indian Ocean, along with Israel having its undeclared nuclear capabilities and after the resolution of Iran's nuclear program. Since the early 1970s, there had been a proposal lying on the table that the Indian Ocean should be de-nuclearized to promote a defence and security atmosphere, and Indian Ocean Nuclear Free Zone (IONFZ) should be declared by the United Nations General Assembly by dismantling all nuclear weapons and arsenals. The proposal for the Indian Ocean Zone of Peace (IOZP) had been there for quite some time, for instance, the UNSC Resolution 2832, XXVI, of 1971.[39] Some countries (like Sri Lanka and others) even went to suggest de-militarize the Indian Ocean. All these efforts would be a great step in building trust and regional harmony in the Indian Ocean in the 21st century. This measure would help end up the long standing nuclear and military standoff between India and Pakistan.

Conclusion

These are some of the great challenges faced by several littoral States in the Indian Ocean. As far power play is concerned among super and major

[39]See for detail, Yoshikazu Sakamoto, *Asia, Militarization & Regional Conflict* (Tokyo: United Nations University, 1988).

powers in the region, Pakistan is in search of multilateralism in the Indian Ocean so that a particular power could not dominate the Indian Ocean politics and security apparatus and pose security and other challenges to smaller littoral States. Pakistan is carefully treading on the US pivot and re-balances to Asia, China's OBOR, and India's 'Act East' and devising its own preferences in collaboration with other countries. Pakistan needs to be pro-active on its Vision East Asia and develop a ''Go East'' policy in order to be more vibrant in its policy toward the Indian Ocean. Pakistan does not seem isolated on the Indian Ocean issues. Rather it is fully integrated with a large number of littoral States and outside powers to make the Indian Ocean a zone of peace. Regionally speaking, a number of political, security, and economic measures, given above, would create durable peace and harmony in the Indian Ocean. In the final analysis, it is proposed that Pakistan should intimate its intention of joining the IORA and should propose the idea of the Indian Ocean de-nuclearisation in the United Nations as a first step to integrate the Indian Ocean region.

North Korean Nuclear Tests: Motivations and International Responses

Anum Riaz*

Abstract

Since the start of 2016 the Democratic People's Republic of Korea (DPRK) has been working towards further advancement of its nuclear and missile programs. There have been some significant developments that include DPRK's claims to have successfully conducted a Hydrogen bomb test (January 2016) and another nuclear test (September 2016) , a successful satellite launch, formation of a new military unit KN-08 brigade to deploy ICMBs, test-firing of a new anti-tank guided weapon etc. The international community has widely condemned all these developments by unanimously adopting the toughest United Nations Security Council Resolutions (UNSCRs) against the DPRK. All these UNSCRs focus on the economic and diplomatic isolation of DPRK through a series of sanctions, but DPRK still seems determined to further advance its nuclear and missile program. This research paper will give a rundown of the DPRK's previous nuclear tests and would also list the UN Security Council resolutions adopted against the DPRK. It also provides an analytical overview of North Korea's test conducted in January and September 2016. Moreover, the possible motives behind North Korean nuclear adventurism have also been analyzed. The official responses and the measures taken by the international community on the

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recent North Korean nuclear tests will also be discussed in detail.

Keywords: Terminal High Altitude Area Defence, North Korea, Misslie, Test, NPT, Comprehensive Nuclear-Test- Ban Treaty Organization.

Introduction

The Democratic People's Republic of Korea (DPRK), since the start of 2016, has been actively working towards the further advancement of its nuclear and missile program. The significant developments include DPRK's claims to successfully conduct a Hydrogen bomb test (January, 2016)[1] and another nuclear test (September, 2016)[2], a successful satellite launch, formation of a new military unit KN-08 brigade to deploy ICMBs, test-fire of a new anti-tank guided weapon, and claims of successfully testing an improved engine for ICBM which North Korea claims would boost its ability to carry out a nuclear attack on the United States. Moreover, DPRK has also successfully launched a submarine-launched ballistic missile (SLBM) with a potential range of 1,000 kilometres[3], and also fired three new ground-based ballistic missiles into the Sea of Japan with at least one equipped with technology designed to penetrate Terminal High Altitude Area Defence (THAAD) system. [4]

The international community has widely condemned all these developments by unanimously adopting the toughest United Nations Security Council Resolutions (UNSCRs), under Chapter VII, Article 41[5] of the

[1]"DPRK Proves Successful in H-bomb Test", *KCNA*, January 6, 2016, http://www.kcna.kp/kcna.user.article.retrieveNewsViewInfoList.kcmsf.
[2]"DPRK Succeeds in Nuclear Warhead Explosion Test", *KCNA*, September 9, 2016, http://www.kcna.kp/kcna.user.home.retrieveHomeInfoList.kcmsf;jsessionid=498E23C666531C558C185853EA2A4888.
[3]Alexander Kim, "Why North Korea's September Nuclear Test Is Different", National Interest, October 23, 2016, http://nationalinterest.org/feature/why-north-koreas-september-nuclear-test-different-18153 .
[4]Ibid.
[5]"Fact sheets and Briefs : UN Security Council Resolutions on North Korea", Arms Control Association, last updated March 2016, https://www.armscontrol.org/factsheets/UN-Security-Council-Resolutions-on-North-Korea

United Nations Charter, against the DPRK. All these UNSCRs focus on the economic and diplomatic isolation of DPRK through a series of sanctions, but DPRK still seems determined to further advance its nuclear and missile program.

The DPRK, to date, has conducted five nuclear tests, in 2006, 2009, 2013 and two in 2016.[6] DPRK acceded to the Nuclear Non Proliferation Treaty (NPT) in December 1985 as a non- nuclear weapon State.[7] However, on 10 January 2003, DPRK announced its withdrawal from the NPT with effect from January 11, 2003.[8] Pyongyang also rescinded its Safeguards Agreement with the IAEA. DPRK claims to have withdrawn legally from the NPT under its Article 10.[9] This made it the first and only member to withdraw from the NPT.

The official Korean Central News Agency (KCNA) announced on 6 January 2016 that, in the pursuit of the strategic determination of the ruling Worker's Party of Korea (WPK), DPRK conducted its first ever hydrogen bomb test at 1000 hours local time.[10] Subsequently, in a detailed press release, Pyongyang claimed that it has scientifically verified the power of a smaller H-bomb.[11] This indicates a higher stage in DPRK's development of nuclear force and its aims for developing the most powerful nuclear deterrent. The statement describes this test as a "measure for self-defence which DPRK has taken to firmly protect its sovereignty and nation's vital right from the ever-growing nuclear threat and blackmail by the US-led hostile forces and to reliably safeguard the peace on Korean peninsula and regional security." [12]

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[6]Ibid.
[7]"Chronology of US-North Korean Nuclear and Missile Diplomacy", Arms Control Association, last updated March 2016, https://www.armscontrol.org/factsheets/dprkchron.
[8]Paul Kerr, "North Korea Chronology", *Arms Control Association*, June 1, 2003, https://www.armscontrol.org/act/2003_06/nkoreachron_june03 .
[9]Ibid.
[10]"DPRK Proves Successful in H-bomb Test", *KCNA*, January 6, 2016, http://www.kcna.kp/kcna.user.article.retrieveNewsViewInfoList.kcmsf.
[11]Ibid.
[12]Ibid.

The statement also makes it clear that "Pyongyang will neither suspend its nuclear developments nor undertake nuclear dismantlement unless the US rolls back its vicious hostile policy towards the former... DPRK will steadily escalate its nuclear deterrent both in quality and quantity to reliably guarantee the revolution." The statement further said that "the DPRK as a responsible nuclear State will neither be the first to use nuclear weapons nor transfer relevant means and technology under any circumstances as long as the hostile forces for aggression do not encroach upon its sovereignty." [13]

Pyongyang's missile and nuclear technological advancements have remained a source of concern at the international and regional level. After North Korea tested its fourth and fifth nuclear devices on January 6, 2016 and September 9, 2016 respectively, as a response the United Nations Security Council (UNSC) passed the toughest resolutions 2270 (2016)[14] and 2321 (2016) against the DPRK [15] to curb its advancement in the nuclear and missile domain. Other than the recent resolutions, the UNSC previously had adopted four major resolutions, 718 (2006), 1874 (2009), 2087 (2012) and 2094 (2013), against the DPRK.[16] These resolutions impose and strengthen sanctions on the DPRK for continuing to develop its nuclear weapons program and call for dismantling its nuclear program in a complete, verifiable, and irreversible manner and to refrain from more ballistic missile tests.

[13]Ibid.
[14]"Security Council Imposes Fresh Sanctions on Democratic People's Republic of Korea, Unanimously Adopting Resolution 2270 (2016)", Meeting Coverage of Security Council's 7638th Meeting (AM), 2 March 2016, https://www.un.org/press/en/2016/sc12267.doc.htm.
[15]"Security Council Strengthens Sanctions on Democratic Republic of Korea, Unanimously Adopting Resolution 2321 (2016)", Meeting Coverage of Security Council's 7821st Meeting (AM), 30 November 2016, https://www.un.org/press/en/2016/sc12603.doc.htm.
[16]"Fact sheets and Briefs : UN Security Council Resolutions on North Korea", Arms Control Association, last updated March 2016, https://www.armscontrol.org/factsheets/UN-Security-Council-Resolutions-on-North-Korea

North Korea's Nuclear Tests

Pyongyang conducted its *first nuclear test* on October 9, 2006. The Comprehensive Nuclear-Test- Ban Treaty Organization (CTBTO) seismic stations recorded a seismic activity of 4.1 [17] and the estimated yield of this test has been recorded to be less than 1 kiloton. [18] North Korea's first nuclear test was condemned internationally; resultantly the UNSC resolution 1718 was adopted unanimously. This resolution broadly includes sanctions that limit trade and institutes travel bans.

Despite the UNSC sanctions and international condemnation, DPRK conducted its *second nuclear test* on May 25, 2009.[19] The test generated a seismic activity of 4.52 [20] and was assessed to have an estimated explosive yield of 2-7 kilotons.[21] To condemn Pyongyang's nuclear advancement, the UNSC unanimously adopted the Resolution 1874 on June 12, 2009 [22], which reinforces the resolution 1718 by expanding the arms embargo via banning all imports and exports of weapons to DPRK, excluding small arms, and stipulated that a State must notify the Security Council before selling arms to North Korea. Financial assistance that could be used to aid North Korea's weapons development was prohibited. Member States were also not allowed to enter into loans with the country unless for explicitly humanitarian purposes.

[17]"On the CTBTO's Detection In North Korea", CTBTO Preparatory Commission, 12 February 2013, https://www.ctbto.org/press-centre/press-releases/2013/on-the-ctbtos-detection-in-north-korea/.

[18]Tariq Rauf, "11 Jan. 2016: Another nuclear test announced by North Korea: Searching for a plan of action?", *SIPRI (*January 2016), http://www.sipri.org/media/expert-comments/rauf-january-2016.

[19]"North Korea Nuclear Chronology", NTI, Last Updated in February 2011 , http://www.nti.org/media/pdfs/north_korea_nuclear.pdf?_=1316543714 .

[20]"On the Comprehensive Nuclear-Test-Ban Treaty Organization's Detection in North Korea", CTBTO Preparatory Commission, 12 February 2013, https://www.ctbto.org/press-centre/press-releases/2013/on-the-ctbtos-detection-in-north-korea/.

[21]Tariq Rauf, "11 Jan. 2016: Another nuclear test announced by North Korea: Searching for a plan of action?", *SIPRI (*January 2016), http://www.sipri.org/media/expert-comments/rauf-january-2016.

[22]"Fact sheets and Briefs : UN Security Council Resolutions on North Korea", Arms Control Association, last updated March 2016, https://www.armscontrol.org/factsheets/UN-Security-Council-Resolutions-on-North-Korea

Generating a seismic activity of 5.0[23], the DPRK tested a *third nuclear device* on February 12, 2013. The estimated yield of this device was assessed to be up to 8 kilotons. The UNSC adopted its fourth Resolution 2094 on March 7, 2013 [24] that blocks access of the Kim's regime to bulk cash transfers, prevents illicit DPRK activities and restricts ties to the international banking systems.

In December 2015, the North Korea Leader Kim declared that North Korea was developing a thermonuclear weapon, but the Western media and experts discredited any such developments.[25] North Korea on 6 January 2016 has claimed[26] to successfully test a smaller Hydrogen-bomb. However, the technical nature of this test is still being debated by experts; this is considered to be North Korea's *fourth nuclear test*. The underground test took place at a known nuclear test site at Punggye-ri, in the east of the country. As a response the UNSC adopted its Resolution 2270 on 24 March 2016.[27]

On September 9, 2016, North Korea conducted its *fifth nuclear test*. [28] North Korea has a history of conducting test launches on important national days. It is interesting to note that 9 September 1948 is marked as the Day of Foundation of the Republic of DPRK i.e. 68th anniversary of the

[23]"On the CTBTO's Detection In North Korea", CTBTO Preparatory Commission, 12 February 2013, https://www.ctbto.org/press-centre/press-releases/2013/on-the-ctbtos-detection-in-north-korea/.
[24]"Fact sheets and Briefs : UN Security Council Resolutions on North Korea", Arms Control Association, last updated March 2016, https://www.armscontrol.org/factsheets/UN-Security-Council-Resolutions-on-North-Korea.
[25]Choe Sang-Hun,"Kim Jong-Un's Claim of North Korea Hydrogen Bomb Draws Skepticism", *New York Times*, 10 December 2015, https://www.nytimes.com/2015/12/11/world/asia/north-korea-kim-hydrogen-bomb.html?mcubz=2&_r=0 .
[26]"DPRK Proves Successful in H-bomb Test", *KCNA*, January 6, 2016,http://www.kcna.kp/kcna.user.article.retrieveNewsViewInfoList.kcmsf.
[27]Resolution 2276 (2016) Adopted by the Security Council at its 7656th meeting, on 24 March 2016, http://www.securitycouncilreport.org/atf/cf/%7B65BFCF9B-6D27-4E9C-8CD3-CF6E4FF96FF9%7D/s_res_2276.pdf
[28]"DPRK Succeeds in Nuclear Warhead Explosion Test", *KCNA*, September 9, 2016, http://www.kcna.kp/kcna.user.home.retrieveHomeInfoList.kcmsf;jsessionid=498E23C666531C558C185853EA2A4888.

founding of North Korea by Kim Il Sung (grandfather of Kim Jong Un), so detonation of a nuclear device on September 9 shows the pattern that North Korea has been following previously. This test can also be seen as a North Korean response to the March 2016 US – ROK joint annual military drills. As a response to this nuclear test, the UNSC unanimously adopted its Resolution 2321 on 30 November 2016.[29] The UNSCR 2321 decides that all the UN Member States shall suspend scientific and technical cooperation involving persons or groups officially sponsored by or representing the DPRK; moreover, it also aims at cutting down the ongoing coal revenues by capping the DPRK's exports to all UN members. [30]

If we look at the timeline of nuclear testing, a set pattern could be observed. It seems that North Korea tests a nuclear device every third year, with the exception of the 2013 test which was conducted after three years. The 2016 nuclear tests are also another exception; as one was a H-Bomb while latter is considered by the experts to be more powerful than any of the previous nuclear tests conducted by North Korea. However, the improvement in the estimated yield of all five nuclear tests proves that North Korea is gradually moving towards technological advancement of its nuclear weapons.

The 2016 Nuclear Tests - Analytical Overview

The technical nature of the January 2016 test is still unclear. The seismic activity recorded by the twenty-seven primary seismic stations of the CTBTO was 4.85[31], which is not a lot more than the seismic activity detected at the times of DPRK's previous tested weapons. According to the initial estimates by the Western media, the approximate yield of the recent test was said to be 6 kilotons. [32]

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[29]Adopted by the Security Council at its 7821st meeting, UNSCR 2321, 30 November 2016,http://www.un.org/en/ga/search/view_doc.asp?symbol=S/RES/2321(2016).
[30]Ibid.
[31]"6 January: DPRK announced fourth nuclear test", CTBTO Preparatory Commission, January 6, 2016, https://www.ctbto.org/nuclear-testing/testing-times/.
[32]Josh Keller, Ford Fessenden and Tim Wallace, "Why Experts Doubt That North Korea Tested a Hydrogen Bomb ", *New York Times*, 6 January, 2016

The hydrogen bomb can be hundred times more powerful than an atomic bomb. [33]The explosive yield of the hydrogen bomb is bigger than that of an atomic bomb. The expected yield and seismic activity generated as a result of North Korea's 2016 test does not match the explosive yield of an H-bomb.

The estimated yield of the hydrogen bomb tested by the US "Ivy Mike" in 1952 was reported to have a yield of 10.4 megatons. [34] Moreover, the first Hydrogen bomb tested by the Soviet Union in 1953 "RDS-6S" had an estimated yield of 400 Kilotons of TNT.[35] As compared to these yields, the estimated yield of the recent North Korean test is quite less i.e. 6 kilotons. This substantiates that it might not be a hydrogen bomb; however, it could have been a boosted fission device. Thermonuclear weapon is more powerful and highly sophisticated than the conventional nuclear bomb; maybe that is the reason why experts remain skeptical of North Korean claims of conducting a successful H-bomb test.

At the initial level, technical experts rely on the seismic data and environmental sampling of the test site to validate the claims about the nature of the nuclear test. The preliminary analysis of the CTBTO reports showed that the characteristics of the waveforms were similar to the event detected on 12 February 2013.[36] For assessing the nature of the test the traces of radioactivity released from the event, typically in the form of the radioactive noble gas Xenon, is detected, sampled and analyzed at the regional radionuclide stations of CTBTO. However, according to the latest

https://www.nytimes.com/interactive/2016/01/06/world/asia/north-korea-nuclear-bomb-test.html?mcubz=2

[33]"A thousand times more powerful than an atomic bomb, here's why the H-bomb is a scary thought", First Post, 6 January 2016, http://www.firstpost.com/world/a-thousand-times-more-powerful-than-an-atomic-bomb-heres-why-the-h-bomb-is-a-scary-thought-2573042.html.

[34]"50 Facts about US Nuclear Weapons Today", Brookings Institute, April 28, 2014,http://www.brookings.edu/research/articles/2014/04/28-50-nuclear-facts.

[35]"Soviet Hydrogen Bomb Program", Atomic Heritage Foundation,http://www.atomicheritage.org/history/soviet-hydrogen-bomb-program.

[36]"Technical Findings", CTBTO, updated on March 11, 2016, https://www.ctbto.org/the-treaty/developments-after-1996/2016-dprk-announced-nuclear-test/technical-findings/

update by the CTBTO, the technical nature of the test remains inconclusive.[37]

There is a possibility that DPRK's need to conduct the test underground and to prevent radioactive releases from the test site may have limited the explosive yield of the test. It is also possible that DPRK did not test the device to its full potential, or DPRK might have tested a boosted fission device and has exaggerated to test a Hydrogen bomb. Even if Pyongyang has attempted to test a boosted fission device, which may have fizzled out, the likelihood that DPRK is trying to develop H-bomb cannot be completely ruled out.

The claims about a miniaturized H-bomb if confirmed would mean that Pyongyang has developed the capability of creating an H-bomb on a smaller scale, i.e. a miniaturized H-bomb which could fit on a missile that could be launched by a submarine or aircraft. Whether North Korea has tested H-bomb or A-bomb, the point of concern is that it is the only country which is testing in the twenty-first century, and seems fully determined to technically advance its nuclear arsenal.

According to the USGS (United States Geological Survey), an explosion of magnitude 5.3[38] occurred at 0900 hrs (local time) on 9 September 2016 near North Korea's nuclear test site Punggye-ri, located in the Northeast region. It is the same location where the DPRK has been previously conducting its nuclear tests. With an estimated yield of 10-15 Kilotons[39], experts consider the recently tested weapon to be more powerful than the weapons tested by the DPRK before.

According to a statement issued by the DPRK's Nuclear Weapon Institute, the recent test marks the "standardization of the nuclear warhead and will enable the DPRK to produce at will and as many as it

[37]Ibid.

[38]"Possible Explosion of Magnitude 5.3 in North Korea", *USGS*, September 8 2016. https://www.usgs.gov/news/possible-explosion-magnitude-53-north-korea

[39]Testimony of David Albright, President of the Institute for Science and International Security, before the House Foreign Affairs Subcommittee on Asia and the Pacific Hearing Title: "North Korea's Perpetual Provocations: Another Dangerous, Escalatory Nuclear Test", September 14, 2016.

wants a variety of smaller, lighter, and diversified nuclear warheads of higher strike power with a firm hold on the technology for producing and using various fissile materials".[40] This statement shows that the September 9 test achieved a milestone in the advancement of technology of mounting nuclear warheads on ballistic rockets.

Possible Motives

There could be a host of possible motive behind the 2016 North Korean nuclear testing, some of them could be:

Demonstration of a more credible nuclear deterrent: It could be part of the demonstration of a more credible nuclear deterrent against US and its allies on the Korean Peninsula. This stems from deep insecurity and fear of a possible US nuclear attack on North Korea. These tests could be seen in the light of North Korea's efforts to develop a stronger nuclear deterrent to counterbalance US nuclear umbrella provided to South Korea and Japan to maintain balance of power in the region.

Technological advancement of nuclear capability: These tests have a clear motivation for technological advancement and further development of North Korean's nuclear weapons, as these tests are aimed at refining warhead design and reliability as well as increasing the yield of North Korea's nuclear weapons.

Political motivation: The test conducted in January 2016 was politically motivated as Kim Jong-Un wanted to project himself as a strong leader before the Seventh Congress of the Worker's Party of Korea. This rare and potentially significant political gathering of North Korea's communist parties was held in May 2016.[41] The political motivations behind the September 2016 test, soon after the G20 summit and US-ROK military drills

[40]"DPRK Succeeds in Nuclear Warhead Explosion Test", *KCNA*, September 9. 2016. http://www.kcna.kp/kcna.user.home.retrieveHomeInfoList.kcmsf;jsessionid=498E23C666531C558C185853EA2A4888

[41]"Kim Jong-Un becomes North Korea ruling party chairman", *Express Tribune*, May 9, 2016,http://tribune.com.pk/story/1099906/kim-jong-un-becomes-north-korea-ruling-party-chairman/ .

in the region, could be to send a strong message to the international community that North Korea remains fully determined to defend itself by continuously advancing its nuclear and missile programs.

Power projection: Two nuclear tests in the same year can also be seen as a power projection tactic. North Korea is an isolated country, and the international community has very less diplomatic leverage over it, except for maybe China. The 2016 tests also show that North Korea is eager to gain an effective nuclear capability, and this is the reason why irrespective of the UNSC sanctions and international pressure it is still testing. The latest test might have been conducted to give a befitting response to the US- ROK joint military drills.

Regime Preservation: Another motive could be to ensure regime preservation or legitimacy of Kim Jong-Un's rule. Moreover, strengthening the Kim regime's international standing and security posture can also be one such motive. The projection of technical pride and prestige of the regime can also be a motivation.

Resumption of Six-Party Talks: North Korea has a history of exaggerating its capabilities to achieve political ends. North Korea may use these claims to test H-bomb and then to test a still stronger nuclear device to resume the Six-Party Talks; which include US China, Russia, South Korea, Japan and North Korea.

Bilateral talks with US: Another possible motive could be to engage the US at a bilateral level for economic and diplomatic gains. Regardless of the technical details of these tests, the 2016 nuclear tests have brought North Korea into the spotlight, and may provide its leadership with an upper hand, if and when dialogue or negotiations begin. With the regime change in the US, chances are high that the American policy of Strategic Patience towards North Korea's nuclear and missile advancements is going to change.

All the above mentioned possible motivations behind North Korea's nuclear testing can be explained via Deterrence Theory, i.e. North Korea's nuclear weapons are intended to deter US and its allies from attacking

North Korea with nuclear weapons or military force. In case there is use of force or nuclear weapons against North Korea; Pyongyang can retaliate with its own nuclear weapons which will increase the chances of Mutually Assured Destruction (MAD).

Responses of the International Community

Pyongyang's recent nuclear tests have been widely condemned at the regional and international level. Moreover, the North Korean nuclear advancement has come under debate at various international forums, such as the Conference on Disarmament[42] and the Nuclear Security Summit[43] etc.

South Korea: South Korea's Presidential office has strongly denounced the fourth nuclear test by DPRK. According to President Park's statement in the National Security Council meeting "South Korea will make sure that North Korea pays the corresponding price for the nuclear test".[44] She also condemned the latest nuclear test by saying that the test reflected North Korean regime's fanatic recklessness. South Korea has also been advocating the development of a collective international response for punishing North Korea for not keeping up its international obligations.

Japan: Japan's Prime Minister Shinzo Abe has said that the test is "totally unacceptable, and that it constitutes a grave threat to Japan's security and violates U.N. Security Council resolutions".[45] On the September 9 test, he further said that, "the nuclear test by North Korea is a clear and repeated

[42]"Conference on Disarmament Opens 2016 Session hears Message from United Nations Secretary-General Ban Ki-Moon", UNOG, 26 January 2016, http://www.unog.ch/80256EDD006B9C2E/(httpNewsByYear_en)/8CEB3A8A56F91D10C1257F460051B111?OpenDocument.

[43]"North Korea tops agenda at 2016 Nuclear Security Summit", *Vatican Radio*, 1 April 2016,http://en.radiovaticana.va/news/2016/04/01/north_korea_tops_agenda_at_2016_nuclear_security_summit_/1219468 .

[44]"South Koura strongly denounces DPRK's 4th nuke test", *Xinhua*, January 6, 2016, http://news.xinhuanet.com/english/2016-01/06/c_134983226.htm.

[45]"Comment by Prime Minister Shinzo Abe on the Nuclear Test by North Korea", Cabinet Public Relations Office, Japan, January 6, 2016, http://japan.kantei.go.jp/97_abe/statement/201601/1215434_10999.html.

violation of the relevant UNSCRs... Japan lodges a serious protest against North Korea, and condemns North Korea in the strongest possible terms". [46] It is noteworthy here that Japan and South Korea are US allies; both have American extended deterrence assurances against the North Korean threat.

China: China has been a close ally to the DPRK but, according to the Chinese Foreign Ministry's statement, it is evident that China firmly opposed[47] the 2016 nuclear tests conducted by the DPRK. The Chinese statements after 2016 tests call for denuclearization of the Korean Peninsula, i.e. removal of American nuclear umbrella; this is conditional as it implies that the American nuclear commitment should be revoked.

United States: According to the US State Department spokesperson's statement, "the US has consistently made clear that US will not accept DPRK as a nuclear State." [48] In another statement, US Secretary of Defense Ashton Carter has reaffirmed "The ironclad commitment of the US to the defense of the ROK, and that this commitment includes all aspects of the US extended deterrence." [49] President Obama in a statement said that "The recent nuclear test is a flagrant violation of multiple UNSC Resolutions and the United States does not and never will accept North Korea as a nuclear state." [50] On balance the current statement is a more strong condemnation of the DPRK test than the previous statements given by the US

[46]Statement by the Prime Minister of Japan (on the Nuclear Test by North Korea), September 9, 2016, http://japan.kantei.go.jp/97_abe/statement/201609/statement.html

[47]"Foreign Ministry Spokesperson Hua Chunying's Regular Press Conference", Ministry of Foreign Affairs of the People's Republic of China, January 6, 2016, http://www.fmprc.gov.cn/mfa_eng/xwfw_665399/s2510_665401/2511_665403/t1329999.shtml.

[48]"Press Statement by the Secretary of State John Kerry on the North Korean Nuclear Test", Washington, DC, January 6, 2016, http://www.state.gov/secretary/remarks/2016/01/250994.htm.

[49]Ibid.

[50]"Statement by the President on North Korea's Nuclear Test", The White House, September 09, 2016 , https://obamawhitehouse.archives.gov/the-press-office/2016/09/09/statement-president-north-koreas-nuclear-test

Russia: Russia's foreign ministry said that if the test is confirmed, then it would be a new step for Pyongyang and a flagrant violation of international law that stands to aggravate tensions on the Korean peninsula.[51] Russian Foreign Minister Sergei Lavrov also has expressed serious concern on the September 2016 nuclear test conducted by North Korea.

U.K.: The Foreign Minister Philip Hammond in his statement said that "It is a grave breach of UN Security Council resolutions and a provocation which the U.K. condemns without reservation".[52] The new Foreign Minister Boris Johnson labeled the September 2016 test as the flagrant violation of the UNSCRs. [53] Like the 2013 statement, this time also the U.K. has again expressed concern over the nuclear developments by North Korea, and called upon DPRK to resolve the issue though Six Party talks.

France: France has also condemned[54] the nuclear test carried out by North Korea in the strongest possible terms. The 2016 statement[55] by France states that the recent test violates the universally accepted norm of no nuclear testing. Moreover, the spokesperson of French Foreign ministry said that "North Korea's continuous development of a nuclear and ballistic arsenal is a gross violation of UN Security Council resolutions... This escalation is unacceptable... A swift and strong reaction by the UN Security

[51]"Comment by Russian MFA Spokesman M.V.Zaharovoy in connection with the DPRK government statement on the hydrogen bomb test",
The Ministry of Foreign Affairs Russian Federation, January 6, 2016,
http://www.mid.ru/foreign_policy/news//asset_publisher/cKNonkJE02Bw/content/id/2004721

[52]Foreign Secretary statement on reports of North Korean nuclear test, Foreign & Commonwealth Office and The Rt Hon Philip Hammond MP , 6 January 2016,
https://www.gov.uk/government/news/foreign-secretary-statement-on-reports-of-north-korean-nuclear-test.

[53]Foreign Secretary Boris Johnson condemns North Korea nuclear test, 9 September 2016,
https://www.gov.uk/government/news/foreign-secretary-boris-johnson-condemns-north-korea-nuclear-test

[54]"Nuclear Test – North Korea – Spokesperson's statement" , France Diplomatie, (January 6, 2016), http://www.diplomatie.gouv.fr/en/country-files/north-korea/events/article/nuclear-test-north-korea-spokesperson-s-statement-06-01-16

[55]Ibid.

Council, the European Union, and the entire international community is called for."[56]

Israel: Israel was the last to condemn January's nuclear test. In an official statement, Israel has said that it joins the international community in expressing concern over the danger that this act poses to regional stability and international peace and security. "This act by the DPRK must be met with a swift response by the international community... A clear message must be sent to the DPRK and to other countries, that such activities are unacceptable and cannot be tolerated".[57] Israel condemned the September 2016 test by saying that, "the nuclear test conducted by North Korea contradicts international norms and Security Council resolutions".[58] Israel has not taken an independent position: it takes cover behind the international community.

India: India's Ministry of External Affairs (MEA) said that: "It is a matter of deep concern that the DPRK has again acted in violation of its international commitments in this regard. We call upon the DPRK to refrain from such actions which adversely impact on peace and stability in the region."[59] In response to the September nuclear test, the Indian MEA issued another statement saying that "India deplores the nuclear test conducted by the DPRK, India remains concerned about the proliferation of nuclear and missile technologies which has adversely impacted India's national security."[60]

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[56]North Korean nuclear test (September 9, 2016), France Diplomatie, http://www.diplomatie.gouv.fr/en/country-files/north-korea/events/article/north-korean-nuclear-test-09-09-16.

[57]"Israel condemns North Korea's nuclear test", Israel Ministry of Foreign Affairs , January 13, 2016 ,

[58]Israel condemns North Korea's nuclear test", Israel Ministry of Foreign Affairs , September 09, 2016. http://mfa.gov.il/MFA/PressRoom/2016/Pages/Israel-condemns-North-Korean-test-9-September-2016.aspx

[59]"Official Spokesperson's response to a question on reports of a nuclear test by DPRK", Ministry of External Affairs India , January 06, 2016, http://www.mea.gov.in/media-briefings.htm?dtl/26258/Official+Spokespersons+response+to+a+question+on+reports+of+a+nuclear+test+by+DPRK.

[60]MEA's Statement on DPRK, September 09, 2016 http://www.mea.gov.in/press-releases.htm?dtl/27374/Statement_on_DPRK

Pakistan: Pakistan's Ministry of Foreign Affairs gave subsequent statements that show Pakistan's concerns about the DPRK's nuclear testing. These statements also say that Pakistan has been supporting nuclear weapons free Korean Peninsula as agreed by all parties and that it strongly believes all countries should comply with their respective international obligations."Pakistan opposes any action which is detrimental to peace and stability in the region and militates against the prospects of reaching a solution to the issue in the framework of the Six Party Talks". [61]

United Nations: The UN Secretary-General Ban Ki-moon said that "The test is deeply troubling, the UN Security Council is vowing to immediately begin considering significant measures. This act is profoundly destabilizing for regional security and seriously undermines international non-proliferation efforts. I condemn it unequivocally". [62] Moreover, the United Nations Security Council also strongly condemned the Democratic People's Republic of Korea's (DPRK) nuclear test on 9 September and said it is a clear violation of repeated calls on the country to halt such activity.[63]

The EU: EU Commission's Vice President called the January 2016 test to be "A grave violation of DPRK's international obligations and UNSC resolutions, and a threat to the peace and security of the entire North East Asian region". [64]

Conference on Disarmament (CD): The statements issued by the countries at the 2016 opening session of the CD have widely condemned the nuclear test held on January 6, 2016. The countries that have condemned DPRK's nuclear test included the US, South Korea, Canada, Germany, Finland,

[61]"Pakistan Expresses Concern over Nuclear Test by DPRK", MOFA, January 8, 2016, http://www.mofa.gov.pk/pr-details.php?mm=MzM4NQ,,
[62]"UN deplores deeply troubling hydrogen bomb test announced by DPR Korea", UN News Centre , January 6, 2016, http://www.un.org/apps/news/story.asp?NewsID=52945#.VwVph6R97IV.
[63]Security Council strongly condemns DPRK nuclear test, 10 September 2016, http://www.un.org/apps/news/story.asp?NewsID=54898#.WN_U48CGPIU .
[64]"Statement by the HR/VP Federica Mogherini on the alleged nuclear test in DPRK", European Union External Action, January 6, 2016, http://eeas.europa.eu/statements-eeas/2016/160106_01_en.htm

Japan, France, Italy, Netherlands, U.K., Poland, Spain and Australia. India has shown concern about North Korean nuclear activities, while there was no mention of North Korea in Pakistan's statement. [65]

The DPRK while defending itself at CD said that the hostile policies of US have compelled it to pursue nuclear weapon possession and to bolster its nuclear deterrent capability to cope with the ever-increasing nuclear threat of the US It has also reiterated that the DPRK would neither be the first to use nuclear weapons nor transfer relevant means and technology under any circumstances as already declared as long as the hostile forces for aggression did not encroach upon its sovereignty. [66]

Measures taken by the International Community

UNSC Resolutions 2270 and 2321 against DPRK: The U.N. Security Council has unanimously adopted two new UN Security Council Resolutions, UNSCR 2270 on March 2, 2016 and UNSCR 2321 on November 30, 2016. The draft of 2270 resolution was prepared after seven months of negotiations between China and US With a focus on choking down the flow of hard currency to North Korea, the recent resolution imposes the toughest sanctions so far on North Korea. This resolution is a significant milestone achieved by the international community which hopefully will prove to be instrumental in halting the North Korean nuclear and missile advancements. This resolution places a full arms embargo on North Korea. It also bans all states from transferring any item that could contribute to North Korea's nuclear or ballistic missile programs. [67]

On November 30, 2016, in response to the September 9, 2016 nuclear test conducted by North Korea, the UNSCR 2321 was unanimously adopted by the UN Security Council. The UNSCR 2321 expands measures against

[65]"Conference on Disarmament Opens 2016 Session hears Message from United Nations Secretary-General Ban Ki-Moon", UNOG, 26 January 2016, http://www.unog.ch/80256EDD006B9C2E/(httpNewsByYear_en)/8CEB3A8A56F91D10C1257F460051B111?OpenDocument.

[66]Ibid.

[67]Security Council Imposes Fresh Sanctions on Democratic People's Republic of Korea, Unanimously Adopting Resolution 2270 (2016), UN, March 2, 2016,http://www.un.org/press/en/2016/sc12267.doc.htm.

North Korea for its continued violations of existing resolutions. The Resolution 2321 aims at cutting down the ongoing coal revenues by capping the DPRK's exports to all UN members; it will also curb the DPRK's coal exports in the remaining months of 2016, limiting shipments to $53 million or 1 million tons. [68] This Resolution also includes bans on the transfer of dual-use items to North Korea which can also be used in North Korea's nuclear programs.[69]

Both of the above mentioned UNSC resolutions focus on diplomatically and economically isolating North Korea. The adoption of these resolutions was perceived to help in crunching North Korean economy and also help bring North Korea to the negotiations table. In the future, once these sanctions prove to be effective against Kim's regime, lifting of sanctions could be used as a quid pro quo to asking North Korea to commit, though resuming Six Party Talks, for the denuclearization of Korean Peninsula.

Soon after the adoption on UNSCR 2270, the DPRK conducted the fifth nuclear test which led to the adoption of the UNSCR 2321. Likewise, North Korea is unlikely to perceive these new set of sanctions seriously and may become more aggressive. The international community should make sure that these UNSC Resolutions should not negatively impact the population of North Korea. Recently there are intelligence reports about North Korea preparing for another nuclear test.[70] This shows that international sanctions have not proved to be effective in halting the advancement of North Korea's nuclear and missile program. Therefore, a long term solution to the North Korean issue would be to renew the Six Party Talks.

US Sanctions Bill: On 18 February, US President Barack Obama signed the North Korea Sanctions and Policy Enhancement Act of 2016,[71] which

[68] Adopted by the Security Council at its 7821st meeting, UNSCR 2321, 30 November 2016,http://www.un.org/en/ga/search/view_doc.asp?symbol=S/RES/2321(2016).
[69] Ibid.
[70] Joseph S. Bermudez Jr. and Jack Liu , "North Korea's Punggye-ri Nuclear Test Site: Possible Vehicles Located at Tunnel Entrance" , *38 North*, March 25, 2017, http://www.38north.org/2017/03/punggye032517/.
[71] "H.R. 757: North Korea Sanctions and Policy Enhancement Act of 2016", February 18, 2016,https://www.govtrack.us/congress/bills/114/hr757.

imposes fresh US sanctions on North Korea. This bill was waiting for President's approval as it had been already passed by the House of Representatives by a majority of 408-2, and the US Senate by a majority of 96-0.[72] The bill calls for: a) mandatory sanctions on anyone who is assisting North Korea's nuclear activities and human rights abuses, b) authorizes the spending of $50m (£35m) aid for the next five years on radio broadcasts into North Korea to improve the humanitarian situation.[73] Foreign Affairs Committee Chairman Ed Royce on 21 March 2017, in a written statement to the US House of Representatives, introduced new and tougher legislation strengthening sanctions against North Korea. The bill titled "Korean Interdiction and Modernization of Sanctions Act (H.R. 1644)", aims to curb North Korea's access to hard currency and materials by expanding existing sanctions. The bill if passed would; prohibit the purchase and acquisition of any coal, iron, or iron ore in excess of the limitations provided in applicable UNSC resolutions, would give the President the authority to block transactions which transfer and provide crude oil, refined petroleum etc. Entities and people in the US will not be allowed to offer fuel, supplies, or bunkering services to vessels and aircraft linked to North Korea, and obliges US to ban any goods, wares, articles, and merchandise mined, produced, or manufactured wholly or in part by North Korean laborers from entering the US, as well as to impose sanctions against foreigner persons that employ North Koreans.[74]

Like the UNSCRss these US sanctions also focus on economic and diplomatic isolation of North Korea. If we observe the mounting tensions in Korean Peninsula it seems that the chances of use of force by the US for preventing North Korea from developing an Inter Continental Ballistic Missile are present. On the other hand US policy makers are fully aware of

[72]Patricia Zengerle , "Congress passes tougher North Korea sanctions, sends bill to Obama", *Reuters*, 12 February 2016, http://www.reuters.com/article/us-northkorea-usa-sanctions-idUSKCN0VL1WD

[73]"H.R. 757: North Korea Sanctions and Policy Enhancement Act of 2016", February 18, 2016,https://www.govtrack.us/congress/bills/114/hr757.

[74]"H.R. 1644: Korean Interdiction and Modernization of Sanctions Act". 21 March 2017,https://foreignaffairs.house.gov/wp-content/uploads/2017/03/HR-1644.pdf.

the fact that contemplating a disarming strike against DPRK will come at a price of an all out war between North Korea, the U.S and its allies. Therefore, the real time chances of use of force by the US, for halting the further advancement of North Korea's missile and nuclear programs, are less likely.

Chinese Embargoes against DPRK: For the fulfillment of its commitments to the UN Security Council resolution 2270, the Chinese Commerce Ministry for the first time announced a list of embargoes against the DPRK. Trade restrictions include embargoes on the imports of coal, iron and iron ores from the DPRK, imports of gold ores, titanium ores, vanadium ore, and rare earth minerals from the DPRK, and exports of aircraft fuel including aviation gasoline. [75] Import of these minerals and export of fuel is permitted only for the purpose of people's livelihood i.e. it does not contribute to the development of the missile and nuclear program of the DPRK. On Dec. 10, for the implementation of UNSCR 2321, the Chinese Commerce Ministry announced that it was temporarily suspending imports of North Korean coal.[76] Moreover, the Chinese Commerce ministry in a fresh announcement declared that for the execution of UNSCR 2321 the import of coal from the DPRK for the year 2017 will be suspended in accordance with the Foreign Trade Law of the People's Republic of China and the MOFCOM and GACC Announcement No.81 of 2016, and that this announcement shall take effect as of February 19, 2017 and be valid until December 31, 2017.[77]

Japanese Sanctions: The Government of Japan on 10 February announced to take individual measures against North Korea. These sanctions restrict the movement of North Korean citizens in Japan and requests Japanese citizens not to visit North Korea, bans the entry of all North Korean flag

[75]"MOFCOM Announcement No. 11 of 2016 Announcement on List of Mineral Products Embargo against the DPRK", MOFCOM, April 7, 2016, http://english.mofcom.gov.cn/article/policyrelease/buwei/201604/20160401291199.shtml.
[76]"China to suspend imports of North Korean coal until end of this year", *The Hankyoreh*, 12 Dec 2016,http://english.hani.co.kr/arti/english_edition/e_national/774313.html.
[77]"MOFCOM and GACC Announcement No.12 of 2017", MOFCOM, February 20, 2017 , http://english.mofcom.gov.cn/article/policyrelease/buwei/201702/20170202520711.shtml.

vessels, reduces the lowest amount of currency to be carried to North Korea to be 100,000 yen. And also gives a list of entities and individuals designated for asset-freezing measures.[78]

Measures taken by South Korea:

President Park Geun-hye ordered the shutting down of Kaesong complex in retaliation for DPRK's nuclear test and satellite launch.[79] This industrial complex located at the common border has been a source for the flow of hard currency from South Korea to North Korea. Moreover, on 9 March 2016, South Korea announced that it has imposed unilateral maritime sanctions against the DPRK by banning third-country ships visiting the DPRK from entering South Korean ports.[80] These sanctions target 38 individuals and 24 organizations in North Korea and bar South Koreans to do any sort of business with North Korea.

Deployment of THAAD:

After North Korea's fourth nuclear test ROK and US have been negotiating the deployment of the THAAD system in South Korea. Both states also had jointly consulted the potential deployment of the THAAD missile defence system to South Korea.[81] ROK and US have also launched an official working group for disusing the deployment of THAAD in South Korea. [82] In an interview given by the former Secretary of Defence Ashton Carter had clearly said that the deployment of THAAD is imminent, as it is part of

[78]"Measures taken by the Government of Japan against North Korea", Ministry of Foreign Affairs Japan, February 10, 2016, http://www.mofa.go.jp/a_o/na/kp/page4e_000377.htm.l.
[79]"Seoul shuts down joint North-South Korea industrial complex", *The Guardian*, February 10, 2016, http://www.theguardian.com/world/2016/feb/10/seoul-shuts-down-joint-north-south-korea-industrial-complex-kaesong.
[80]Hyung-Jin Kim, "South Korea announces unilateral sanctions on North Korea ", *Associated Press*, March 8, 2016, http://www.msn.com/en-us/news/world/south-korea-announces-unilateral-sanctions-on-north-korea/ar-AAgvYVQ.
[81]"North Korea: How to Approach the Nuclear Threat", Remarks by Daniel R. Russel Assistant Secretary, Bureau of East Asian and Pacific Affairs Hosted by the Institute for Corean-American Studies Rayburn House Office Building, Washington, DC, April 4, 2016, http://www.state.gov/p/eap/rls/rm/2016/04/255492.htm.
[82]"S. Korea, US launch formal talks on deploying THAAD in Korea", *Yonhap*, March 4, 2016,http://english.yonhapnews.co.kr/national/2016/03/04/11/0301000000AEN20160304004700315F.html?7f856cb0.

protecting American forces on the Korean Peninsula and protecting South Korea. [83] On July 7, 2016, ROK and the US agreed to deploy the Terminal High-Altitude Area Defense (THAAD) system to the Republic of Korea, in response to North Korea's continued development of ballistic missile technology in contravention of six United Nations Security Council Resolutions.[84] The political turmoil in South Korea and strong domestic opposition made the future of THAAD's deployment somewhat uncertain. ROK's policy toward the deployment of THAAD, even after the removal of President Park from office, remains unchanged.

In a recent joint statement, Foreign Minister Yun Byung-se and the US Secretary of State Rex W. Tillerson, have reaffirmed their position on the deployment of THAAD in South Korea,[85] by clearly mentioning that THAAD is purely for defensive purposes, and is directed against the threats emerging from the nuclear and missile advancements of North Korea. However, according to recent media reports, after North Korea's test of four ballistic missiles, the US has started deploying the first elements of THAAD in South Korea.[86]

Soon after the ROK-US announced their agreement for the deployment of THAAD in South Korea, China has been strongly opposing this decision. This announcement has adversely affected the diplomatic and economic relations between South Korea and China. In a nutshell, the deployment of THAAD in South Korea comes at a time of mounting tensions on the Korean Peninsula. Deployment of THAAD may lead to closer collaboration between China and Russia against US, Japan, and South Korean alliance.

[83]"A Conversation with Ash Carter", *CFR*, April 8, 2016, http://www.cfr.org/defense-and-security/conversation-ash-carter/p37723.
[84]"ROK-US Alliance agrees to deploy THAAD", USFK, Press Release, July 07, 2016, http://www.usfk.mil/Media/Press-Releases/Article/831166/rok-us-alliance-agrees-to-deploy-thaad/.
[85]"Joint Press Conference of the ROK and US Foreign Ministers",Ministry of Foreign Affairs Republic of Korea, 21 March 2017, http://www.mofa.go.kr/ENG/press/pressbriefings/index.jsp?menu=m_10_30.
[86]"US starts deploying anti-missile system in South Korea after defiant North's latest test", *Reuters*, March 7, 2017, http://www.reuters.com/article/us-northkorea-missiles-kcna-idUSKBN16D2MC .

The deployment of THAAD can also be seen as part of US rebalance strategy towards Asia[87], aimed at countering China and its allies. The continuous proactive advancements by North Korea could also help the US in justifying its growing military presence in Asia-Pacific.

Conclusion

If an international diplomatic mission is not soon formulated that brings all the stakeholders to the negotiation table, and tries to find a solution to the North Korean issue through dialogue, the peace and stability in Korean Peninsula is at stake. Chances are fair that Pyongyang may soon test another nuclear device (in 2017) aimed at further achieving technological advancement under Kim's leadership. North Korea has clearly signalled that it is ready to negotiate for achieving economic stability of its nation. North Korea might be using these recent nuclear tests as a bargaining chip for demanding an Iran like Joint Comprehensive Plan of Action (JCPOA). North Korea's stance in the recent events of testing nuclear missiles can be taken as means to an end, where North Korea desires to get a political and economical compensation as given to Iran under the name of Joint Comprehensive Plan of Action. Moreover, North Korea also desires to put an end to US military cooperation with South Korea and Japan. Furthermore, for dragging North Korea's nuclear advancements and for decreasing tension on the Korean Peninsula; the international community collectively should craft a quid pro quo strategy that includes both UNSC sanctions and diplomatic engagement with North Korea. The recent nuclear tests directly challenge the global non-proliferation regime as DPRK's continuous technical developments, even as a security measure can motivate South Korea and Japan to develop nuclear weapons. This can initiate a nuclear arms race in North East Asia. In this case if Japan goes nuclear, South Korea may follow the suit. While the US-ROK plans of deploying THAAD system has started materialising, therefore, chances are high that tensions between the US, and China could increase.

[87]Michael D. Swaine, "Chinese Views on South Korea's Deployment of THAAD", China Leadership Monitor, no. 52, http://carnegieendowment.org/files/CLM52MS.pdf.

[88] Accepting North Korea into the nuclear club as a nuclear power and then engaging it to show a responsible behavior is in the best interest of the international community. In that scenario, North Korea could be asked to make nonproliferation commitments in exchange for acceptance of its nuclear weapons status, in much the same way that the US has accepted the nuclear status of India, Pakistan, and Israel. Once a country that has acquired nuclear weapons, like North Korea whose nuclear program is security driven, it is unrealistic to expect that such a country will give up its nuclear program. Therefore, rather than demanding that North Korea should give up its nuclear program efforts, it should be made to halt further nuclear advancements and to cap Pyongyang's growing capabilities.

Year 2016 proved to be a unique year as there were two UNSCRs adopted unanimously against DPRK. The implementation of the UNSCRs 2270 and 2321 can be quite challenging, as many states have yet to incorporate domestic legislation for the effective implementation of UNSCR 2240. Sanctions alone are not effective in changing fundamental political goals of governments. The best way forward is that the international community should fully engage Pyongyang along with UNSC sanction. Easing of sanctions in return for nuclear restraint along with limiting nuclear weapons capabilities by the DPRK can also be another option. In this regard Six Party Talks could be resumed or bilateral talks between the US and DPRK could be initiated. China should play its role by using its political leverage to bring the DPRK to the negotiating table. Considering the increased tensions on the Korean Peninsula and North Korea's ambitious leadership, Pyongyang would continue to advance its nuclear arsenal and missile program. Pyongyang on its journey to becoming economically stable and securing its sovereignty via nuclear weapons, is unlikely to give up nuclear testing any time soon. Even after the fresh round of UNSC Resolutions, North Korea would be encouraged to

[88]Gerry Mullany and Michael R. Gordonmarch , "US starts deploying THAAD Antimissile System in South Korea, After North's Tests", *New York Times*, 6 March, 2017. https://www.nytimes.com/2017/03/06/world/asia/north-korea-thaad-missile-defense-us-china.html?_r=0

conduct another nuclear test in the near future. Recently, there have been media reports about North Korea preparing to conduct a sixth nuclear test, and considering the fast pace path on which North Korea is right now, these speculations cannot be completely ruled out. North Korean nuclear issue cannot be resolved till the time it remains isolated. It is in the vested interest of all stake holders to bring North Korea to the negotiation table. For this, a balanced approach that includes; diplomatic engagement, economic incentives, along with the recent UNSC Resolutions is required.

Tactical Nuclear Weapons and Deterrence Stability in South Asia: Pakistan's Rationale

Iqra Kabir, Azhar Khan*

Abstract

The objective and aim of the study is to explain the Indo-US concerns and arguments regarding Pakistani tactical nuclear weapons and how far these concerns are justified. This study seeks to analyze the fears of western and regional states against Pakistan's TNWs and will endeavor to find the ways in which Pakistani policy makers and opinion makers can best respond to these challenges. It will draw on both sides of the argument and conclude whether Pakistan has efficiently tackled the concerns raised by the international community or it has failed to achieve the status of a responsible nuclear weapon state. The research is descriptive, explanatory, and analytical in nature, as it tends to explain the concerns and apprehensions of western and regional powers on Pakistan's tactical nuclear weapons. The qualitative data collection method is used to gather information about the existing literature, important events, and reports. The research includes both primary and secondary data and has made use of a combination of content retrieved from journals, newspapers, interviews, and research articles. Pakistan's scientific and military establishment believed that acquisition of nuclear weapons would render India's conventional military superiority irrelevant. However, in less than a year, the 'irreversible accomplishment' was more or less reversed with the limited war in Kargil, Siachen. The

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aftermath of the military adventurism taught Pakistan Army the single most valuable lesson that would shape its policy in subsequent years: India's conventional superiority could very well assert itself within Pakistan's nuclear threshold. In order to tackle this, Pakistan decided to introduce a nuclear dimension to tactical warfare. The idea, as viewed by different analysts, is either absolutely genius or absolutely absurd. It has the potential to paralyze Indian Cold Start strategy as a deterrent or it has the potential to provoke a massive nuclear retaliation in the event of a limited war. While theoretically and historically evaluating the efficacy of Pakistan's Tactical Nuclear Weapons (TNWs) as a deterrent, the research paper has majorly found that Pakistan has no intension of using TNWs rather it is for deterrence purpose and for maintaining the strategic stability. Moreover, Pakistan has proved to be a responsible nuclear weapon state by inculcating changes within its security apparatus.

Keywords: Tactical Nuclear Weapons, Intercontinental Ballistic Missiles, Nuclear Weapons State, United States

Historical Overview of Tactical Nuclear Weapons

Non-Strategic nuclear weapons (NSNWs), also termed as intermediate range, theatre or sub-strategic weapons and tactical nuclear weapons (TNW). Strategic nuclear weapons are used to deter the adversary with the threat of huge damage whereas military targets are attacked by NSNWs. These low-yield nuclear weapons are considered in the category of non-strategic nuclear weapons (NSNWs) which are designed mainly for battlefield contingencies. According to Sokov[1], Tactical Nuclear Weapons (TNWs) refer to the short range weapons with the range less than 500 km including land-based missiles and a range of 600 km including sea and air-

[1]"Tactical Nuclear Weapons (TNW)", NTI, May 1, 2002, accessed October 10, 2016, http://www.nti.org/analysis/articles/tactical-nuclear-weapons/.

based weapons. There is no universally accepted definition of these weapons but the US Office of Secretary of Defense defined NSNWs as nuclear weapons that are not part of the nuclear triad-Intercontinental Ballistic Missiles (ICBMS), long range bombers and strategic nuclear submarine[2]. They have operational military war fighting capabilities and are more dangerous than strategic weapons.[3]

United States deployed thousands of short-range nuclear weapons in Europe, South Korea and Japan throughout the Cold War. The purpose was maintaining deterrence and the defense of its allies in Europe and Asia. Additionally, they could have been used on the battlefield to slow or to stop the advancement of adversary's conventional forces. It did not rule out the possibility that these weapons can be used in contingencies with other adversaries even though they were deployed for defense of the allies from Soviet Union. They were part of NATO's flexible response strategy in Europe. This strategy was used to convince USSR that any kind of attack may lead to nuclear retaliation. The US maintained the capability of responding to any attack through nuclear weapons although it did not insist their use. Moreover this capability was maintained for escalation control. Due to the changes in the threats and the capabilities of the adversary, the US often altered the size and structure of its non-strategic nuclear forces during the Cold War. The US declined operational nuclear warheads from more than 7000 in the mid-1970s to below 6000 in 1980s and to fewer than 1000 by the middle of 1990s.[4] The reduction was due to the US and NATO belief that they can maintain deterrence even by fewer

[2]"Non-Strategic Nuclear Weapons: The Next Step in Multilateral Arms Control," Australian Strategic Policy Institute, August 2013, accessed October 10, 2016, https://www.aspi.org.au/publications/strategic-insights-62-non-strategic-nuclear-weapons-the-next-step-in-multilateral-arms-control/SI62_nuclear_weapons.pdf.

[3]"Tactical Nuclear Weapons: Debunking the Mythology," United States Air Force Institute for national Security Studies, August 2002, accessed October 10, 2016, http://www.usafa.edu/df/inss/OCP/OCP46.pdf.

[4]Usa Ibp, US Defense Policy Handbook, 1st ed. (International Business Publications, USA, 2005).

numbers but with modern weapons[5]. Similarly, Soviet Union also considered nuclear weapons to be important part of their military strategy but also assured that it would not be the first one to use them.[6] But according the Western analysts, Soviet Union had incorporated nuclear weapons into its warfighting strategies more than the US. According to Soviet analyst[7], these weapons can be used for preemptive and surprise attacks. Under Mikhail Gorbachev in the mid-1980s, it began to reduce its emphasis on nuclear warfighting plans due to his belief that the use of these weapons would be disastrous. However, they remained a prime tool of deterring and fighting a large-scale conflict with the US and NATO. It deployed a wide range of delivery vehicles for NSNWs at nearly 600 bases located in throughout Russia, Eastern Europe and some non-Russian republics[8].

Throughout the 1990s, US kept almost 1,100 NSNWs in active stockpiles. In the 2001 nuclear posture review, the Bush administration underlined the likelihood of the use of nuclear weapons in regional contingencies acknowledging that it might use nuclear weapons in response to nations that have conventional, biological or chemical weapons[9]. It stated that it would deploy and develop those nuclear weapon capabilities to defeat any nation whether or not it possessed

[5]CSIS Nuclear Strategy Study Group and Mazzarr, Michel J., 1965- *Toward a nuclear peace: the future of nuclear weapons in U.S foreign and defense policy: report of the CSIS Nuclear Strategy Group.* Center for Strategic and International Studies, Washington, DC, 1993.

[6]Woolf, Amy F. "Nonstrategic Nuclear Weapons." Federation of American Scientists. February 21, 2017. https://fas.org/sgp/crs/nuke/RL32572.pdf.

[7]Millar, Alistair, Stansfield Turner, Brian Alex, and Alistair Millar er. *Tactical Nuclear Weapons: Emergent Threats in an Evolving Security Environment*. Edited by Brian Alexander. Boca Raton, FL, United States: Potomac Books, 2003

[8]Millar, Alistair, Stansfield Turner, Brian Alex, and Alistair Millar er. *Tactical Nuclear Weapons: Emergent Threats in an Evolving Security Environment*. Edited by Brian Alexander. Boca Raton, FL, United States: Potomac Books, 2003

[9]Kristensen, Hans. "Global Strike: A Chronology of the Pentagon's New Offensive Strike Plan." March 15, 2006. Accessed October 10, 2016. http://fas.org/ssp/docs/GlobalStrikeReport.pdf.

nuclear weapons. Many analysts argued that US was planning for tactical use of nuclear weapons.

During the Cold War era, the conventional asymmetry between the two rivals i.e. the US and USSR led to an arms race. Similarly the two South Asian rivals i.e. India and Pakistan have strained relations and are engaging in an arms race. Their relationship is rooted in the decades old rivalry which has continued until now in the form of a nuclear arms race. Like the Cold War period, both India and Pakistan also perceive threat from each other resulting in the enhancement and vertical proliferation of their nuclear weapons. The adoption of various nuclear weapons and doctrines was the outcome of this threat perception from each other. South Asian environment is analogous to Cold War rivals where both the US and USSR wanted to gain superiority over each other by increasing their weapons and to bridge the gaps of asymmetries. Although contrasting with the Cold War, Pakistan and India have lesser geostrategic depth which has more chance of misperception and unintentional use of weapons but considering the threat perception in both the situations, South Asian competitiveness can be considered analogous to Cold War.

South Asian Nuclear Environment and Doctrines

Salik[10] in his book *The Genesis of South Asian Nuclear Deterrence: Pakistan's Perspective* explains the characteristics of South Asia's nuclear environment. The nuclear doctrines of India and Pakistan are still in an evolving phase which increases the likelihood of pre-emptive strikes. As the result of Indo-US nuclear deal, Indian expansion of fissile material production and the induction of ABMs (Anti-Ballistic Missiles) have increased strategic instability in the region and can consequently result in arms race. The infrastructure of command and control, intelligence and communication are also developing in both countries. There is also need for Confidence Building Measures (CBMs). Moreover the politically weak

[10]Naeem Salik, *The Genesis of South Asian Nuclear Deterrence: Pakistan's Perspective*, 2nd ed. (Karachi: Oxford University Press, 2009).

governments and the inclination of general public of both countries towards risk taking will further create uncertainties of responses in crises and will have public pressure on decision making during crises.

After the nuclearization of South Asia in 1998, the deterrence equation was evolved between India and Pakistan forcing them to refrain from any conventional war but a limited war did occur. The Kargil Conflict was fought between them in 1999. After the war of 1971, both countries decided to resolve their disputes whereas the issue of the control of Siachen glaciers was left unresolved. So in April 1984, India launched operation to gain control over it and in the following years Pakistan also launched several operations to reclaim the occupied territory. Kargil was one of those military operations. In response Pakistani forces were attacked by Indian forces. For about two months Pakistan's bases were attacked by Indian jets. There was a heavy international pressure to end the war and due to this pressure this conflict came to an end. This limited war can be seen as the application of stability-instability paradox according to which when two nuclear weapons states attain stability at the strategic level, they tend to fight at low level or they indulge in limited conflicts. As both of them were aware of the risk of escalation, they kept the war relatively low even below the conventional level. Thus Kargil conflict comes under the category of marginal conventional conflict.

The next conflict between the two occurred in 2001-2002. It occurred in two phases. The first phase began in December 2001 when militants attacked Indian Parliament. Indian government stated the two Pakistani backed militant groups to be the reason behind the attack. In response to it, India launched Operation Parakram and mobilized 500,000 troops to the Line of Control and international borders. In response to the mobilization, Pakistan deployed its own troops. So, as a result approximately 1 million troops were confronting each other along the Line of Control. The conflict was deescalated by President Musharraf's efforts. However, the troops remained deployed.

The second phase of the crisis occurred in May 2002 when an Indian army camp in Kashmir was attacked by terrorists, killing 32 people. India planned of a military response more ambitious than the previous one. This time they decided to drive 3 strike corps from Rajasthan into Pakistan, engaging and destroying Pakistani forces and seizing Pakistani territory in the Thar Desert. Due to the US intervention, the crisis was diffused which had the possibility to escalate into a nuclear conflict. This was the second time after the nuclearization of both the countries that they engaged in limited conflicts. Thus, it can be argued that the first few years after the 1998 nuclear tests were result of the destabilizing effects of nuclear proliferation[11].

After the Operation Parakram, India issued a document regarding its doctrine in January 2003 in which there were postulates of NFU policy, MCD and no use of nuclear weapons against a non-nuclear weapons state and retaliatory attacks to be authorized by civil political leadership through National Command Authority (NCA)[12]. It further stated that India will retaliate with nuclear weapons in case of any major attack on India or Indian forces anywhere by biological or chemical weapons and it will participate in Fissile Material Cut-off Treaty (FMCT) negotiations.

According to Khan[13], Cold Start Doctrine (CSD) can be termed as a defensive-offensive posture of India due to the fact that previously it had strike forces with only three divisions but with CSD it intended to develop eight divisions and they will remain positioned close to the international borders India announced its CSD on 28th April 2004. According to Ladwig[14], the CSD would give India the capability to launch a retaliatory strike

[11]Kapur, S. Paul. "Ten Years of Instability in a Nuclear South Asia." *International Security* 33, no. 2 (October 2008): 71–94.

[12]Naeem Salik, *The Genesis of South Asian Nuclear Deterrence: Pakistan's Perspective*, 2nd ed. (Karachi: Oxford University Press, 2009).

[13]Zafar Khan, "Cold Start Doctrine: The Conventional Challenge to South Asian Stability," *Contemporary Security Policy* 33, no. 3 (December 2012).

[14]Walter C. Ladwig, "A Cold Start for Hot Wars? The Indian Army's New Limited War Doctrine," *International Security* 32, no. 3 (January 2008).

against Pakistan that would result in huge damage to Pakistan Army before the intervention of the international community. Meanwhile it would pursue narrow enough aims to deny Islamabad a justification to escalate the clash to the nuclear level. CSD doctrine once implemented will ensure that Pakistan has no time for inviting the interference of the US or of any other state for the resolution or the de-escalation of the conflict as it has done previously.

Four types of changes were made in the doctrine; transformation of force structure, emphasis on speed, limitation of objectives and focus on combined arms. First, the eight divisions sized Integrated Battle Groups (IBGs); forwardly deployed, equipped to operate independently on the battlefield, separately encompassed with armor, artillery, air support and infantry. Secondly, the doctrine stressed on the speed of the IBGs both in mobilization and maneuver. For gaining surprise element, IBGs would attack at unpredictable and different locations on the Pakistani territory. Moreover the IBGs would enter in Pakistan within 72-96 hours by quickly operating and this way the Indian Army would provide the political leadership the option of pre-emption without having any international pressure. Thirdly, the IBGs would penetrate 30-40 miles within Pakistan's territory. Fourth, to gain air superiority over the advancing battle groups and to support the army by providing close air support the doctrine would exploit combined arms by recruiting Indian Air Force (IAF) and Indian Navy (IN). The purpose of this is to have concentration of force with smaller volume of manpower[15].

CSD represents a form of flexible response by providing various policy options to Indian leadership between doing nothing and crossing the nuclear threshold of Pakistan or provoking a full scale war. Pakistan perceived a threat from CSD and considered it aggressive and threatening. According to the former Chief of Army Staff General Ashfaq Parvez

[15]Shashank Joshi, "India's Military Instrument: A Doctrine Stillborn," *Journal of Strategic Studies* 36, no. 4 (August 2013).

Kayani[16] the consequences of CSD would be 'unintended and uncontrollable'. This is due to the fact that CSD will trigger response from Pakistan as it has the capability to cross Pakistan's nuclear redlines. Once those redlines are being crossed, there is a possibility of using nuclear weapons by Pakistan resulting in a huge destruction. Due to the historical enmity, the conventional asymmetry, lack of strategic depth and other vulnerabilities, the doctrine which highlights limited war can be considered as a total war by Pakistan[17]. The geostrategic depth between India and Pakistan is lesser as compared to that of the US and USSR during the Cold War. The conflict of any kind has the capacity of escalating into a nuclear war because it can no longer be controlled once triggered.

The heightened threat perception of Pakistan was also indicated at its official level. NCA of Pakistan said "Massive induction of advanced weapons including installation of ABMs, building up of nuclear arsenals and delivery systems through ongoing and new programs, offensives like CSD and similar accumulations in the conventional realm tend to destabilize the regional balance"[18]. The strategic balance which was maintained by acquiring nuclear weapons by both the states has been disturbed by India because of the introduction of new technologies within the region. This increase has induced security dilemma within Pakistan and it has been facing threat because of the instability of the deterrence equation. This threat perception has been the cause of Pakistan's introduction of TNWs within the region.

After the acquisition of nuclear capability Pakistan quickly moved towards formulation of its nuclear doctrine and to put in place an effective

[16]"Welcome to ISPR," ISPR, January 1, 2010, accessed October 10, 2016, http://www.ispr.gov.pk/front/main.asp?o=t-press_release&id=1082.

[17]"Tactical Nuclear Weapons and Deterrence Stability in South Asia: Pakistan's Stabilisation-Destabilisation Dilemma," Institute of Strategic Studies Islamabad, February 03, 2015, accessed October 10, 2016, http://issi.org.pk/wp-content/uploads/2015/02/3-Ghazala-Final.pdf.

[18]"Welcome to ISPR," ISPR, January 13, 2010, accessed October 10, 2016, https://www.ispr.gov.pk/front/main.asp?o=t-press_release&date=2010/1/13.

command and control system. According to Salik[19], Pakistan believes that ambiguity adds to the value of deterrence due to the weaker conventional capabilities and nuclear assets that is why it chose not to publicly pronounce its nuclear doctrine. One thing about Pakistan's nuclear doctrine which is not kept ambiguous is that it is India-centric and is driven by its security concerns. Due to the history both India and Pakistan share and a list of conflicts they have been involved into, Pakistan has kept its defense focus only towards India.

There are four important contours of Pakistan's nuclear doctrine. First, it is Indo-centric. Second, Pakistan maintained a posture of MCD. Third, the requirements for MCD are not fixed rather determined by changing threat environment. Fourth, due to India's conventional military advantage Pakistan reserves the option to use nuclear weapons first i.e. Nuclear First Use Policy[20]. These four contours explain how Pakistan has focused its policies towards countering India and also that it has no intension of inducing arms race in South Asia. Pakistan's doctrine depends on the threat environment it will face and can change according to it depicting the defensive nature of the doctrine.

Chakma[21] also elaborated other important features of Pakistan's nuclear doctrine i.e. the principle of massive retaliation and counter value nuclear targeting. Massive retaliation can be considered best because

[19]"The Evolution of Pakistan's Nuclear Doctrine," Naval Postgraduate School, accessed October 10, 2016, http://my.nps.edu/documents/104111744/106151936/6+Nuclear+Learning_Salik.pdf/3457bf32-507c-4120-8c74-45d71d4340b7.

[20]"Deterrence Instability & Nuclear Weapons in South Asia," Stimson Center, April 2015, accessed October 10, 2016, http://www.stimson.org/search/google/books%20reports%20deterrence%20instability%20nuclear%20weapons%20in%20south%20asia?mode=404.

[21]"Pakistan's Nuclear Doctrine and Command and Control System: Dilemmas of Small Nuclear Forces in the Second Atomic Age," Institute for Regional Security, July 2006, accessed October 10, 2016, http://www.regionalsecurity.org.au/Resources/Files/vol2no2Chakma.pdf.

having a weaker position with respect to India, this option can lessen the impact of strategic vulnerability of Pakistan. But it has not clearly stated that when the principle of massive retaliation will be used except this that Pakistan will use it in response of any pre-emptive strike by India. There are two options available for a nuclear weapon state i.e. counter force nuclear target and counter value nuclear target. In counterforce targeting the nuclear weapon state considers the military assets of the other state as a focus of its attack whereas in counter value nuclear target its focus is on the big cities and population of the adversary. Pakistan has only maintained minimum nuclear force that will result in unacceptable damage to India if it tries to harm the security of Pakistan.

Sultan[22] in his article wrote that in an interview, The Director General of SPD, Lt. General (ret.) Khalid Kidwai described the nuclear redlines of Pakistan. He says that the weapons are solely aimed at India and they will be used in case of deterrence failure. They will be used if India attacks Pakistan and conquers large part of its territory i.e. space threshold, if India destroys a large part either of land or air forces i.e. military threshold, if India proceeds to economic strangling of Pakistan or pushes Pakistan into political destabilization or creates a large scale internal subversion i.e. domestic destabilization.

Pakistan's Acquisition of Tactical Nuclear Weapons

The successful test of Hatf IX – also known as Nasr – on April 21, 2011 marked the development of short-range or low-yield nuclear weapons which Pakistan plans to use to forestall the advances of Indian troops under New Delhi's "Cold Start" doctrine. Nasr is a Surface-to-Surface Multi-

[20]"South Asian Stability-Instability Paradox: Another Perspective," IPRI, 2014, accessed October 10, 2016, http://www.ipripak.org/wp-content/uploads/2014/04/Article-no.-2-dr.-Adil.pdf.

Tube Short Range Ballistic Missile and is capable of carrying nuclear warheads of 'appropriate yield'[23]

With the developments of tactical nuclear weapons Pakistan has changed its nuclear policy from credible minimum deterence to full spectrum deterrence which provides Islamabad with strategic and tactical tools to confront emerging threats such as offensive doctrines like India's Cold Start. Contrary to the belief that Pakistan is moving towards tactical nuclear warfare, Feroz Hasan Khan[24] in his book *Eating Grass: The Making of the Pakistani Bomb* argues that Nasr is not a war fighting weapons rather it is meant to "deter assaulting forces at the tactical level" which depicts Pakistan's intension of using TNWs merely for deterrence purpose and not for fighting with the enemy.

To date, Pakistan's nuclear policy comprises an official transition from the doctrine of credible minimum deterrence to full spectrum deterrence, developed short-range delivery systems, continued production of fissile materials needed for the maintenance of its arsenal and advocated use of tactical nuclear weapons in its larger nuclear weapons policy. These developments have raised a wide range of criticism both at regional as well as international level. According to the Stability-Instability Paradox, having nuclear weapons ensures strategic stability but, at the same time, also increases the risk of tactical instability. This means that high level or full-fledged wars would be eliminated but the risk of low level wars would increase. In the Indo-Pak context, however, the acquisition of TNWs calls for a revision of the Paradox. The development of TNWs by Pakistan introduced another stability-instability paradox between the two rivals. With the strength of conventional defences more or less fool-proof, the enemy is more likely to revert to subversive or $4^{th}/5^{th}$ Generation Warfare. Since Pakistan has attained sufficient capability to deter India from

[23]"Welcome to ISPR," ISPR, April 19, 2011, accessed October 10, 2016, https://www.ispr.gov.pk/front/main.asp?o=t-press_release&id=1721.

[24]Feroz Hassan Khan, *Eating Grass: The Making of the Pakistani Bomb* (Washington, DC, United States: Stanford University Press, 2012).

asserting its conventional superiority, chances are that India would resort to subversive warfare, capitalizing on Pakistan's internal vulnerabilities. Taking advantage of the latter's domestic turmoil, India would now try to inflict harm indirectly. This could figure as increased support to the Tehreek-e-Taliban Pakistan and the Balochistan insurgency.

India formulated its military doctrine of Cold Start in the face of so-called terrorist threats from Pakistan-based militants. Officially, it was a proactive strategy designed to counter potentially offensive threats in proxy operations at sub-conventional level. Development of this doctrine and the conventional asymmetry between the two rivals pushed Pakistan to add TNWs to its nuclear arsenal. There were other factors too that resulted in the acquisition of TNWs by Pakistan. The discriminatory Indo-US nuclear deal in 2005, favour given to India by the Nuclear Supply Group (NSG) due to which India got an agreement for nuclear fuel supply, and the introduction of ABMs in the region raised prospects for India to gain an advantage over Pakistan and thus the balance of strategic equation between both of them was disturbed[25]. Due to these reasons, Pakistan moved towards other policy options like obtaining TNWs. The nuclear deterrence gap that was created by Indian Cold Start doctrine, has been minimized by acquisition of TNWs and by Pakistan. The objectives of TNWs were two-fold: to deter India from waging a war that could lead to nuclear exchange, and to put up an effective response in case of a limited war.

Regional and International Concerns

The introduction of TNWs by Pakistan in South Asia has given rise to a controversial debate. It has raised concerns whether these weapons will increase stability or will further destabilize the region. Not only have these weapons alarmed the regional neighbor-India, but also the international community. Experts from around the world have been highlighting the risks that come with these weapons. Pakistan claims that the introduction

[25]"Cold Start In Strategic Calculus," IPRI, 2012, accessed October 11, 2016, http://www.ipripak.org/wp-content/uploads/2014/01/art1asanw12.pdf.

of TNWs was in response to India's CSD and the decision to lower the nuclear threshold is necessary in order to avoid a full-scale conventional war by India. Whereas responding to the introduction of TNWs, India says that the CSD has never been formally implemented by the Indian government[26]. Except a few military exercises conducted by India, there are no developments, which show that the doctrine has been fully employed. No official document is released and there is no change in the Indian posture regarding the doctrine.According to an Indian expert, Jaganath Sankaran[27], Pakistan has exaggerated the threat of CSD and induced TNWs. He says that CSD is not as great a threat as the dangers produced by TNWs are. It is in Pakistan's best interests not to deploy them. Both the states need to have CBMs in order to avoid any kind of mistrust or miscalculation from any side.

In response to the threat of use of TNWs by Pakistan, India is also preparing itself for nuclear war. In April 2015, it has conducted a massive military exercise alongside the Pakistan's border-Rajasthan desert[28]. The exercise involved 30,000 soldiers, artillery, tanks, armoured personnel carriers for practicing real situation in case of nuclear weapon attack on the battlefield. Indian Army Chief General Dalbir Singh[29] said that high level of operational preparedness has become the part of Indian strategy because India realizes the nature of future wars to be short and would give limited warning time. The statements given by Indian officials depict their concerns as well as how they are preparing to counter the threat they perceive from Pakistan's evolving doctrine and TNWs.

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[26]Press Trust of India, *India Has No "cold start" Doctrine: Army Chief*, (NDTV), December 2, 2010, http://www.ndtv.com/wikileak/india-has-no-cold-start-doctrine-army-chief-440926.

[27]Jaganath Sankaran, "Pakistan's Battlefield Nuclear Policy: A Risky Solution to an Exaggerated Threat," *International Security* 39, no. 3 (January 2015).

[28]*More by INP*, (The Nation), April 25, 2015, http://nation.com.pk/national/25-Apr-2015/indian-army-launches-exercise-on-pakistan-border-to-test-battle-readiness.

[29]"Indian Army Chief Says Military Ready for Short, Swift War," newspaper, September 2, 2015, accessed October 11, 2016, http://www.dawn.com/news/1204371.

According to a retired vice admiral of Indian Navy, Vijay Shankar[30], Pakistan's nuclear policy is in contradiction with India's policy. He supported Indian doctrine while criticized Pakistan's doctrine by asserting that it has given rise to challenges for India.

Along with the regional experts, international experts have been warning about the dangerous implication of TNWs since they are developed. United States and its allies have expressed their concerns through various statements given by their officials. They refer TNWs as a destabilizing factor in South Asia and are working on either reducing these weapons or reducing the effects of them. Daryl G. Kimball, executive director of Washington based Arms Control Association[31] claim TNWs to be a dangerous development that has destabilizing effects. Because of their small size they are easier to steal and transport which increases the anxieties of experts around the world[32]. It would enable the non-state actors to feasibly plot the theft. TNWs lower the threshold because they require deployment in the battlefield and in contrast to strategic nuclear weapons they produce small explosions. But even these small low yield explosions could lead to escalation and retaliation from the adversary.[33]

Pakistan's Narrative over Tactical Nuclear Weapons' Possession

The main source for public information regarding Pakistan's stance over TNWs can be concluded from ISPR press releases. A large number of Pakistan's strategists are of the view that Pakistan's acquisition of TNWs is

[30]"Challenges to India's Nuclear Doctrine," The Atlantic Council, October 11, 2016, accessed October 11, 2016, http://www.atlanticcouncil.org/events/past-events/challenges-to-india-s-nuclear-doctrine.

[31]"Pakistan Builds Low Yield Nuclear Capability, Concern Grows," Reuters, May 15, 2011, accessed October 11, 2016, http://in.reuters.com/article/idINIndia-57022820110515.

[31]"Risks in Pakistan's Tactical Nuclear Weapons Policy | GRI," Global Risk Insight, November 12, 2015, accessed October 11, 2016, http://globalriskinsights.com/2015/11/risks-in-pakistans-tactical-nuclear-weapons-policy/.

[33]"Emerging Cracks in South Asian Nuclear Deterrence - Harvard Political Review," Harvard Political Review, December 24, 2015, accessed October 11, 2016, http://harvardpolitics.com/world/emerging-cracks-south-asian-nuclear-deterrence/.

a proportionate response to CSD. They think that it was necessary for Pakistan to add value to its strategic nuclear forces and Nasr serves that purpose[34]. Some of the Pakistan's experts are of the view that even without going for the option of TNWs, Pakistan can counter India's aggression by the rest of its ballistic and cruise missiles. But still, TNWs provide an extra layer of deterrence and also provide an additional option to the strategic decision makers in South Asia.

There are two schools of thoughts in Pakistan. One considers TNWs as stabilizing for deterrence while the other considers the introduction of TNWs in South Asia as a dangerous development. But still they are of the view that TNWs is a better option than fighting even a limited war because both the states have nuclear weapons which can escalate into a nuclear war. Maria Sultan expressed one such opinion, "Yes you would have stability at a different level of instability"[35].

According to General Khalid Kidwai[36], with the acquisition of TNWs, the deterrence capability of Pakistan has been enhanced at all levels of threat spectrum- operational, strategic and tactical. He further said at the Carnegie International Nuclear Policy Conference that TNWs would decrease the chance of war and this development was needed to deter CSD. He also rejected the concerns that are being raised regarding the security of these weapons claiming that an efficient system is available to protect Pakistan's nuclear arsenal. According to Pakistan's National Security Advisor Major General (R) Muhammad Ali Durrani[37], Pakistan's

[34]"Welcome to ISPR," ISPR, April 19, 2011, accessed October 11, 2016, https://www.ispr.gov.pk/front/main.asp?o=t-press_release&id=1721.

[35]"Tactical Nuclear Weapons and Deterrence Stability in South Asia: Pakistan's Stabilisation-Destabilisation Dilemma," ISSI, 2015, accessed October 11, 2016, http://issi.org.pk/wp-content/uploads/2015/02/3-Ghazala-Final.pdf.

[36]"A Conversation With Gen. Khalid Kidwai," Carnegie Endowment for International Peace, March 23, 2015, accessed October 11, 2016, http://carnegieendowment.org/files/03-230315carnegieKIDWAI.pdf.

[37]"Pakistan's Strategic Thinking and the Role of Nuclear Weapons," Sandia, July 2004, accessed October 11, 2016, http://www.sandia.gov/cooperative-monitoring-center/_assets/documents/sand2004-3375p.pdf.

nuclear policy primarily relies on deterring all forms of external aggression through conventional and strategic forces. Thus Nasr accomplishes the purpose of protecting Pakistan's vulnerability at tactical level. According to the Director of research and analysis at the policy, doctrine and strategy branch of SPD- Adil Sultan[38], Nasr has given Pakistan broad deterrence options at all levels i.e. tactical, operational and strategic against the limited incursions, deterrence against sizable military offensive and prevention of an all-out war respectively. With these weapons along with other nuclear assets Pakistan would be able to respond proportionately at each of these levels. Kazmi, Director in the Arms Control and Disarmament Affairs branch of SPD is of the same view as other Pakistani officials. He says that if Nasr serves the purpose on which it is made it would result in regional stability and would also make Pakistan's deterrence more credible[39].

Proponents of TNWs argue that the weapons guarantee "full spectrum deterrence" against any possible external aggression. These weapons serve the national security interests of Pakistan. Being conventionally weaker, Pakistan believes that a credible threat of nuclear escalation is necessary to deter an Indian conventional attack. TNWs ensure this in two ways i.e. by maintaining deterrence stability in the region which was eroded when India announced "Cold Start Doctrine", and by adding strength to battleground military operations of strategic forces of the country. Due to India's conventional advantage it is hard for Pakistan to win a conventional conflict, but with the introduction of TNWs, that advantage would be easier to counter.

[38]"South Asian Stability-Instability Paradox: Another Perspective," IPRI, 2014, accessed October 11, 2016, http://www.ipripak.org/wp-content/uploads/2014/04/Article-no.-2-dr.-Adil.pdf.

[39]"Pakistan's Tactical Nuclear Weapons and Their Impact on Stability," Carnegie Endowment for International Peace, 2016, accessed October 11, 2016, http://carnegieendowment.org/2016/06/30/pakistan-s-tactical-nuclear-weapons-and-their-impact-on-stability-pub-63911.

The capability to discourage all forms of aggression, including operational and tactical, and strengthening the country during military operations will enhance TNWs' credibility as a deterrent. Pakistan cannot commit itself to a policy of "no first-use" due to the growing Indian advantage in conventional forces. It has made an implied choice for a first-use policy to counter both – the non-conventional and the conventional threat from India. Ambiguity about choices, capacity, and employment doctrine are maintained to keep the adversary guessing, which in turn increases the credibility of deterrence. Further, Pakistan has opted for doctrinal ambiguity to induce uncertainty in the minds of Indian decision makers, and because it wants to take advantage of risk aversion to abet a deterrence strategy.

Finally, signals conveyed with respect to TNWs are interpreted clearly by all states with sizeable stakes[40]. And, whether or not they would be direct victims of a potential nuclear catastrophe, major powers cannot relieve themselves of the moral obligation to intervene in the interests of international peace. It is this obligation precisely that state developing deterrents capitalize on. In the case of India-Pakistan, Pakistan knows Washington will intervene decisively, even if it is at the eleventh hour, to make the risks of escalation manageable.

In an interview with Zafar Khan, he said that according to the optimists, TNWs have plugged the gaps and India would not be able to wage war against Pakistan so TNWs have proved to be effective as a deterrent against India[41]. Whereas in her interview, Dr Rizwana Abbasi said that so far TNWs have proved to be effective as a deterrent against India but in the future Pakistan has to revise its strategy[42]. TNWs do have some deterrence value and it cannot be dismissed out rightly. Indian CSD threatened to carry out punitive strikes in Pakistan below the nuclear

[40]"Game of Nukes," Indian Defence Review, April 01, 2015, accessed October 11, 2016, http://www.indiandefencereview.com/news/game-of-nukes/.

[41]Interview of Zafar Khan, June 19, 2016.

[42]Interview of Rizwana Abbasi, June 19, 2016.

threshold. With the TNWs now in place, the nuclear threshold has been lowered which some analysts find to be highly destabilizing. As for deterrence, India will now think twice before operationalizing its CSD due to the TNWs and their crisis time deployment utility[43]. Pakistan's stance in response to all the concerns is that TNWs are not for fighting rather they are for deterrence and defensive purpose against India. But a state has to justify every test and development against the adversary. The world knows about Pakistan's stance but want it to justify itself[44]. TNWs are for national security purpose, they have averted war and it may consider increase weapons build-up[45]. Pakistan has justified its response as rational policy option against India's Cold Start and dismissed all the concerns related to safety, security and accidental use[46].

According to Sagan's vulnerability-invulnerability paradox, in order to make itself less vulnerable a state disperses its nuclear weapons in different locations to keep them safe. However by doing so, they become vulnerable to other forces such as terrorist groups resulting in accidental use[47]. In case of Pakistan, this paradox can be applied that by acquiring TNWs Pakistan has made itself invulnerable to Indian attacks on one hand while on the other hand it has made itself vulnerable to internal threats such as safety and security of its TNWs. However Pakistan claims its TNWs to be safe, secure and invulnerable to any kind of threats through effective and centralized command and control structure.

Pakistan has not moved away from its rationale and thus in response to US deal to limit its TNWs, Pakistan said that its TNWs are here to stay and it will continue to deploy them without putting any limit on them.

[43]Interview of Rabia Akhter, July 2016

[44]Interview of Zafar Khan, June 19, 2016.

[45]Interview of Rizwana Abbasi, June 19, 2016.

[46]Interview of Saira Bano, July 2016.

[47]Scott Douglas Sagan, ed., *Inside Nuclear South Asia* (United States: Stanford University Press, United States, 2009).

According to the head of SASSI, Maria Sultan[48], in order to deter India, Pakistan wants to keep the option of TNWs open. Pakistan's response to US demand is that it is not offering much in return and thus they are irrational demands. As Pakistan wants to be acknowledged as a recipient of nuclear technology and US in not paying much attention to this, Pakistan considers it as an unreasonable deal. According to a Pakistani official, Pakistan cannot be dictated about the weapons it will make or use. Any kind of deal that can contain Pakistan's nuclear posture has been rejected by the officials.

Adviser to the National Command Authority (NCA) retired Lt Gen Khalid Ahmed Kidwai[49] responded to US concerns saying that there is no possibility that Pakistan is going to accept any restrictions or limits to its nuclear program. During a lecture at the Institute of Strategic Studies, Islamabad, he stood for Pakistan's rationale and stated that Pakistan is not at all contrite about its development of TNWs. As they are the third element of its Full Spectrum Deterrence, Pakistan will continue to develop them. The world is only concerned about Pakistan's TNWs without realising the reasons behind the development. Not have these weapons limited the chances of war but they also have helped in finding solution to disputes that are threatening the peace of South Asia by providing opportunities to the political leaders and diplomats. In response to Western concerns, Kidwai said that Pakistan would be developing a proper strategy for them. For this purpose SPD and strategic forces are making sure that they are balanced and used appropriately in a situation when their use is a must and not to involve them too early in the battle and to keep them safe. They also plan their storage, number and operational deployment.

[48]Reuters, *Islamabad Not to Limit Nuclear Weapons, US Selling F-16*, (The Nation), October 22, 2015, http://nation.com.pk/national/22-Oct-2015/islamabad-not-to-limit-nuclear-weapons-us-selling-f-16.

[49]"Tactical N-Weapons Are Here to Stay, Says Adviser," Dawn, March 26, 2016, accessed October 11, 2016, http://www.dawn.com/news/1248033.

The proponents of TNWs say that they can be used to stabilize South Asia if there is a strict application of centralized command and control; withhold from early use; communication and common understanding between the adversaries. The stronger side would be more worried than the one possessing TNWs because if it initiates a limited war it could cause the early use of TNWs on the battlefields thus shifting the burden to conventionally stronger side.[50].

Conclusion

India and Pakistan are the two most important states of South Asia. They have been at conflict since their existence. There have been various encounters between these two regional rivals. The rivalry seems not ending as both of the states keep on competing each other at every platform. Regional and international states are of the view that Pakistan's TNWs have destabilizing effects and if stability is required in the region Pakistan should not develop or deploy them.

Pakistan has well responded to all the concerns. It considers TNWs as stabilizing for the region because they will deter the adversary from launching attack on Pakistan. Its officials are of the view that TNWs have further enhanced deterrence at all levels and have made it credible. It says that the authority of these weapons will not be pre-delegated to local commanders. Rather there is an efficient system of Command and Control available to make sure that the authority of TNWs is centralized. It has repeatedly emphasized that the TNWs are merely for deterrence purpose and Pakistan has no intension of using these weapons.

Although there are apprehensions associated with TNWs but Pakistan believes it has taken every step to secure and safeguard them. Pakistan's officials and researchers consider TNWs as a stabilizing development which is a rational response to Indian CSD as long as its authority remains

[50]Zafar Khan, "Cold Start Doctrine: The Conventional Challenge to South Asian Stability," *Contemporary Security Policy* 33, no. 3 (December 2012).

centralized. They believe TNWs are not for fighting purpose rather for deterrence against India. There is a proper and fully functional command and control system for maintaining, securing and safeguarding TNWs. It has different agencies which are assigned their respective functions. The decision of launching these weapons is not on the basis of one man rule, rather it is made on consensus. Pakistan has been behaving as a responsible nuclear weapon state by securing its TNWs and taking measures that are needed for the stability of the region. If it has developed a certain kind of weapons, it was due to the challenges Pakistan was facing. Keeping in view the asymmetry between both states, it can be concluded that Pakistan has taken a rational step by acquiring TNWs. It is considering to increase the development of its TNWs. As long as they are centralized, secured and unreachable for extremist elements, TNWs are a source of enhancing Pakistan's deterrence against India thus balancing the asymmetry in South Asia. Due to its efforts and measures, the international community is satisfied to some extent but Pakistan needs to be more elaborate in addressing the challenges it faces due to the regional and international concerns. There is still a need to have effective communication and clarification between India and Pakistan in order to overcome the mistrust they are facing.

Pakistan needs to be transparent in its strategy regarding its TNWs and needs to be more elaborate in addressing regional and international concerns. There is a need for intense diplomatic measures by Pakistan. This can be done by sending its representatives to all nuclear weapon states and NSG meetings so that its rationale could be acknowledged. There is also a need to highlight its rationale in the United Nations too. Pakistan's stance can only be found in its media or journals. So rather than only countering other states concerns through its own media, Pakistan should counter concerns in the international media too. Although Pakistan has been carrying out various measures to uplift its status but still there is need to work in academic, political and diplomatic sectors to further strengthen its stance.

As mentioned above, to some extent Pakistan has been successful in addressing the regional and international concerns, and if it keeps on taking efficient steps that would enable the security of its TNWs, then surely Pakistan can achieve the official status of being a responsible nuclear weapon state.

Contours of Pakistan's Deterrence Strategy and Deterrence Stability in South Asia

Baber Khan*

Abstract

Basically, this is an empirical study to qualitatively analyze the changing deterrence contours of Pakistan with respect to its impact on deterrence stability in South Asia. Since the deterrence contours of nuclear power states significantly affect the deterrence environment, therefore Pakistan's changing deterrence postures are taken into account to analyze its impacts on South Asian evolution of deterrence. The need of its maintenance as "necessity" is encompassed in this paper because of its close association with deterrence contours. For broader understanding of deterrence environment in South Asia, evolution of nuclear deterrence and its imperative-maintenance are critical. Primary focus in this attempt is given on the changing deterrence contours of Pakistan because of the fact that it has multi-layered perspectives and perplexity. It is also endeavored to figure out and analyze the rationale behind the changes and character of these changes as "responsive policies".

Key words: Deterrence, Deterrence postures, Deterrence Stability, South Asia

Introduction

The significance of nuclear deterrence in the contemporary world is no more required to be implied. There is an explicit relation between nuclear deterrence and stability resulting from deterrence discourses. Veracity of

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this relationship has multiple aspects. Various academicians and scholars have given several insights with different aspects on this relation. However, given the complexity of this concept, it remains ambiguous to define perfectly with respect to its exercise. Therefore, Deterrence calculus in South Asia also needs to be recapitulated from time to time because of the changing deterrence postures of India and Pakistan. Both countries keep on changing their deterrence contours according to their changing strategic needs. Nuclear arms race and the different developments in nuclear arms exert a certain impact on nuclear deterrence. Usually, these developments strengthen the deterrence or sometimes strategically weaken the deterrence on the strategic level. Sometimes, deterrence induces instability at lower level to reinforce the deterrence and enhance the stability at higher level. Similarly, sometimes it enhances the stability at lower level and induces instability at higher level. Higher level of deterrence refers to the deterrence on strategic level whereas lower level deterrence refers to the deterrence on tactical level although all levels are interlinked.

Deterrence is a complex subject to study in the South Asian landscape. Nuclear powers in South Asia share a geographical proximity which makes the deterrence relation more complex, unlike the Cold War deterrence model. In Cold War deterrence model, the US and USSR had geographical distance and exercise of deterrence was quite different. Whereas, in South Asia India and Pakistan have a common border making missile flight times very short and limiting reaction time to almost nothing; a history of four wars along with unlimited number of border skirmishes; the perennial Kashmir dispute; active involvement in intra-State conflicts; contesting regional and global outlook; and, above all, power asymmetry.[1] Therefore, deterrence in South Asia has multi-layered perspectives and aspects which requires a thorough study. However, in this study, an attempt has been made to analyze Pakistan's changing deterrence postures with its impact on deterrence stability in South Asia. Pakistan changes its deterrence

Zafar Nawaz Jaspal, 2008. "Paradox of deterrence: India-Pakistan strategic relations". *ISSI Journal*, http://www.issi.org.pk/ss_Detail.php?dataId=507 (accessed March 5, 2017)

contours from time to time because of a given deterrence environment in the region. In order to get a clear picture of deterrence stability and deterrence strategies on various levels in the region, a succinct evolution of deterrence has been encompassed in this study, because, evolving nature of deterrence has deep co-relation with the changing nature of deterrence.

Pakistan is primarily focused in the analysis with respect to the deterrence deportments. Thereafter, a brief discussion on necessity of the maintenance of deterrence between the nuclear states as a "necessity" is incorporated in the study. Why deterrence is required to be maintained with its different contours according to the regional environments? How exercise of deterrence serves the nuclear state on strategic, operational and tactical levels? These kinds of questions are attempted to be answered with substantiated arguments and references in this paper.

Pakistan's nuclear deterrence is specifically chosen to analyze with its impact on the stability of South Asia keeping in view the fact that certain postures which appear to be negative can impact positively. Basically, this article argues that the changing deterrence postures of Pakistan are directly contributing to the deterrence stability of South Asia. Developments of nuclear deterrence on the part of India were the initiatives to disturb the power equation between both nuclear states. Therefore, the relationship between the rationale behind Pakistan's changing deterrence postures and the initiatives taken by India to destabilize the region is undertaken thoroughly in this paper.

In this regard, the rationale behind the changing deterrence contours is not perceptive in its nature. In this relationship, the analysis of developments on the part of Pakistan which have contributed, directly or indirectly, to the deterrence stability of region are also focused in this research. This study exclusively revolves around nuclear deterrence. In the end, the importance of deterrence stability with regard to strategic stability is taken into account in the South Asian strategic landscape. The

pathway of deterrence stability which leads toward strategic stability is succinctly analyzed.

Evolution of Deterrence: A Succinct Overview

Strategic environment of South Asian is quite different from other regions in the world. India and Pakistan, the two hostile nuclear neighboring states, are located next to each other. There is a geographical contiguity between the two states which led them to several military conflicts and wars. There are certain inevitable strategic compulsions which have to be maintained within strategic policies according to the national interests of each side. Evolution of nuclear deterrence in South Asia can be traced back to 1998 when both states tested nuclear weapons and declared themselves *de facto* nuclear states.[2]

It is axiomatic in international relations that states endeavor to ensure their sovereignty, security and safety. For that matter, they adopt multiple strategies which include economic growth, domestic security, developing alliance, arms buildup, and military modernization. Nuclear weapon states prefer to adopt the strategies which could deter the aggressors. Therefore, strategic approach between the two countries has changed because of the centrality of nuclear weapons. Pakistan, initially, had not intended to acquire nuclear weapons but India's nuclear test of 1974 made it to pursue the nuclear capabilities. So, in order to maintain the balance of power in the region, Pakistan successfully acquired the nuclear weapons and ensured its strategic security for as John Garnet says "Security means freedom from insecurity".[3]

Acquisition of nuclear weapons and their centrality in the strategic approach brought the course of deterrence in the region. Deterrence can be understood as the: "Ability to dissuade a state from embarking upon a

[2]Dr. Farah Zahra, 2012. "Credible Minimum Nulcear Deterrence in South Asia". *IPRI Journal* XII, no. 2, 1-14.

[3]John Garnet, 1980. *Theories of Peace and Security.* London: Oxford University Press.

course of action prejudicial to one's vital security interests/core values, based on a demonstrated capability".[4] States articulate deterrence differently according to their strategic needs. There can be various doctrines of deterrence like massive retaliation, mutually assured destruction, flexible response, graduated deterrence, extended deterrence, limited deterrence and minimum deterrence.[5] Initially, India was not interested in deterrence because of its hegemonic ambitions and belief on the inability of Pakistan to develop nuclear weapons. As Raj Rammana narrated that "There was never a discussion among us over whether we should or not make the bomb. How to do it was more important? For us it was a matter of prestige that would justify our ancient past. The question of deterrence came much later".[6] While the quest of nuclear weapons by Pakistan, is closely linked with the conventional military superiority of India (which was needed to be negated), Kenneth Waltz stated that "States acquire nuclear weapons for containing fear of present or future conventional strength of adversary power".[7] However, it seems that Pakistan's acquisition of nuclear weapons was aimed at to contain the fear of both conventional and non-conventional strength of adversary.

In 1998, both states in the region successfully tested nuclear weapons. Resultantly deterrence strategies based on the nuclearization started to be formulated by the policy makers. Strategists and scholars from various regions started to study and concentrate on the deterrence policy of neighboring nuclear states because 'Nuclear Deterrence' is a necessity which has to be maintained between nuclear states. The acquisition of

[4]Dr. Zafar Iqbal Cheema, 2013. "Revisiting Nuclear Deterrence and Strategic Stability in the Shadow of Tactical Nuclear Weapons in South Asia". in "Shifting Dynamics and Emerging Power Equilibrium in South
and Central Asia around post-2014", Islamabad: Asia Printers. 375.

[5]Zafar Iqbal Cheema, 2010. *Indian Nulcear Deterrences: Its Evolution, Development and Implications for South Asian Security.* (New York: Oxford University Press), 2010.

[6]Muhammad Mushtaq and Muhammad Jawad, Hashmi, 2012. "Regional Hegemonic Aspirations of India; A Review of Indian Nuclear Program". *Pakistan Journal of Social Sciences* 32 (1): 253. (Raj Rammana was quoted by Muhammad Mushtaq and Muhammad Jawad Hashmi)

[7]Gurmeet Kanwal, 2008. "Indian Army Vision 2020". New Delhi: Harper Collins. (Kenneth Waltz quoted by Gurmeet Kanwal)

nuclear weapons by two all-time hostile neighbor states was the first phenomenon in the world. Therefore, it had to be studied out of the framework of the "Cold War" because the USSR and the US did not share the same geographical contiguity as India and Pakistan do.

Maintenance of Nuclear Deterrence as Necessity

India and Pakistan have fought four wars which clearly indicate the belligerent nature of bilateral relations. Both states exist next to each other sharing an elongated border. In such a strained environment, development of nuclear weapons by both states not only has created the fear among other states but also has made the region very capricious. Deterrence had been the primary factor that averted a hot war during the Cold War. On its realization, both superpowers started to concentrate on the formulation of deterrence policy at strategic level to achieve the war-aversion objectives. In the discipline of International Relations, deterrence is generally termed as the relations between adversaries in whom one attempts to frighten the other to not to react. Phil Williams pointed out that "Deterrence is an attempt by one government to prevent an adversary from undertaking a course of action (usually an attack on itself or its allies) that the government regards as undesirable, by threatening to inflict unacceptable costs upon the adversary in the event that the action is taken".[8] Deterrence strategies usually aim at to influence the adversary's thought process in such a way that an adversary begins to believe that refraining from attack is in its best interests.

Henry Kissinger offered his thoughts that "The Nuclear Age turned strategy into deterrence, and deterrence into an esoteric intellectual exercise".[9] It shows that deterrence is a multi-faceted phenomenon. It is not merely a policy to deter the enemy from doing a specific act. Richard Wasserstrom also argued (when different deterrence policies were being formulated during Cold War) that "I do not think that issues of nuclear

[8]Phil William, "Nuclear Deterrence", in John Baylis, Ken Booth, John Garnett, Phil Williams, Contemporary Strategy: Theories and Concepts, Vol. 1 (Great Britain: Holmes & Meier Publishers, Inc., 1987), p. 115.
[9]Henry Kissinger, Diplomacy (New York: Simon and Schuster, 1994), p. 608.

deterrence are so easily separable from those of nuclear war, and the topic of nuclear deterrence seems to me to be a very difficult one, possessing elusive, puzzling, and deeply problematic aspects".[10] Richard's claim also implies that characteristics of deterrence are multi-faceted leading to the performance of multiple functions. By virtue of its multiple aspects, states have to maintain it in order to gain strategic objectives.

In South Asia, geographical proximity reduces the warning time of the launch of nuclear weapons as compared to USSR and the US case during the Cold War. Therefore, despite the abhorrent nature of these weapons, both states retain the nuclear weapons to maintain deterrence at all levels in order to avert any catastrophe in the region. Its maintenance may require the different policies and objectives. Given the significance of deterrence and its ineluctability as a necessity, both states have set certain strategic objectives to achieve through the mean of deterrence. According to Maj. Gen. (R) Qasim Qureshi, Pakistan's strategic objectives are:-

a. Persuade or compel India to alter the status quo in Kashmir.
b. Deter India's conventional military threat.
c. Deter India from attempting or supporting initiatives to de-nuclearize Pakistan.
d. Deter India from wrongfully exploiting the provisions of the Indus Waters Treaty.

India's strategic objectives are:-

a. Deter Pakistan from using sub conventional/limited military initiatives as means to change the status quo in Kashmir, or to damage India.
b. In the event of conventional war, deter Pakistan from threatening or initiating nuclear use.
c. Persuade or compel Pakistan to dismantle militant outfits existing in or operating from Pakistan.

[10]Richard Wasserstrom "War, Nuclear War, and Nuclear Deterrence: Some Conceptual and Moral Issues". (University of Chicago Press Journal: The University of Chicago Press publishers April 1985 Vol. 95, No. 3) 424-444, http://www.jstor.org/stable/2381030 (accessed February 22, 2017)

d. Persuade or compel Pakistan to accept the status quo in Kashmir".[11]

Both states have to maintain the nuclear deterrence in order to achieve their strategic objectives without fighting the conventional or nuclear war with each other. Moreover, deterrence is also required to be maintained because of its feature that it can also avert the major crises.

Pakistan's Changing Deterrence Postures

Nuclear posturing of Pakistan is critical to the study of nuclear-deterrence linked security dilemma vis-à-vis India. India's growing economy allows it to flex its military and strategic muscles in order to influence the regional stability and impact the balance of power. On the other hand, Pakistan with its smaller economy, struggles to favorably maintain the deterrence equation. Pakistan's Prime Minister Nawaz Sharif announced the deterrence policy of Pakistan after 1998 nuclear test, and declared that Pakistan would follow the minimum credible deterrence as the nuclear policy of the state. He also declared to ensure that Pakistan would avoid the arms race in the region.[12] That was the first deterrent posture of Pakistan. Often, deterrence postures of nuclear states cannot be figured out accurately. However, a vague understanding can be developed by virtue of official statements to analyze the deterrence contours of Pakistan. It is plausible because, deterrence doctrines are generally embedded in the statements of heads of relevant departments and press releases of Inter-Services Public Relations (ISPR) Directorate of the military.

Before reaffirming the minimum credible deterrence of Pakistan, the concept 'minimum credible deterrence' needs to be discussed. Primarily, this concept lacks consensus in terms of implications and particularly definitions. Definition of minimum deterrence given by Buzan states that "a secure second strike force of sufficient size to make threats

[11]Major General (R) Qasim Qureshi, "Deterrence Stability in South Asia". https://www.hsdl.org/?view&did=709864 accessed March 1,2017
[12]Tertrais, "Pakistan's Nuclear Program: A Net Assessment,"5

of Assured Destruction credible".[13] Stein and Lebow argue that "Too much deterrence…can fuel an arms race that makes both sides less rather than more secure and provoke the aggression that it is designed to prevent".".[14] Baylis is of the opinion that "fewer weapons deployed "in a less threatening manner" are "less dangerous in terms of accidents and are less provocative" in order to support the case of minimum deterrence.[15] Therefore, it still needs to be figured out as to how to remove ambiguities as claimed by Dr. Farah Zahra i.e. "It is a matter of debate as to what credible and minimum deterrence would actually constitute in a nuclear deterrence relationship… Should the mere presence of a few nuclear weapons and delivery systems constitute a minimum deterrent, or would "credible minimum deterrence" necessitate an arsenal that is constantly being quantitatively and qualitatively upgraded in line with perceived improvements in an opponent's capabilities?"[16]

However, keeping in view the above noted definitions of minimum credible deterrence, It can be interpreted as a reliable force to deter the enemy with minimum required potential. In order to develop the understanding of the contours of deterrence for Pakistan, Brig. ® Naeem Salik has written that "Nuclear Doctrine is the principle of belief or bedrock on which organizational and force structures are built... It provides the guidelines for force configuration and the nature, type and number of weapons and delivery systems that would be needed to implement the doctrine".[17] According to George Perkovich, four principles appear to be vital for Pakistan's nuclear doctrine:

a. That Pakistan's nuclear deterrent is India-specific.

[13]Barry Buzan, 1987. *Strategic Studies: Military Technology and International Relatioins.* London: Macmillan.
[14]Richard N. Lebow and J.G. Stein, 1994. *We All Lost the Cold War.* Princeton: Princeton University Press, 1994. 368
[15]Johan Baylis, 2000. *The Search for a Third Way in Alternative Nuclear Futures Role of Nuclear Weapons in the Post-Cold War World.* Oxford: Oxford University Press.79
[16]Dr. Farah Zahra, 2012. "Credible Minimum Nulcear Deterrence in South Asia". *IPRI Journal* XII, no. 2, 1-14.
[17]Naeem Salik, 2010. *THe Genesis of South Asian Nulcear Deterrence: Pakistan's Perspective.* New York: Oxford University Press, 2009,234-239

b. Pakistan has embraced a doctrine of credible minimum deterrence.
c. The requirements for credible minimal deterrence are not fixed; instead, they are determined by a dynamic threat environment.
d. Given India's conventional military advantages, Pakistan reserves the option to use nuclear weapons first *in extremis*".[18] Agha Shahi, Zulfiqar Ali Khan, and Abdul Sattar wrote, "Obviously our deterrence force will have to be upgraded in proportion to the heightened threat of preemption and interception".[19] Abdul Sattar mentioned in the presentation at National Defense College that "Our policy of minimum credible deterrence will obviate any strategic arms race".[20]

These declarations and statements provide the view of the deterrence picture of Pakistan. However, in the context of South Asia, there are various question pointed out by Rodney Jones in order to find out the "minimum" which raised suspicious about its definition and implication.

He asks that "Does 'minimum' imply the sufficiency of small number of nuclear weapons? Nuclear weapons held in reserve? Low readiness or alert rates of nuclear force? Renunciation of nuclear war fighting? Mainly counter-value targeting? Alternatively, does the term minimum merely make a virtue of today's facts of life in the Subcontinent's limited resources, scare weapons materials, unproved delivery systems, and still undeveloped technical military capabilities?"[21]

Certain technical and classified information are essentially required to answer these questions. Anyhow, primary focus of this paper is to analyze the changing deterrence postures of Pakistan, not the in-depth analyses of

[18] Michael Krepon, 2013. "Pakistan's Nuclear Strategy and Deterrence Stability". In *Deterrence Stability and Escalation Control in South Asia*, by Michael Krepon and Julia Thompson, 41. Stimson Center.
[19] Agha Shahi, Zulfiqar Ali Khan and Abdul Sattar, "Securing Nuclear Peace," *The News International*, 5 October 1999.
[20] Naeem Salik, 2010. *The Genesis of South Asian Nulcear Deterrence: Pakistan's Perspective.* New York: Oxford University Press.
[21] Herbert F. Yark, Arms and the Physicist (New York: American Physical Society, 1994), p.373

exclusively "minimum deterrence definition". From the inception of nuclear weapons to April 2011, Pakistan had maintained the minimum credible deterrence. In order to maintain the strategic balance, Pakistan retuned its doctrine for wide-ranging response. From minimum credible deterrence to Full Spectrum Deterrence (FSD) was developed to deter the enemy from the course of aggression at all levels. Transformation of deterrence took place after the first flight missile test of 60 kilometer range Hatf-9 (Nasr) in April 2011 which was followed by the view of Lt. Gen. (R) Khalid Kidwai that "a very important milestone in consolidating Pakistan's strategic deterrence capability at all levels (strategic, operational, tactical) of the threat spectrum".[22] Furthermore, flight test of 180 kilometer Hatf-2 in March 2012 was posed by the ISPR as acquisition of military capability both at "operational and tactical level".[23] The successful test of Hatf-2 further strengthened the newly adopted deterrence posture. It was developed in accordance with the contemporary dynamics of strategic environment in the region. These missiles had specific functions to perform in certain scenarios as pointed out by David Smith that "Pakistan's shorter-range missile flight tests suggest its targeting objectives either to signal the urgent need to halt a military campaign or to stall advancing armored formations and their logistical support on both sides of the International Border or Line of Control dividing Kashmir".[24]

This shows that changing deterrence strategy was already anticipated by the various scholars that it has reached at tactical level. Its shorter range and conventional war grounds between both countries corroborate the above mentioned indirect claim by David Smith. Anyhow, all the

[22] Inter-Services Public Relations, "Press Release," No. PR94/2011-ISPR, May 29, 2012, http://www.ispr.gov.pk/front/main.asp?o=t-pressrelease&id=2075#pr_link (accessed March 2, 2017)

[23] Inter-Services Public Relations, Press Release No. PR34/2012-ISPR, March 5, 2012, http://www.ispr.gov.pk/front/main.asp?o=t-press release&date=2012/3/5.(accessed March 2, 2017)

[24] David Smith, 2013. "The US Experience with Tactical Nuclear Weapons: Lessons for South Asia". In *Deterrence Stability and Escalation Control in South Asia*, by Micheal Krepon. Washington : Stimson Center.

quoted statements and assessments explicitly illustrate that deterrence strategy of Pakistan is associated with the changing strategic paradigm of India. Italian researchers reported in 2002 that Lt. Gen. (R) Khalid Kidwai gave the following expositions i.e. "Nuclear weapons are aimed solely at India. In case that deterrence fails, they will be used if:

a. India attacks Pakistan and conquers a large part of its territory (space threshold)
b. India destroys a large part either of its land or air forces (military threshold)
c. India proceeds to the economic strangling of Pakistan (economic strangling)
d. India pushes Pakistan into political destabilization or creates a large-scale internal subversion in Pakistan (domestic destabilization)"[25]

These expositions imply that Pakistan's FSD is more an attempt to enhance the deterrence stability at all levels because any kind of use of nuclear weapons is associated with Indian proceedings. According to renowned scholar Dr. Mansoor Ahmed, "the combined official narrative revolve around the following postulate First, introducing the Nasr was a direct response to India's Cold Start doctrine, which seeks to exploit perceived gaps in Pakistan's deterrent posture. Second, using any nuclear weapons on the battlefield, even so-called tactical weapons, would have strategic consequences. Third, Pakistan's full spectrum deterrence is not a war-fighting strategy, but rather a strategy to deter limited conventional war below Pakistan's existing thresholds for nuclear use. Fourth, Pakistan will control Tactical Nuclear Weapons (TNWs) just like other strategic nuclear forces, maintaining centralized command and control at all times under the National Command Authority (NCA). Finally, because Pakistan's Nasr missiles 'will not be deployed to forward positions, nor will use be delegated to field commanders,' fears for the field security of deployed

[25] Michael Krepon, 2013. "Pakistan's Nuclear Strategy and Deterrence Stability". In *Deterrence Stability and Escalation Control in South Asia*, by Michael Krepon and Julia Thompson, 41. Stimson Center.

short-range nuclear systems, such as preemption and loss of control, are misplaced".[26]

Given the combined official narratives and strategic calculations, it can be believed that development of comprehensive response at all levels (including strategic level, operational level and tactical level) was the result of development of newly limited conventional war doctrine on part of India. In order to analyze the "change" in the deterrence policy of Pakistan, rationale behind the change is critical to be discussed.

Rationale Behind the Changing Deterrence Postures

Rationality in deterrence policy making is a complex subject. It can be discussed under the light of one unique or exclusive factor. Sometimes, the unexpected sudden change in deterrence policy can be the rationale under the given strategic environment. As Michael Krepon stated, "Willingness to risk a breakdown in nuclear deterrence would only be rational if the threat that is being countered or deterred is of an existential scale".[27]

Since it can be easily extrapolated that Pakistan's policies are closely attributed to the developments on the part of India, those are essential to be mentioned. Over the last decade, nuclear stockpile of India has doubled from 70 to 100 warheads.[28] It is also imperative to understand that India can afford to spend substantial resources in order to develop both its conventional and nuclear capability with its burgeoning economy that may not necessarily be Pakistan specific. However, it does affect Pakistan's security calculus. At the same time, India is continuously pursuing the policy of intervention in the internal affairs of Pakistan, particularly in Baluchistan. India is playing an instrumental role in spreading terrorism in

[26] Mansoor Ahmed 2016 "Pakistan's Tactical Nuclear Weapons and thier impact on Stability". Carnegie
Endowment for International Peace, June 30, 2016. 2-3
[27] Michael Krepon, 2013. "Pakistan's Nuclear Strategy and Deterrence Stability" In "Deterrence Stability and Escalation Control in South Asia", by Michael Krepon and Julia Thompson, 41. Stimson Center.
[28] Robert Norris and Hans Kristensen, 2012. "Nuclear Notebook: Indian Nuclear Forces". *Bulletin of the Atomic Sceintists* 96-101.

Pakistan as is evident by the confession of Indian spy, senior serving naval officer, Kulbhushan Yadav, operating in Balochistan and captured by the Pakistani law enforcement agencies.[29]

Since Pakistan was following the minimum credible deterrence, the gap on operational and tactical level in conventional deterrence very much existed. India has been exploiting this gap below the nuclear threshold for conventional and sub-conventional military activities against Pakistan. In order to exploit this gap systematically under the nuclear threshold, India formulated the conventional military warfare doctrine, called Cold Start Doctrine (CSD). According to Brig. (R) Gurmeet Kanwal of Indian Army

> "The CSD aims at making land incursion into Pakistan's territory through forward mobilization of eight integrated battle groups (IBG's) with the support of Navy and Air force in facilitating Indian army to conduct tactical manoeuvers within 72-96 hours... The political objective of this war strategy is to bring war into the enemy's territory under the nuclear overhang before the international community intervenes to enforce a cease-fire. The military objective is to destroy Pakistan's Army Reserve (North) and Army Reserve (South) during which 3-5 of the Indian strike divisions will penetrate by crossing the international border keeping simultaneity with the holding corps, and thereby creating confusion for Pakistan army to make mistakes by dividing their cohesive strength".[30]

In order to counter this doctrine, Pakistan developed the comprehensive response by changing the deterrence posture from minimum credible deterrence to Full Spectrum Deterrence (FSD), plugging in the gap below the nuclear threshold. This change had practically

[29] Transcript of RAW agent Kulbhushan's confessional statement, March 30, 2017 http://www.dawn.com/news/1248786

[30] Gurmeet Kanwal, 2008. "Indian Army Vision 2020". New Delhi: Harper Collins. (Kenneth Waltz quoted by Gurmeet Kanwal)

occurred after the successful flight test of Nasr,[31] a battlefield nuclear weapon. Newly adopted deterrence policy was further articulated by the press releases of ISPR and statements of government officials. After the test, Pakistan's ISPR issued the statement that "Nasr was developed to add deterrence value to Pakistan's Strategic Weapons Development Program at shorter ranges. The Nasr could carry nuclear warheads of appropriate yield with high accuracy and had shoot-and-scoot attributes, essentially a quick response system that addressed the need to deter evolving threats".[32] In this statement, it can be figured out that the purpose of this test was to enhance the deterrence value on operational and tactical level. It was also clearly mentioned in the press release that this was the need of time to address the evolving threat. India's conventional military doctrine CSD can be taken as reference to the evolving threat.

Moreover, speaking at the 2015 Carnegie International Nuclear Policy Conference, General(R) Khalid Kidwai reaffirmed that "Pakistan's battlefield nuclear weapons are an extension of the country's conventional deterrent capabilities... Pakistan needed short-range tactical nuclear weapons to deter India's Cold Start doctrine, and having tactical nuclear weapons would make war less likely". He further made clear that "these weapons are developed in response to concerns that India's larger military could still wage a conventional war against the country, thinking Pakistan would not risk retaliation with bigger nuclear weapons".[33] This speech also indicates that the development of tactical nuclear weapons was aimed at counter-balancing India's conventional military doctrine CSD and led to the change in deterrence posture of Pakistan. Primarily, Nasr was tested to strengthen deterrence at all levels, as claimed by Zafar Nawaz Jaspal i.e.

[31] Sadia Tasleem, "Pakistan's Nuclear Use Doctrine," Carnegie Endowment for Peace, June 30, 2016, http://carnegieendowment.org/2016/06/30/pakistan-s-nuclear-use-doctrine-pub-63913

[32] ISPR. April 19, 2011, http://www.ispr.gov.pk/front/main.asp?o=tpress_release&id=1721 (accessed March 5, 2017)

[33] "Pakistan Needs Short Range Tactical Nuclear Weapons to Deter India," Express Tribune (Islamabad), March 24, 2015, http://tribune.com.pk/story/858106/pakistanneedsshortrangetacticalnuclearweaponstodeterindia/ "Gen. Khalid Kidwai," Carnegie Endowment for International Peace, 9.

"The aim of NASR is not to induct weapons of use, but "weapons of deterrence" to counterbalance India's move to conventional military offensives at a tactical level".[34]

Pakistan's official rationale of change in deterrent posture and doctrine after inclusion of Nasr missiles is well-fixed to understand. Development of FSD was necessary, useful, and well-timed to address conventional asymmetries against India. As the nature of the threat posed by India changed, Pakistan's response also changed according to the needs of a strategically given environment. The newly adopted FSD doctrine brought back rationality and credibility but does not signal a shift to war-fighting strategy. The changes simply bolster deterrence posture and simultaneously Pakistan's intent of using nuclear weapons as a weapon of last resort remains intact. Furthermore, given the prevailing asymmetries, it seems that a certain level of ambiguity may provide for a more effective deterrence. Therefore, in order to identify the rationale behind the changing nuclear and conventional military policies, changes in India's both conventional and non-conventional strategies are inevitably required to be studied and analyzed. Counter-balance of CSD was the primary rationale behind the transformation of deterrence from minimum credible to full spectrum deterrence.

Pakistan's Responsive Strategic Policies and Deterrence Stability

Stable relationship between the two nuclear states is associated with stable deterrence, which can be denoted by the two terms, Deterrence and Stability. Usually, these terms are commonly understood as the description of this relationship.[35] Deterrence stability is a much wider concept to be discussed with the inclusion of various factors. It should be viewed as a whole because of its multi-faceted characteristics. It cannot be stated that deterrence stability is automatically articulated and is a result from merely acquiring nuclear capabilities. It becomes awfully tough to

[34] Zafar Nawaz Jaspal, 2008. "Paradox of deterrence: India-Pakistan strategic relations". *ISSI Journal*, http://www.issi.org.pk/ss_Detail.php?dataId=507 (accessed March 5, 2017)

[35] Zafar Iqbal Cheema, 2010. *Indian Nulcear Deterrences: Its Evolution, Development and Implications for South Asian Security.* New York: Oxford University Press

maintain deterrence stability when hostile states enmesh in strategic competition with their unequal capabilities. Particularly, when adverse nuclear states share geographical contiguity, it automatically involves a bundle of intricacies.

India, because of its growing economic edge, has indulged in a fast arms build-up which paves the way for an arms race against Pakistan. Obviously, an intensified nuclear arms race has certain ramifications for deterrence stability. Pakistan's deterrence and force postures are greatly responsive in nature. It may be assumed on the part of Pakistan that nuclear deterrence is an alternative to conventional war-fighting. However, India's strategic policies indicate their lack of belief in such assumptions. As noted above, Pakistan's strategic policies are India- centric and responsive in nature. Primarily, India takes the initiative in the alteration of its strategic policies or development, stockpiling and manufacturing of weapons. These initiatives start to affect the stability negatively in the region. Strategic balance starts to oscillate and Pakistan prepares a response to maintain the balance in the region. Development of nuclear weapons by India led Pakistan to follow the same path. Therefore, Pakistan's all kinds of security policies towards India are solely aimed at maintaining the deterrence stability in the region.

The Indian Army Chief unveiled the new concept of CSD as detailed above which started to affect strategic stability in the region. Pakistan responded to this doctrine with the development of comprehensive response in the form of change in deterrence contours from minimum credible deterrence to FSD. Though strategic stability has several definitions, yet it can be defined as a "State of affairs, in which, countries are confident that their adversaries would not be able to undermine their nuclear deterrent capability".[36]

It is important to note that strategic stability is intangible because "there are no certain tools or equipment to measure how much or what

[36] Pavel Podvig, 2012. "The Myth of Strategic Stability". *Bulletin of Atomic Scientists.*

strategies would be sufficient to maintain balance of power".[37] However, as a concept, strategic stability has never been contentious though debatable because of its various definitions. Employment of different strategies responsively by Pakistan, to maintain the balance of power for deterrence stability, exclusively aimed to bring about strategic stability in the region. Different deterrence postures of Pakistan are an attempt to utilize the deterrence force as instrument to avert the conventional and nuclear war, and maintain the strategic stability. Lt. Gen. (R) Kidwai reaffirmed that "Nuclear Weapons will be used only if the very existence of Pakistan as a state is at stake".[38] Introduction of tactical nuclear weapons was also an attempt to integrate conventional defense with nuclear deterrence capability at operational and tactical level. Primary purpose of induction of battlefield nuclear weapons was to counter the limited war doctrine of India, so that, deterrence could be stabilized at all levels and strategic stability could be ensured in the region.

Conclusion

Nuclear deterrence evolved in South Asia with the development of nuclear weapons by India and Pakistan, and the predisposed and perceived threats of both evolved after the cold nuclear test by India in 1974 that led Pakistan to do the same. Growing influence of deterrence on policy making and its erstwhile exercise in cold war model provided it with remarkable significance in the strategic paradigm of South Asia. It is also evident that it is very much required to be maintained particularly on strategic level for positive outcomes and favorable consequence. It has become the necessity which cannot be evaded. After its integration in policy formulation, Pakistan kept on changing its deterrence contours in tandem with the strategic developments on part of India. These developments took place in

[37] Kenneth Waltz, Theories of International Politics, (Boston: Mc Graw Hill, 1979), 116-118. (According to explanation provided by Waltz about Balance of Power theory, states are unitary actors who, at a minimum, seek their own preservation and, at a maximum, drive for universal domination)

[38] Michael Krepon, 2013. "Pakistan's Nuclear Strategy and Deterrence Stability". In *Deterrence Stability and Escalation Control in South Asia*, by Michael Krepon and Julia Thompson, 41. Stimson Center.

various forms including the nuclear doctrine structure, deterrence policy, arms import and articulation of conventional war doctrine like CSD.

Moreover, the evolving Indian conventional force modernization and rapidly increasing capabilities are potentially exacerbating the technological and conventional asymmetry between India and Pakistan. This asymmetry may add to the misplaced confidence of the Indian political and military elite that they can achieve required results within the short time of a newly formulated limited military campaign CSD against Pakistan and succeed in degrading Pakistan's conventional forces while remaining below the Pakistani nuclear thresholds.

However, Pakistan has continuously pursued a policy to maintain the strategic balance by increasing its nuclear and conventional capabilities. Along with that, deterrence and force postures have been changing with the strategic environmental requisites. Counter-initiative by Pakistan according to its restricted and limited resources extensively served the region to bring back the deterrence stability. Rationale behind this can be linked to the changing nuclear and conventional policies of India. Therefore, it can be out-rightly claimed that Pakistan's changing deterrence contours and deterrence policies directly ministered to the strategic environment of South Asia to bring back the deterrence stability. Primarily, focus of Pakistan's strategic policies and operational policies has been to counter the perceived threats emanating from the adventurous strategic policies of India, so that deterrence stability could be ensured and peace could be ensured in the region.

Nuclear Issues, Escalation Control and Stability-Instability Paradox: Case Study of South Asia

Asia Karim, Sadaf Farooq & Manzoor Ahmed*

Abstract

Nuclear weapons have the capability of maintaining stable relations between nuclear neighbors at strategic level but at the same time prove disappointing at the lower edge of spectrum. This speculation is called 'stability-instability paradox'. This paper investigates the extent to which the theory is applicable in Indo-Pak relations. By drawing a comparison between pre and post nuclear crises between India and Pakistan, the study analyses that post-nuclearized South Asia has been characterized by a number of crises and near crises situations, but the introduction of tactical nuclear weapons has toned down the fragile environment. Further, stability at conventional level is being threatened by some aspirant Indian moves, like Ballistic Missile Defense. The study concludes that new strategic developments by India demands a quantitative and qualitative up-gradation of Pakistan's nuclear weapons and delivery system, survivable command and control system, reliable early warning system and a change of its nuclear posture. The study postulates that if the balance of terror tilted in Indian favor, the prevalent stability-instability paradox will turn into a total instability.

Keywords: Cold Start Doctrine, Proxy Wars, Border Aggression.

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Introduction

The hidden nuclear capabilities of India and Pakistan did not force them to normalize their relations. They remained highly unsuccessful in curtailing mutual mistrust and hatred between the historic rivals. The detonation of nuclear devices in 1998 and the resultant overt nuclearization of region gave rise to a global debate regarding possible impacts of the new technology over the prevailing regional strategic environment. Scholars, academicians and strategists were divided over the possible, stabilizing or disastrous, effects of nuclear weapons. Two major groups were nuclear optimists and nuclear pessimists.

Proliferation pessimists voice for the negative impacts of nuclear weapons. They are of the view that Cold War stability was based on a number of military and political factors; like strategic parity, absence of territorial disputes and historical rivalry[1], which are almost missing in the new regional strategic calculus[2]. Scott D. Sagan, a prominent pessimist, is of the view that chances of accidental nuclear uses, crises instability and preventive wars get heightened with the advent of new nuclear capable states[3]. This group of scholars believes that, unlike Cold War, leaders of the developing countries will never hesitate to use the ultimate weapon in pursuit of their objectives and for securing their national interests[4]. Proliferation optimists, however, view nuclear weapons as a stabilizer, having the force to press rivals towards peaceful coexistence. In the words of Kenneth Waltz, a nuclear optimist: Presence of nuclear weapons craft exceptionally cautious behavior in states.... Why fight if you can't win much and might lose everything[5]?

[1] In fact Cold War rivals, USA and USSR, were allies in the Second World War.
[2] David J. Karl, "Proliferation Pessimism and Emerging Nuclear Powers" (*International Security:* vol 21, no 3, MIT Press, 1996-1997) P 87-119.
[3] Matthew Kroenig, "Beyond Optimism and Pessimism: The Differential Effects of Nuclear Proliferation," (Managing the Atom Working Paper No. 2009-14, Harvard Kennedy School, Harvard University, 2009)
[4] David J. Karl, "Proliferation Pessimism and Emerging Nuclear Powers" (*International Security:* vol 21, no 3, MIT Press, 1996-1997) P 87-119.
[5] Ibid, P 90.

As far as South Asia is concerned, optimists argue that with the advent of nuclear weapons, a balance of terror has emerged which will play its role in the preservation of peace and stability because nuclear war means mutual suicide[6]. On the other hand, pessimists assume that keeping in view the deep rooted Indo-Pakistan rivalry; nuclear weapons will result into chaos and instability because of the high probability of crises escalation into conventional war and nuclear exchanges.[7] Further, keeping in view the level of mutual mistrust between the two countries, these scholars are concerned about the possibility of accidental and un-authorized use[8].

Apart from pessimists and optimists, a third group of scholars believes that nuclearization will stabilize the regional situation at strategic level but will enhance instability at the lower edge of the spectrum. These scholars are called the proponents of stability-instability paradox. The idea of stability-instability paradox has its origins in the Cold War, when USA and USSR confronted each other for global dominance. Presence of the stocks of nuclear arsenals on both sides prevented a direct confrontation but for gaining their objectives and increasing their sphere of influence, both super powers relied on the tools of sub-conventional warfare (proxies).[9] Based on their self-interests both powers supported the governments, oppositions or revolutionary groups in a number of regions; like Asia, Europe, Latin America, Africa and Middle East. Such tactics during Cold War pushed Glenn Synder to put forward a theory of stability-instability paradox. Snyder first referred to this concept in `1965, through his work *Balance of power and balance of terror* (Balance of power and balance of terror was a chapter in Paul Seabury's edited book, The Balance of

[6] Michael Sheehan, *The Balance of Power: History and Theory,* (London, Routledge, 1996)
[7] Summit Ganguly& Paul Kapur, *Nuclear Proliferation in South Asia: Crises Behavior and the Bomb*, (Oxon, Routledge, 2009)
[8] Hamid Khan, *Constitutional and political history of Pakistan* (2nd Ed), (Karachi, Oxford University press, 2009)
[9] Adel Sultan, "South Asia Stability-Instability Paradox: Another Perspective", (*IPRI,* vol 14, no 1, 2014), P 21-37.

will to use all types of weapon and forces, if its survival and integrity was endangered.[13] On its part, India threatened Pakistan with total destruction if it worked out such options.[14] Reports suggest that during 1999 crises both countries upgraded their nuclear arsenals at high alerts for meeting any possible threat.[15]

Such an environment attracted international attention. For diffusing tension, the US intervened and advised both governments to stop expanding the crises. On the advice of President Clinton, General Zinni visited Islamabad on June 24, to convince the Pakistan government for a withdrawal plan. On June 27, PM Nawaz Sharif visited China and being disappointed he cut short his visit and returned home.[16] On July 4th, Pakistan's PM moved to America. Next day President Clinton and PM Nawaz reached an agreement. In this agreement, America ensured its effective role for the resolution of Kashmir dispute and Pakistan agreed upon the withdrawal from Kargil.[17] On his return, Sharif called a meeting of the defense committee of the cabinet which was followed by a meeting with the leaders of freedom fighters. In this meeting, Pakistan requested them for their withdrawal from Kargil heights. Crises diffused after Kargil hills were vacated.[18]

Thus Kargil war was a demonstration of the fact that the region is surrounded by greater instability and disaster because the nuclear capable states had just returned from the brink of a nuclear exchange. None the less there are some other important and stunning facts about this crisis. Unveiling the actual situation, General Ved Malik, Indian army chief during

[13] Devint Hagerty, *South Asia in world politics* (USA, Rowman& Littlefield publishers, 2005)
[14] Shaun Gregory, "Rethinking Strategic Stability in South Asia", (*SASSU* ,no 3, 2005)
[15] Devint Hagerty, *South Asia in world politics* (USA, Rowman& Littlefield publishers 2005)
[16] M. Siddique UlFarooqur, *White Paper: Kargil Adventure or Trip* (Lahore, Sagar Publishers, 2006)
[17] Irum Khalid, *Pakistan's Foreign policy,* (Lahore, Peace publications, 2013)
[18] M. Siddique UlFarooqur, *White Paper: Kargil Adventure or Trip* (Lahore, Sagar Publishers, 2006)

the crises, acknowledged the fact that nuclear capabilities and the consequent nuclear posture of Pakistan deterred India from initiating a full scale conventional war[19]. When Operation Vijay[20] was started, the military requested the Government of India to permit the widening of operations across LOC for cutting the line of communication and supply line to the infiltrators. The Government after reviewing the whole situation dismissed all such requests and ordered its military to restrict the use of force to Kargil.[21] On its part, Pakistan decided not to provide an air cover to its forces/freedom fighters in the Kargil hills. All this restraint was due to the risk of escalation in a nuclearized environment.

Instead of all the cautions during Kargil crises, it was not the last crises. As the basic irritants between the two were not addressed, the level of mutual mistrust and hatred reached its climax in December 2001 when a group of terrorists attacked the Indian Parliament. Soon after the attacks India claimed Pakistani involvement.[22] For retaliating against the proclaimed Pakistani sponsored terrorism, the Indian government ordered its forces to reach Pakistani border.[23] After these orders almost 500,000 troops gathered near Pakistani border. This massive mobilization was named as *operation Parakarum.*[24] In response to such immense Indian presence on its borders, Pakistan also counter deployed its forces for responding to possible Indian aggression and gradually the situation got intensified[25]. The reason was that both the states involved in the crises

[19] S Kapur, "Nuclear Proliferation, Kargil Conflict, and South Asian security", (*Security studies*, vol 13, no 1, 2003)

[20] Indian operation to push back infiltrators in the Kargil War.

[21] Devint Hagerty, *South Asia in world politics* (USA, Rowman& Littlefield publishers 2005)

[22] Indian claimed terrorists to be the members of Lashkar-e-Taiba (LeT), and Jaish-e-Mohammed (JeM), two Pakistani based militant organizations.

[23] P. R. Chari, Pervez Iqbal Cheema & Stephen P. Cohen, *Four Crises and a Peace Process, American Engagement in South Asia,* (Washington, The Brookings Institution, 2007)

[24] While Explaining the level of Indian mobilization in 2001 Peter R. Lovay said: Soon after terrorist attacks on its parliament building around 23 Indian divisions and all its three strike crops along with armoured division and 600 aircrafts were deployed in Rajasthan and Punjab. Additionally it cancelled all leaves and the army day parade as well.

[25] Shaun Gregory, "Rethinking Strategic Stability in South Asia", (*SASSU* ,no 3, 2005)

were nuclear capable, being conventionally inferior one is ready to use them. Since the beginning of the crises nuclear signaling was very much there. In May, 2002 Pakistan also conducted three consecutive tests of nuclear capable ballistic missiles, thus effectively communicating the credibility of its nuclear threats[26]. Possession of weapons by any state suggests that these will be used under some conditions. So in December, 2001, Pakistan described those circumstances as; destruction of large part of Pakistani army or air force, loss of territory, economic and domestic destabilization, beyond which it will not hesitate to exercise the nuclear option[27].

Keeping in view 1999 experience, when Pakistani nuclear capabilities deterred India's will of expanding the crises, India launched large military exercises in a nuclearized scenario in 2001-2002 crises. It also tested Agni I[28] and threatened Pakistan with massive retaliation had it used nuclear weapons against its forces.[29] Some reports claimed that India had actually deployed Agni-I during this crisis[30]. But others reject such claims by stating that, despite verbal threats of nuclear use and signaling by missile testing, neither side had actually deployed its weapons.[31].

Such a situation caught the attention of international community. China, Russia, Britain and USA, all were afraid of a nuclear catastrophe and warned both countries about the possible dangers of such confrontation.[32]

[26] Bhumitra Chakma, *The Politics of Nuclear Weapons in South Asia*, (England, Ash gate publishing Ltd, 2011)

[27] Feroz Hassan Khan, "The Independence-Dependence Paradox: Stability Dilemmas in South Asia", (*Arms Control Association,*2003)

[28] Range of Agni I is 400-500 miles. Testing of a missile of such range during 2001-2002 crises demonstrates that this missile was specifically tested for attacking Pakistan.

[29] Peter R.Lavoy, "Managing South Asia's nuclear rivalry: New policy challenges for the United States", (*The non-proliferation review,* 2003), Retrieved from: http://cns.miis.edu/npr/pdfs103lavoy.pdf

[30] Ibid.

[31] Rid, Ahmed, Saeed. (2007-2008). India's ambitious Missile program and second strike capability *Regional Studies*. 22 (1).

[32] Rajesh M. Basrur, *South Asia's Cold War: Nuclear Weapons and Conflicts in Comparative Perspective* (Oxon, Routledge, 2008)

Crisis was diffused peacefully when Indians ordered the withdrawal of its forces to peace time locations.[33]Though American role was very decisive during the crises but actually it was the threat of nuclear annihilation which deterred India for operationalizing its war plans. A large number of scholars in India, Pakistan, and the West agree to the fact that explicit nuclear threats by Pakistan loomed high over the Indian decision making authorities during the crisis.

Despite massive mobilization after the parliament attacks of 2001, no significant political or strategic objective was gained by Indian forces. Indian analysts and strategists assigned the responsibility of this failure to Sundarji Doctrine.[34] According to them the failure of Indian forces to deploy quickly after the governmental order[35] provided Pakistan with an opportunity to deploy its forces for counter offense and urge international community to play its role for the diffusion of tensions. Critics of Sundarji Doctrine demanded a new and more assertive strategy to deal with the changed strategic environment. Thus, two years after Operation Parakram, India devised its new war fighting policy named Cold Start (CS).[36]

With this doctrine, three strike corps of Sundarji Doctrine ware replaced by 8 small divisions called integrated battle groups (IBGs)[37], and seven holding groups were renamed as Pivot corps and were provided with additional artillery and infantry training for enabling them to conduct limited offense. According to the plan, 8 IBGs with full coordination of IAF

[33] Alex Stolar, "To the Brink: Indian Decision making and the 2001-2001 Stand-off" (*Stimson Center,* vol 68, 2008)

[34] Ali Ahmad, "The Logic of the 'Sundarji Doctrine'," *IPCS*, December 22, 2009, http://www.ipcs.org/article/nuclear/the-logic-of-the-sundarji-doctrine-3029.html

[35] Under Sundarji doctrine, there were seven holding crops stationed near Pakistani border, which were trained and equipped only for defensive purposes. For offensive actions there were three Strike crops, stationed inside central India. Thus when India ordered its forces of offensive strikes in Pakistan on 18th December, 2001, Strike crops took almost three weeks to reach IB. And during this time period whole strategic scenario got changed and India loses all the rationales for attack.

[36] Feroz Hassan Khan, "The Independence-Dependence Paradox: Stability Dilemmas in South Asia", (*Arms Control Association,*2003)

[37] IBGs will be a combination of mechanized arterially, infantry and armor units.

and Navy will launch quick offences on multiple locations along Pakistani border, enter Pakistani territory within *seventy two* to *ninety six hours* of the orders and capture almost fifty to eighty kilometer of its territory. Such objectives aim at demanding concessions from the later during post-war dialogues.[38]

Element of Surprise and pursuance of limited objectives are the hearts of this new policy, and for this purpose its proponents stressed the need of quick deployment and operation, so as to leave Pakistan and international community with no time to craft any counter moves. And the time when International community reaches to rescue Pakistan its IBGs would gain a stranglehold over a thin piece of territory. One of the most important aspects of this plan is Indian hope of operating below nuclear thresholds of Pakistan. Indians argue that aims of such strikes are not to threaten adversary's existence or territorial integration, thus leaving it with no rationale for nuclear use[39]. Thus it can be said that the new strategy is devised to engage Pakistan in short crises without crossing its nuclear thresholds.[40].

Successful implementation of the proposed strategy requires latest weaponry, command and control system and extensive training. For this purpose India started its aggressive military modernization program. In this direction first step was the increase of its defense budget, purchase of sophisticated artillery and the up-gradation of available assists. Second step was initiation of different military exercises keeping in view the Cold Start scenario. From 2004 to 2012, India conducted almost ten exercises, after which Indians gained some success in employing essential elements of CSD. Third step was initiation of organizational changes, and the

[38]Walter C Ladwig III, "A Cold Start for Hot War. The Indian army's new limited War Doctrine" (*International Security,* vol 32, no 3, 2007-2008)
[39]Sannia Abdullah, Cold Start in strategic calculus, (*IPRI*, vol 12, no 1, 2012), 1-27
[40]Walter C Ladwig III, "A Cold Start for Hot War. The Indian army's new limited War Doctrine" (*International Security,* vol 32, no 3, 2007-2008)

creation of the South-Western command. New Command will work in collaboration with Northern and western commands, thus making the management of large number of IBGs manageable.[41]

Pakistani analysts are of the view that: keeping in view Pakistan's lack of strategic depth, the loss of a small piece of territory envisioned in CSD would be a great strategic blow to Pakistan because most of its important cities and communication lines lie next to its border. Thus limited war will not remain limited if operationalized.[42] For countering India's aggressive moves, Pakistan also launched a minimum military modernization program. For Example, *Spada-2000*air defense system and *Saab-2000* air borne early warning and control aircrafts were inducted into Pakistan Air Force (PAF). In addition to these, PAF is also in the possession of two squadrons of unmanned Ariel vehicles (UAVs). All these new technologies will enable Pakistan to detect the movement of all aircrafts from the forward bases of India. Thus Pakistani efforts have largely undermined the surprise element of CSD.[43] In addition to military modernization, Pakistan also focused on the training of its personnel and for this military exercises, Azme-e-Nau, were conducted in 2010.[44] PAF also initiated its exercises *High Mark*in the same year. These exercises demonstrated the military preparedness of Pakistan's armed forces and were the expression of a joint counter offense by its army and air force[i]. After these exercises, Zafar Nawaz Japal, a renowned Pakistani defense analyst, opined that Pakistan is doing a lot to counter Indian limited war aspirations but, without tactical nuclear weapons, Pakistan cannot deter limited war fighting aspirations of India.[45] Following its needs for maintaining strategic balance, Pakistan tested its short-range Hatf-9[46] in April 2011 and within three months India reacted by testing Prahaar, with a range

[41]Y I Patel, "Dig Vijay to Divya Astra: A Paradigm shift in the Indian Army's Doctrine", (*Bharat Rakshak Monitor*, vol 6, no 6, 2004)
[42]Sannia Abdullah, Cold Start in strategic calculus, (*IPRI*, vol 12, no 1, 2012), 1-27
[43]Ibid
[44]Masood Ur Rehman Khattak, "Indian Military's Cold Start Doctrine: Capabilities, Limitations and Possible Response from Pakistan", (*SASSI,* vol 32, 2011)
[45]Zafar Nawaz Jaspal, Tactical Nuclear Weapon: Deterrence Stability between India and Pakistan, Retrieved From: http://www.nps.edu/Academics/Centers/CCC/PASCC/publications/2012/2012_002_jaspal.pdf.
[46]Another short range missile Hatf-II/Abdali was successfully launched in 2012 by Pakistan.

of 60 km and 150 km respectively[47]. Unlike a strategic weapon which is aimed at targeting opponent's counter value targets, short-range/tactical nuclear weapons (TNWs) are endeavored to be used in the battlefield during a war.[48] Introduction of TNWs in the strategic calculus of South Asia renewed the debate of deterrence stability and instability. Some argue in favor of their deterrent value whereas some present the horrific picture of their unauthorized use and the dangers of the lack of escalation control.[49]

Those, who oppose the proliferation of TNWs, claimed that it would be quite difficult to establish a strong and reliable command and control system for these weapons because, for ensuring their credibility, these weapons must be deployed in the field, where its accidental use can trigger a nuclear war[50]. On the other hand, those who speak in favor of the stabilizing impacts of TNWs, argue that these weapons will ensure stability because it will deter Indian obsession of fighting a limited war (CSD) with Pakistan which threaten a nuclear exchange because of the latter's lack of strategic depth and conventional asymmetry[51]. Presence of tactical nukes at both sides presents a picture of enhanced deterrence because it will deter both from unnecessary adventurism (limited wars). But if deterrence failed and a conventional war broke out, then it would lead to devastating and catastrophic consequences[52]. Though CSD aimed at countering the presumed cross-border terrorism but India remained unable to control homegrown terrorist from killing the innocent Pakistanis travelling through India via Samjhota express on 18th February 2007.[53]

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[47]Masood Ur RehmanKhattak, "Indian Military's Cold Start Doctrine: Capabilities, Limitations and Possible Response from Pakistan", (*SASSI,* vol 32, 2011)

[48]Zafar Nawaz Jaspal, Tactical Nuclear Weapon: Deterrence Stability between India and Pakistan, Retrieved From: http://www.nps.edu/Academics/Centers/CCC/PASCC/publications/2012/2012_002_jaspal.pdf.

[49]Michael Krepon, Joshua T. Whit, Julia Thompson, & Shane Mason, *Deterrence instability and Nuclear weapons in South Asia*, (Washington, Stimson Center, 2015).

[50]Ghazala Yasmin Jalil, "Tactical Nuclear Weapons and Deterrence stability in South Asia:Pakistan's Stabilization-Destabilization Dilemma" (*Strategic Studies,* vol 34, no 1, 2014)

[51]Beenish Altaf, "India-Pakistan and tactical nuclear weapons: Implications of Hatf-9" (*IPCS*, 2015)

[52]Amit Gupta, India, Pakistan and Tactical Nuclear Weapons, (*IPCS*, 2014)

[53]Ali Ahsan," The Evolution of Indian Nuclear Thought",(*CISS Insight*, vol 2, no 4, 2014)

2. Samjhota Express incident

Samjhota Train service (also called peace train/ friendship express) was an attempt towards peace building between India and Pakistan. Service was initiated in 1976. During 2001-2002 crises, service was disrupted for some time but later on was restored. Train connects Lahore and Wagah (Pakistan) to New Delhi and Attari (India).[54] Samjhota Express became subject to terrorist attack on 18th February 2007 near Panipat (Haryana, India), a couple of days before Pakistani foreign minister had to leave for Delhi for peace dialogues.[55] During these attacks, 60 people were killed, most of whom were Pakistani nationals.[56] Reacting to the incident, Pakistan neither cancelled the dialogue process nor blamed Indian government for the terrorist incident. Instead it condemned the episode as an act to demolish dialogue process and demanded investigation and punishment to those involved in the odious act of terrorism.[57] But Indian harassment of Pakistani victims and denial of the entrance to Pakistani High Commission personnel into hospital[58] raised concerns in Pakistan and everyone started sensing a tense environment.[59]

Soon after the incident, reports started emerging about the involvement of Hindu extremists behind the terrorist attack.[60] Indian

[54]Ghazala Yasmin Jalil, "Tactical Nuclear Weapons and Deterrence stability in South Asia: Pakistan's Stabilization-Destabilization Dilemma" (*Strategic Studies,* vol 34, no 1, 2014)
[55]2007 Samjhota Express bombing", Retrieved from: http://research.omicsgroup.org/index.php/2007_Samjhauta_Express_bombings
[56]Samjhota Express, Retrieved from: http://research.omicsgroup.org/index.php.org/Samjhauta_Express.
[57]RadhavinodRaju, "Samjhota express blast vs Mumbai terror attacks" (*IPCS* , 2011). http://www.ipcs.org/article/india/samjhauta-express-blast-vs-mumbai-terror-attacks-3328.html.
[58]Officials Pakistani High Commission wants to meet their country fellows for moral support, for assessing the exact situation and gaining firsthand information from the victims.
[59]Naila Inayat, "A Case of Samjhota Express Massacer", (Hilal, 2011)
[60]Indian Train Blasts no obstacle to Peace Talks. (2007). Accessed from http://www.theage.com.au/news/world/india-train-blasts-no-obsticle-to-peacetalks/2007/02/19/1171733657966.html

Investigating agency claimed the involvement of Swami Aseemanand and other Indian army personnel in the blasts.[61]. In 2011, Swami confessed before an Indian magistrate that he and other RSS fellows were actively involved in the attacks.[62] Despite the lapse of so many years, India is yet unable to trace and punish the culprits. In March, 2015, Pakistan Foreign office called upon the Indian High Commissioner, and expressed concerns over the slow pace in the handling of the Samjhota incident and the release of Swami from police custody despite the confession.[63]

3. Mumbai crises

The stage for another Indo-Pakistan crisis was ready with the terrorist attacks of November 2008. On 26th November, a group of ten terrorists attacked Mumbai, the largest economic and entertainment city of India.[64] Out of these, nine attackers were killed and one, Amir Ajmal Kasab[65], was arrested. Soon after the attacks, India declared that attackers were LeT affiliates and also claimed the backing of Pakistan's security organizations especially ISI in it.[66] Afterwards Indian Prime Minister threatened Pakistan by claiming that any attack from Pakistani territory would not be tolerated and that it would cost highly to Pakistan.[67]

Instant reaction from Pakistan was that of condemnation of the brutalities and denial of any involvement. India demanded the extradition of twenty expected terrorists and a strong action against the home

[61]Samjhota Express, Retrieved from: http://research.omicsgroup.org/index.php.org/Samjhauta_Express. Accessed on 16 Jan 2016,

[62]Shireen Mazari, Khurshid Mahmud Kasuri & Asad Durrani, "India-Pakistan relations: security dynamics and future scenarios", (*Policy Perspective*, vol 6, no 1, 2009)

[63]Samjhota Express tragedy's mystery still unresolved, Associated press of Pakistan, 2011

[64]Hindu extremist confesses involvement in Samjhota Express bombing. *The Express Tribune,* 2011

[65]India Claim Ajmal Kasab to be a Pakistani national and the local of Faridkot, a small town in Multan, Pakistan. But Pakistan rejected this claim.

[66]Pakistan Summons Indian DHC over delays in Samjhaota Express Trail, *The News,* 2015

[67]Stephens M. Balakrishnan, "Protecting from brand burn during times of crisis: Mumbai a 26/11: A Case of the Taj Palace and Tower Hotel", (*Management Research Review*, vol 34, no 12, 2011), 1309- 1334.

residing terrorist organizations from Pakistan. Pakistan rejected the demand of extradition on the grounds that there was no any such agreement between the two countries.[68] But Asif Ali Zardari, President of Pakistan, vowed to take strict action against all individuals and organizations had New Delhi provided him with strong evidences.[69]. As Pakistan and India were pursuing the path of mistrust, America intervened and advised Pakistan to take serious actions against the terrorist organizations on its territory because the Indians have intended to instigate air strikes on specific targets[70] inside Pakistan and that America is unable to stop Indian moves.[71] On December 7, Pakistan initiated a crackdown in which large numbers of LeT associates were arrested including, Zaki-ur-Rehman Lakhvi, whom India claimed as the master mind of the Mumbai attacks. By 10th December, UN declared JUD, mother organization of LeT, as a terrorist group, and imposed financial sanctions on some of the members of LeT[72]. On very next day of the UN decision, Pakistan sealed a number of JUD's offices operating on its soil, and its leader, Hafiz Muhammad Saeed was put under house arrest. On 13th December the decisive decision of banning JUD was implemented.[73] On 14th December 2008, Indian air force (IAF) conducted flights on Indo-Pak working border, and its leaders threatened Pakistan to use any option available to them.[74] For countering any possible Indian offense, Pakistan air force conducted air exercises over Karachi, Lahore, Rawalpindi and Islamabad.

[68]Polly Nayak& Michael Krepon, "The Unfinished Crises: US Crises management after the 2008 Mumbai attacks", (*Stimson Center,* 2012)

[69]Zafar Nawaz Jaspal, "Paradox of deterrence: India Pakistan strategic relations", (*Strategic Studies,*vol 29, no 4, 2009), 23-36

[70]Suspected air strikes in Pakistan during Mumbai Crises was the practical implementation of Indian CSD.

[71]Michael Krepon & Nate Cohen, "Crises in South Asia: Trends and Potential consequences", (*Stimson* Center, 2011).

[72]Umbreen Javaid & Marium Kamal, "The Mumbai Terror 2008 and its impact on the Indo-Pak Relations", (*South Asian Studies*, vol 28, no 1, 2013), 25-37

[73]Arundhati Roy, "The monster in the mirror", (2008), Retrieved from: theguardian.com.

[74]Michael Krepon& Nate Cohen, Crises in South Asia: Trends and Potential consequences, (*Stimson* Center, 2011)

Most importantly both India and Pakistan cancelled all leaves of armed forces, which was indicative of a mass mobilization and attack. On one side, war preparations were going on whereas on the other hand, on January 5th, 2009, Indians presented to Pakistan and the international media a database, claiming it as a proof of the involvement of Pakistani citizens in the Mumbai massacre.[75] Reacting to the evidences provided by India, Yousaf Raza Gilani, the then Prime Minister of Pakistan, said that what India provided was just information and not evidence.[76] Though unsatisfied, Pakistan yet trailed all those mentioned and arrested some, including Zaki-ur-Rehman Lakhvi and Hafiz Muhammad Saeed. Giving its final verdict in February 2011, Lahore High Court dismissed all the evidences provided by India, and ordered the release of Hafiz Saeed from police custody.[77] Side by side news papers highlighted reports that some of the governmental officials of India had claimed the involvement of their government in the parliament (2001) and Mumbai (2008) attack.[78] Among such reports and the claims and counter claims of the South Asian nuclear neighbors, it is quite difficult to reach an exact conclusion regarding the sponsors of the stated terrorist incidents.[79].

4. Border Aggression (2014)

International Border and Line of Control between India and Pakistan remained largely silent after 2003 when both countries decided to respect each other's domains. But the year 2012 witnessed decline in the

[75]Zafar Nawaz Jaspal, "Paradox of deterrence: India Pakistan strategic relations", (*Strategic Studies,* vol 29, no 4, 2009), 23-36

[76]Michael Krepon& Nate Cohen, Crises in South Asia: Trends and Potential consequences, (*Stimson* Center, 2011)

[77]Angel Rabasa, Robert D. Blackwill, Peter Chalk, Kim Cragin, C. Christine Fair, Brain A. Jackson, Brian Michael Jenkins, Seth G. Jones, Nathaniel Shestak& Ashley J. Tellis, *The Lessions of Mumbai*, (Santa Monica, RAND Corporation, 2009)

[78]"Govt behind Parliament attack, 26/11: Ishrat probe officer," *Times of India*, July 14, 2013 http://timesofindia.indiatimes.com/india/Govt-behind-Parliament-attack-26/11-Ishrat-probe-officer/articleshow/21062116.cms

[79]Michael Krepon& Nate Cohen, Crises in South Asia: Trends and Potential consequences, (*Stimson* Center, 2011)

professed policy, violations increased in 2013 and in 2014, and severe cross border abuses by India became a routine. This cross border adventurism became a sore point between the nuclearized adversaries, with the possibility of an inadvertent escalation.[80]

Border violence became intensified after Bharatiya Janata party (BJP) gained power in India and a radical Narendra Modi, well known as the Butcher of Gujrat, became its PM. Throughout its election campaign, Modi threatened Pakistan with a more aggressive foreign and defense policy.[81] Cross border bombardment of 2014 was so severe that defense analysts termed these to be the cruelest since the Indo-Pak war of 1971.[82]. DG Punjab Rangers termed these assaults as *small-scale wars.*[83] Such large scale violations resulted in huge number of causalities, injuries, and infrastructural damage on Pakistani side.[84] In a letter to UN Secretary General, Pakistan claimed to have faced a total of 174 violations by India on LOC and 60 on International Border in 2014. Within ten days after their initiation, these attacks resulted in 21 causalities, both military and civilian, and almost 52 injuries.[85].

[80]Polly Nayak & Michael Krepon, "The Unfinished Crises: US Crises management after the 2008 Mumbai attacks", (*StimsonCenter,* 2012)

[81]Government behind terrorist attacks, 26/11: Ishrat Probe Officer, *The Times of India,* 2013

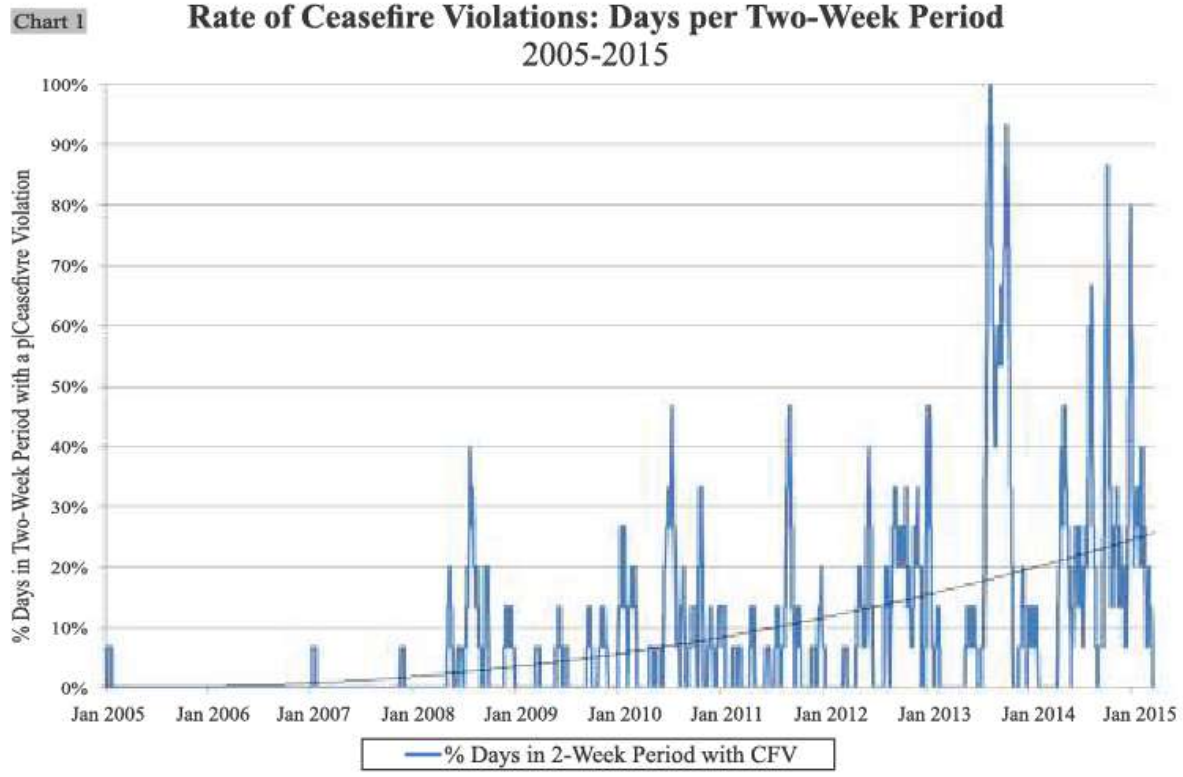
[82] Mohammad Munir, Prospects of India-Pakistan Relations (*IPRI Insight*, vol 1, no 1, 2013)

[83]Julia Thompson, The dynamics of Violence along the Kashmir divide 2013-15 (*Stimson Center*)

[84]Kranti Kumara & Keith Jones, (2014). "India and Pakistan Trade Warnings over Escalating Border Clashes", Retrieved From: https://www.wsws.org/en/articles/2014/10/10/jait-o10.html

[85]"India fighting small-scale war with Pakistan: DG Rangers Punjab", The Express Tribune 2014

Chart 1



Source: Julia Thompson, "The Dynamics of Violence along the Kashmir Divide, 2003-2015," Stimson Center, https://www.stimson.org/sites/default/files/dynamics-violence-kashmir-divide.pdf

Immediate reaction from Pakistan was that of pro7 test to the Indian High Commission and its government. It expressed its desire for regional peace, and requested India to abide by ceasefire agreement for the restoration of stability.[86] Pakistan has also reported Indian violence to United Nations Military Observer Group in India and Pakistan (UNMOFIP) and requested to show restraint.[87] Instead of reacting to Pakistani demands, Indian government and media blamed Pakistan for the initiation of non-provocative border aggression[88] and threatened it with severe and

[86]Sajjad Shaukat, "Why India Continues Cross-border Shelling?", 2014, Retrieved from: http://readersupportednews.org/pm-section/86-86/26368-why-india-continues-cross-border-shelling

[87]Mateen Haider, "Pakistan Writes letter to UNSG over LOC Violations by India", *Dawn,* 2014

[88]Imran Sadiq, "At least one killed: 12 Injured in India-Pak Cross Border Firing", *Dawn,* 2014

unacceptable punishment[89]. In addition to this, Indian also terminated foreign-secretary level dialogues, planned to be held in August 2014.[90]

With the passage of time, threats of full-fledged confrontation were gaining ground. The situation also alarmed the international community and America warns both to show restraint and to utilize diplomatic channels for diffusion of crises and resolution of disputes.[91] Pakistan has also raised the issue in UN, Organization of Islamic Cooperation (OIC) and European Union (EU).[92]

Proxy wars: A Tool of State Policy

Apart from fueling a number of crises and near crises situations, nuclearization has intensified the notion of proxy tactics between India and Pakistan. India always claims Pakistan to be involved in cross-border terrorism through financing and training Kashmiri freedom fighters. Conventional superiority gives Indians an edge to respond massively against any sub-conventional tactic by Pakistan, whereas the latter is left only with protests against such design.

The history of Indian sub-conventional tactics against Pakistan goes back to 1971, when India had successfully prompted a civil war in East Pakistan. But proxy tactics were aggressively pursued after the overt nuclearization because un-conventional balance deprived India of its conventional advantage vis-à-vis Pakistan. Indian involvement in proxy warfare against Pakistan was confirmed by the Jain Commission report. To exactly quote the words of Dr. Shireen Mazari:

> "The publication of the Jain Commission Report for the Indian Government has confirmed what

[89]"Indian Troops Continue to Violate LOC Ceasefire: ISPR", *The Express Tribune,* 2014
[90]Kranti Kumara & Keith Jones, "India and Pakistan Trade Warnings over Escalating Border Clashes", 2014, Retrieved From: https://www.wsws.org/en/articles/2014/10/10/jait-o10.html
[91]"ModiJaitley warns Pakistan", *The Hindu,* 2014
[92]Aymen Ijaz, "LOC on Kashmir and Indo-Pak border violations: What India really wants", *The London Post*, 2014

> many in South Asia had suspected all along: that Indian intelligence services Research and Analysis Wing (RAW) has been fomenting violent destabilization within the domestic policies of the South Asian states".[93]

While explaining Indian use of Afghan soil for conducting its proxy war against Pakistan, Chuck Hagel, the US defense secretary, said: "India for some time has always used Afghanistan as a second front and India has over the years financed problems for Pakistan on that side of the border".[94]

Christine Fair, an American writer, claimed that Indians are heavily financing in Balochistan, and Brahamdagh Bugti, leader of the terrorist BLA, is being protected by RAW and KHAD.[95] Indian army chief, VK Singh while confessing his country's involvement said in September 2013 that he raised a special Technical Services Division to operate inside Balochistan and Azad Kashmir.[96] Dramatic increase in Indian offence was felt after the empowerment of Hindutva's political wing there. On 20th January, 2013, Sushil Kumar Shinde, Indian home minister, revealed that the ruling party, in collaboration with RSS, is running terrorist training camps in India. Some experts believe that these terrorists will be used as proxies against other states.[97] The political and military leadership of Pakistan has claimed Indian involvement in a number of suicide and other terrorist acts. Manohar

[93]Imran Sadiq, "At least one killed: 12 Injured in India-Pak Cross Border Firing", *Dawn,* 2014

[94]NaveedAhmad,"India's Ambitions remain strong", 2014, Retrieved From: http://www.todayszaman.com/op-ed_indias-modi-fication_362761.html.

[95]Shireen M. Mazari, "India's Unconventional War Strategy", Retrieved from: http://www.defencejournal.com/jan99/rawfacts.htm

[96]"India financed problems for Pakistan in Afghanistan: says US defense secretary nominee Chuck Hagel", The Times of India, 2013, Retrieved from: http://timesofindia.indiatimes.com/india/India-financed-problems-for-Pak-in-Afghanistan-says-US-defence-secretary-nominee-Chuck-Hagel/articleshow/18694475.cms

[97]Riaz Haq, "Has Modi Stepped up India's Covert war in Pakistan", 2014, Retrieved From: http://www.riazhaq.com/2014/12/has-modi-stepped-up-indias-covert-war.html.

Parrikar's, Indian defense minister, statement of 25th May, 2015:"Neutralize terrorists through terrorists only"[98] is quite evident of the fact that proxy wars are now used as a policy option.

As the situation was becoming uncontrollable, Pakistan presented documented proofs (including videos and audios) of Indian sponsoring of terrorist elements in Karachi, FATA and Balochistan to Ban Ki- moon, the then UN Secretary General. In addition to the Secretary General, foreign ministers of fifteen states were also briefed over the issue.[99] Despite Pakistani urge to international community for pressurizing India to stop its covert designs for destabilizing Pakistan, India has continued its tactics, as was evident by the arrest of a serving Indian Navy officer Kulbhushan Yadav from Balochistan on March 3rd, 2016.[100] Spy Yadav has admitted that his country is involved in "dissident activities" and is also aiming to create a "sectarian tiger force" to intensify sectarian unrest in Pakistan.[101]

In the background of the increased sub-conventional tactics by the adversary, Pakistan Army in 2013 has reviewed and changed its doctrine. The new military doctrine mentioned the home-grown and foreign-aided terrorists (specifically mentioned "Foreign proxies") as a big threat to the state. This is considered as a radical change by the analysts because since its inception India has been considered as the existential threat to Pakistan. Several reasons are described for this change but the most important reasons were:

- Proofs of foreign involvement in terrorist activities[102].

[98]SanjeevMiglani&Jhon Chalmers, "BJP puts No First Use nuclear policy into doubts", (New Delhi, Reuters, 2014)

[99]Ahsan Ali Zahid&HasanEhtisham, "Pakistan: Terrorism, Deception and India", 2015, Retrieved From: http://thelondonpost.net/pakistan-terrorism-deception-and-india/.

[100]"Fighting Terror with Terrorists: Indian defense minister outlines strategy for new proxy war", The Express Tribune, 2015

[101]"Dossiers on Indian sponsored Terror in Pakistan handed over to UN: Sartaj Aziz", Geo News, 2015, Retrieved from: https://www.geo.tv/latest/6500-dossiers-on-indian-sponsored-terror-in-pakistan-handed-over-to-un-sartaj-aziz

[102]"Indian Spy comes clean in government aired video", The Nation, 2016

- The increasing numbers of terrorist incidents.
- Doctrinal compulsion to concentrate on the Eastern front.
- The lack of adequate training for sub-conventional warfare.[103]

Explaining the changed priorities, Asim Saleem Bajwea (DG ISPR) said: Sub-conventional threat is a reality and is part of the threat challenges faced by Pakistan but it does not mean that conventional threat has gone away.[104] It becomes clear from the above statement that the change of military doctrine is attributed to the changed security scenarios[105] of South Asia, in which proxy wars and sub-conventional tactics affect the state policy.

Kashmir Intifada and Pak-India Tensions 2016

Currently, Pakistan-India relations are going an uneasy way. The present turbulence owes its origin to the extra-judicial killing of Burhan Wani, Kashmiri Freedom fighter, by Indian forces on 8th July 2016 and the resultant popular uprising in Indian held Kashmir.[106] The terrorist attack of September 18th, 2016 on the Indian Army base at Uri has added fuel to fire because of the irrational Indian attitude. India claimed Pakistani involvement in the attack and its PM vowed to avenge its neighbor and to isolate it.[107] Temperature was mounting with aggressive statements, political moves, and military alerts, and reached the climax with Indian claims of successful surgical strikes against selected targets in Pakistani

[103]"Transcript of RAW agent Kulbhushan's confessional statement", Dawn, 2016

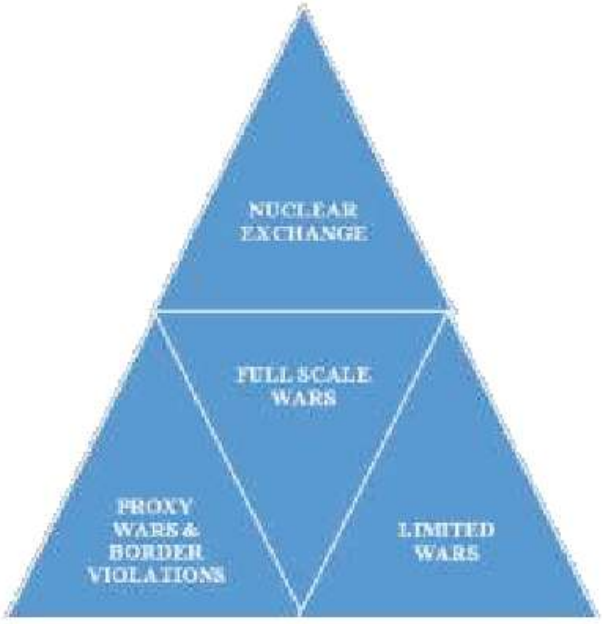
[104]"New Doctrine Army Identifies 'homegrown militancy' as biggest threat", The Express Tribune, 2013

[105]Pakistan believes India is using Afghan territory against it, through training and financing anti-Pakistan elements there.

[106]Mansoor Jafar, "Pakistan's new military doctrine under Indian Threat", Alarabiya News, 2013

[107]Manoj Joshi, "Pakistan's Army Finally sees the enemy within as greatest security threat than India", 2013, Retrieved from: http://www.dailymail.co.uk/indoahome/indianews/article-2258073/pakistans-army-finally-sees-enemy-greater-security-threat-india.html.

administered Kashmir. On its part, Pakistan has rejected all such claims and condemned the unprovoked border aggression by its Eastern neighbor.[108] Due to threats of escalation, the villages located near the LOC were evacuated. Sensing offense, Pakistan's Defense minister said: "We will destroy India if it dares to impose war on us--------we have not made atomic devices to display in a showcase".[109] Thus a danger of a war and escalation was looming high over the continent. In addition to such aggressive military posture, India is also reviewing years old "Indus-Water Treaty", and it has successfully prevented the regional conference scheduled to be held in Pakistan. Further, it has also banned Pakistani artists on its soil. Pakistan has responded and banned the release of Indian movies in Pakistan.[110] All these events illustrate an alarming situation but at the same time it's a reminder of the fact that has there not been nuclear deterrence both would have directly encountered each other. Following diagram will demonstrate Indo-Pak escalatory ladder.



[108]"New Doctrine: Army indentifies homegrown militancy as biggest threat", The Express Tribune, 2013

[109]"Kashmir clashes over militant BurhanWani leave 30 dead", BBC News, 2016, retrieved from: http://www.bbc.com/news/world-asia-india-36761527

[110]Pervaz Jabri, "Modi once again blames Pakistan for Uri attacks, Threatens to isolate it", Business Recorder, 2016, Retrieved from: http://www.brecorder.com/top-news/pakistan/319576-modi-once-again-blames-pakistan-for-uri-attack-threatens-to-isolate-it.html

Ballistic Missile Defense: A threat to strategic stability

Some of the military development programs of India are endangering the prevalent strategic stability of the region. India's BMD program is one of those. The program owes its origin to the 1980's[111]. BMD enables a country to detect, track, intercept and destroy incoming ballistic missiles.[112]. Indian BMD program was initiated with Russian assistance; later on Israel also aided India[113]. Prithvi Air Defense (PAD) and Advanced Air defense (AAD) are the two components of the Indian BMD program.[114] First test of the shield was conducted in 2006, followed by two more in 2007 and 2009.[115] In 2012, V.K. Saraswat, DRDO Chief, claimed that India successfully developed the system and is able to protect two of its cities[116]. But at the same time it should be remembered that the credibility of such systems is not hundred percent sure even to the developed states of the world. According to experts the major aim behind such developments is to reach such a level of weaponry advancement that will neutralize the capabilities of Delhi's opponents'.[117] Some Indian strategists argue that

[111]Sanjeev Miglani & AsadHashim, "India says hit Pakistan based militants, Escalating tensions", 2016, Retrieved from: http://www.reuters.com/article/us-pakistan-india-kashmir-idUSKCN11Z0IJ

[112]Bruce Wright, "Why are Pakistan and India fighting? Nuclear war threatened after Kashmir attack at Uri military base, 2016, Cited from: http://www.ibtimes.com/why-are-pakistan-india-fighting-nuclear-war-threatened-after-kashmir-attack-uri-2423462

[113]Annie Gowen&ShaiqHussain, "India claims surgical strikesagainst militants in Pakistani controlled Kashmir", Washington Post, 2016, https://www.washingtonpost.com/world/india-hits-militant-launchpads-in-pakistan-in-escalation-between-nuclear-armed-rivals/2016/09/29/e0145168-d97e-4149-977a-24d08b16ea0b_story.html

[114]Zafar Nawaz Jaspal, "Ballistic Missile Defense: Implications for Indo-Pakistan strategic environment", (*NDU Journal*, no Xxv, 2011)

[115]Independent Working Group, "A Guide: Frequently asked questions for Ballistic Missile Defense", (Institute for Foreign Policy Analysis)

[116]Zafar Nawaz Jaspal, "Ballistic Missile Defense: Implications for Indo-Pakistan strategic environment", (*NDU Journal*, no xxv, 2011)

[117]Eric Auner, "Indian Missile Defense Program Advances", (*Arms Control Today*, 2013), retrieved from: http://www.armscontrol.org/act/2013_01-02/Indian-missile--program-advances.

BMD would be quite helpful in guarding India from a retaliatory measure in the face of its adventurism.[118]

BMD can negatively affect the deterrence stability of South Asia because the essence of deterrence lies in the retaliatory power and BMD aims at ending the retaliatory capability of the opponent.[119] This perceived advantage will encourage the defense and political elites of India to implement its CSD or even a full fledged war which will lead to nuclear instability.[120] Zulfiquar Khan, Defense analyst, opined that the system is ineffective against cruise missile and Jaspal puts a question mark against its 100% utility in face of ballistic missiles as well.[121] Further, the short flight time between India and Pakistan will not let BMD to target the incoming missiles.[122]. So they maintain that BMD will not affect the deterrence capabilities of Pakistan.

Whatever the reality may be, the fact is that the presence of such an advanced shield in the hands of a giant aggressor compels Pakistan to take effective countermeasures.[123]. Pakistan's cruise and short-range missiles are most important developments to counter Indian BMD.[124] In 2013, ISPR claimed that its SRBMs are designed to defeat Anti-Tactical Missile systems.[125]. The defense shield also necessitates the change of Pakistan's

[118]Wg. Cdr. Anand Sharma, "Ballistic Missile Defense for India: Necessity, Imperatives and Implications", (*National Defense and Aerospace Power*, 2009)
[119]"Missile Defense Shield Ready: DRDO Chief", *The Hindu,* 2012
[120]Wg. Cdr. Anand Sharma, "Ballistic Missile Defense for India: Necessity, Imperatives and Implications", (*National Defense and Aerospace Power*, 2009)
[121]Zafar Nawaz Jaspal, "Ballistic Missile Defense: Implications for Indo-Pakistan strategic environment", (*NDU Journal*, no xxv, 2011)
[122]Ghazala Yasmin Jalil, "Tactical Nuclear Weapons and Deterrence stability in South Asia:Pakistan's Stabilization-Destabilization Dilemma" (*Strategic Studies,* vol 34, no 1, 2014)
[123]Feroz Hassan Khan, Ryan Jacobs & Emily Burke, *Nuclear Learning in South Asia,* (Naval Postgraduate School, 2014)
[124]Zafar Nawaz Jaspal, "Ballistic Missile Defense: Implications for Indo-Pakistan strategic environment", (*NDU Journal*, no xxv, 2011)
[125]Adel Sultan, "South Asia Stability-Instability Paradox: Another Perspective", (*IPRI,* vol 14, no 1, 2014), 21-37

nuclear strategy from non-deployment to launch-on-warning posture.[126]

Conclusion

After reviewing the post 1998 situation in South Asia it can be said that despite the assumptions of Optimists who claimed a stable and peaceful outcome of overt nuclearization, India and Pakistan fought a limited war in the Kargil hills and a number of crises. On the other hand, Pessimists view point also provides a one-sided picture. Though both states faced near war situations in 1999, 2001-2002, 2008 and 2016 but nuclear deterrence restrained them from escalation. Thus nuclear weapons deterred the two involved from indulging in full scale or conventional wars but at the same time it remained unsuccessful in establishing peace and stability as is evident from the periodic occurrences of tensions.[127] Fact is that nuclear weapons are unable to control hostilities at all levels of the spectrum. Actual regional situation lies somewhere between the postulations of Optimists and Pessimists. And stability-instability paradox can best explain Indo-Pakistan relations after 1998 nuclear explosions, because this paradox is a synthesis of both optimist and pessimists approaches, as it talks of the coexistence of nuclear and conventional peace and low-intensity conflicts.[128]

Induction of new weaponry systems like BMD by India has a potential of exploiting an already turbulent regional situation. But Pakistan's counter moves, increased production of fissile material, cruise missiles and TNWs, for defeating BMD ensures the prevalence of deterrence stability at strategic level. In addition to these developments, Indian refusal to engage in dialogue for the resolution of core issue presents a problematic situation.

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[126]Though launch-on-warning is a destabilizing posture but it is necessary to ensure the deterrence value of Pakistani arsenals.

[127]Feroz Hassan Khan, Ryan Jacobs & Emily Burke, *Nuclear Learning in South Asia,* (Naval Postgraduate School, 2014)

[128]ISPR Press Release, 2013, Retrieved from: http://www.ispr.gov.pk/front/main.asp?=t-press_release&id=2240

To conclude, it can be said that nuclearization of South Asia has resulted in increased violence, in the form of sponsoring of non-state actors, guerilla tactics, violation of LOC, IB and limited wars. But positive results are that no full scale war erupted between Pakistan and India since their covert possession of nuclear technology. But prevention of crises cannot be ensured in future unless India behaves like a responsible state for resolving the root causes of conflict.

North Korea's Nuclear Behavior: Future of Global Non-Proliferation Regime

Khalid Iqbal*

Abstract

The Relationship between the Democratic Peoples Republic of Korea (DPRK) and the international non-proliferation regimes presents an interesting case study. The DPRK had joined the Nuclear Non Proliferation Treaty (NPT) as a Non-Nuclear Weapon State (NNWS), in 1985. It also entered into a comprehensive safeguards agreement with International Atomic Energy Agency (IAEA), in 1992. Later, DPRK's comfort level with the parameters, set by in-vogue international non-proliferation regime, eroded incrementally as it began to perceive that the framework was incompatible with its national security concerns. Therefore, it decided to go ahead for developing its nuclear weapons program. However, before doing so, it opted to withdraw from its agreement from the IAEA in 1994 and later from the NPT in 2003[1]. It was a well thought out option selection by DPRK, as compared to adhering to the NPT and developing nuclear weapons clandestinely. Walking away from the NPT was aimed at getting rid of perpetual pangs of political baggage which it would have had to endure had it chosen to continue playing hide and seek with the international non-proliferation regime while

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[1]"Chronology of U.S.-North Korean Nuclear and Missile Diplomacy", *Arms Control Association*, Last updated in March 2017. https://www.armscontrol.org/factsheets/northkoreaprofile

developing its nuclear weapons. However, a number of other bilateral and multi-lateral agreements, protocols and understandings pertaining to DPRK's nuclear matters still remain in place, especially between the DPRK and the US, between North and South Korea and between North Korea and IAEA (which North Korea is often accused of violating). DPRK is also blamed for exiting the NPT lawfully, and hence this exit is perceived by some countries/entities as unlawful and void. On its part, DPRK maintains that it lawfully exited the NPT and is not in violation of any of its international obligations. Never ending battle of wits is in between the international non-proliferation regime and North Korea in the form of a vicious cycle of sanctions and nuclear and missile tests. There is no ongoing diplomatic engagement as the "Six-Party Talks" stand suspended since April 2009. The strategy of sanctions may have already hit a point of diminishing returns in the context of dissuading DPRK from its nuclear and missile programs, but its continuation is certain to precipitate a humanitarian crisis. At the same time, while pursuing its nuclear, missile and space programs, DPRK may be unwittingly advancing American strategic interests like positioning of Anti-Ballistic Missile (ABM) System and redeployment of American nukes in The Republic of Korea (RoK), which it withdrew in 1992[2]. In all likelihood, the solution lies in engaging DPRK in meaningful talks aimed at addressing its security concerns. This paper *examines DPRK's nuclear behavior and its likely impact on the international non-proliferation regime.*

Keywords: North Korea, Anti-Ballistic Missile, Nuclear Non Proliferation Treaty, South Korea, HEU, Conference of Disarmament, CTBT, IAEA safeguards.

[2]"US Tactical Nukes May Return To S. Korea", *The Right Perspective*, November 23, 2010, http://www.therightperspective.org/2010/11/23/us-tactical-nukes-may-return-to-s-korea/

extremely repressive, any attempt at regime change is not likely to succeed. Prima facie, DPRK has learnt to live with sanctions and the international community has learnt to live with a nuclear armed DPRK.

Ironically, when on March 27, 2017, over 100 countries initiated the first-ever UN talks to legally ban the nukes, America spearheaded a boycott of the process terming it "unrealistic". American ambassador to the UN, Nikki Haley, rejected the process in the context of "current global security threats". "As a mom and a daughter there is nothing I want more for my family than a world with no nuclear weapons," Haley stated on side-lines of the event[5]. "But we have to be realistic," she added. "Is there anyone that believes that North Korea would agree to a ban on nuclear weapons…You have to ask yourselves: Do they really understand the threats that we have?"[6] Around 40 countries, including all nine nuclear weapon states, were not participating. This initiative was announced in October, 2016 by 123 UN members; those at the forefront included Austria, Ireland, Mexico, Brazil, South Africa and Sweden, supported by hundreds of non-profit organizations. The UK, Israel, France, USA and Russia had voted no, while China, India and Pakistan abstained. Even Japan voted negatively saying: "Efforts to make such a treaty without the involvement of nuclear weapon states will only deepen the schism and division" [7] within the international system.

Fast Forward: Donald Trump Administration

There are only a few aspects of America's foreign policy where President Donald J Trump did not differ with his predecessor, even during his fanciful campaign days' rhetoric. Of these, one is America's relationship

[5]"Pakistan joins US-led boycott against UN meet to ban nuclear weapons", *Express Tribune*, March 28, 2017. https://tribune.com.pk/story/1367481/us-leads-boycott-nuclear-weapons-ban-talks/
[6]Ibid.
[7]"US Leads Boycott of Nuclear Weapons Ban Talks", *Newsweek Pakistan, Observer*, March 28, 2017. http://newsweekpakistan.com/u-s-leads-boycott-of-nuclear-weapons-ban-talks/

with North Korea, more specifically the methodology to deal with its nuclear and missile program. During his maiden visit to East Asia, commencing from Japan, on March 06, 2017, the US Secretary of State, Rex Tillerson restated all ingredients of Obama administration's policy and projected it as new policy by Trump administration. The Washington Post, cynically though accurately, commented[8]:

> "Poor Tillerson. Someone forgot to tell him that a new administration promising a new approach it can't quite articulate is, in fact, the old approach. Previous administrations even used the same words, calling North Korea's actions 'unacceptable' and pointing to a different 'path'. And yet, even though President Barack Obama pledged to 'break that pattern' of North Korea getting away with belligerent behavior, and President George W. Bush compared the country's dictatorship to a toddler who throws food on the floor, the sad truth is that promising to break the pattern is part of the pattern, and we always pick up the food. We, too, could choose a different path. But we don't".

He dubbed the DPRK "an imminent threat" that needed "immediate attention. On the same day North Korea conducted another test of its ballistic missile. Tillerson's trip put forth the message that urgency of the issue was well home to the US. However, he neither elaborated the strategy of dealing with the threat nor gave a fair idea how differently President Trump would handle the matter from his predecessor who had relied on strategic patience while incrementally tightening the noose of sanctions, and may be hoping that one day North Koreans would come begging for an Iran like deal[9].

[8]Jeffrey Lewis, "Rex Tillerson's 'new approach' to North Korea sounds a lot like the old approach" Washington Post, March 24, 2017. https://www.washingtonpost.com/amphtml/posteverything/wp/2017/03/24/rex-tillersons-new-approach-to-north-korea-sounds-a-lot-like-the-old-approach/

[9]Ibid.

There is a need to re-examine the challenge that North Korea could pose in view of its recent nuclear and missile pursuits and put forward policy choices out of which China, USA, Japan and RoK could choose.[10] At the same time it is essential to ascertain whether the US really wants to put a stop to DPRK's nuclear advances or it wants to go easy, and step by step, keep using DPRK's nuclear actions to justify its own horizontal nuclear proliferation into Korean peninsula. It is important to determine whether the US would stop at first step after having deployed Terminal High Altitude Air Defence (THAAD) missiles[11] or would it let North Korea commit further nuclear "sins" until it completes redeployment of its own nuclear missiles in South Korea. It is also essential to assess whether DPRK would continue falling into such American trap or take some actions—may be only symbolic— to checkmate current double edged American strategy.

The Policy of the Obama administration is generally presumed to have, by and large, failed to coerce North Korea. American assessments have it that the DPRK has piled up sufficient fissile material for around 21 nuclear warheads[12] and that the Obama policy had presumably enabled DPRK to fast track missiles development with a reach up to RoK and Japan. However, majority of such American estimates are often exaggerated, for political reasons. A deliberate misinformation campaign keeps presenting speculative fantasies to create an impression that one day North Korean

[10]"North Korea: Policy Options to Confront an Imminent Threat", Stimson Centre, https://www.stimson.org/content/north-korea-policy-options-confront-imminent-threat

[11]Paula Hancocks and Joshua Berlinger, "Missile defense system that China opposes arrives in South Korea", CNN, March 08, 2017. http://edition.cnn.com/2017/03/06/asia/thaad-arrival-south-korea/index.html

[12]The Editorial Board,"Rex Tillerson Has Shown No Illusions About North Korea", New York Times, editorial , March 22, 2017 https://mobile.nytimes.com/2017/03/22/opinion/rex-tillerson-has-shown-no-illusions-about-north-korea.html.

missiles could hit the United States as well[13]. China's foreign minister, Wang Yi, has even predicted a DPRK-US "head-on collision"[14].

During his visit, the US Secretary of State gave an impression that the US was not inclined to talks with DPRK, and talked about pre-emptive military action if the threat level elevated beyond an unacceptable level. He indicated his intention to engage other countries, especially China, to help enforce UNSC sanctions to add pressure on the DPRK. Tillerson hinted at considering tougher sanctions like barring DPRK from the global financial institutions and even sanctioning Chinese banks which carry out business interactions with North Korea[15]. Such jingoistic posturing is not likely to cow down DPRK. Strategic land scape between the US and the DPRK is worsening. In a reaction to Tillerson's hard-line comments, DPRK brushed aside possibility of pre-emptive usage of military might and played down the impact of tougher sanctions.[16] Though Trump's approach may appear harder, he did not undo the previous administration's humanitarian donation to UNICEF intended for DPRK. Like his predecessor, Trump also views China as having unique leverage to make the DPRK give up its nuclear program[17]. China may view any forward movement on this and other issues, like trade, as tacit American recognition of Chinese public standing with regard to Tibet, Xinjiang, Taiwan and the South China Sea. And this might be an acceptable quid pro quo to the US[18].

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[13]The Editorial Board,"Rex Tillerson Has Shown No Illusions About North Korea", New York Times, editorial , March 22, 2017 https://mobile.nytimes.com/2017/03/22/opinion/rex-tillerson-has-shown-no-illusions-about-north-korea.html .

[14]Ibid.

[15]Ibid.

[16]Ibid.

[17]Jeffrey Lewis, "Rex Tillerson's 'new approach' to North Korea sounds a lot like the old approach" Washington Post, March 24, 2017. https://www.washingtonpost.com/amphtml/posteverything/wp/2017/03/24/rex-tillersons-new-approach-to-north-korea-sounds-a-lot-like-the-old-approach/

[18]The Editorial Board,"Rex Tillerson Has Shown No Illusions About North Korea", New York Times, editorial , March 22, 2017 https://mobile.nytimes.com/2017/03/22/opinion/rex-tillerson-has-shown-no-illusions-about-north-korea.html .

forever[20], and vow to never allow other counties to possess them. An increasing number of countries view this as an approach of "nuclear apartheid". The promises enshrined in the NPT for NNWS states have often been flouted by NWS. Having nuclear weapons is a symptom of which the underlying cause is the security concerns. Non-proliferation regimes want to eliminate the symptoms—that too selectively— without addressing the main drivers. Most of the time, international non-proliferation regime tries to impose a technical solution on political problems. NPT's approach of exclusiveness reduces it to a relic. A false impression is created about NPT's universal acceptance, while ignoring the fact that about half of its signatories are yet to ratify it.

Some of the cardinal provisions of the global non-proliferation regime are out rightly discriminatory in nature, selective in operational context and political in application. Its primary focus has been on freezing strategic status quo in favor of the countries declared NWS by the NPT. Since the institution of the "Manhattan Project" in 1942, various states have amassed over 1,875 tons of nuclear bomb making fissile materials. This stockpile is sufficient for churning out "tens of thousands" of colossally powerful bombs. As of now, around 25 state actors possess these materials, dispersed at "hundreds of sites", including some storage sites having doubtful security cover[21]. Data compiled by series of Nuclear Security Summits (NSS), held during the Obama Administration, brought to light the fact how, during the NSS processes, focus was kept on micro level while ignoring the real macro level issues. "At the beginning of the NSS process in 2010, national commitments on nuclear material removal and

[20]Ambassador Abdul Samad Minty, "Statement by Ambassador Abdul Samad Minty on behalf of South Africa, Subsidiary Body 1 (of NPT REVCON 2015), May 13, 2015. http://safricaun.ch/.

[21]Douglas Birch and R Jeffery Smith U.S. efforts to stem 'extreme threat to global security' far from complete", The Centre for Public Integrity, March 11, 2016, https://www.publicintegrity.org/2015/03/11/16845/us-efforts-stem-extreme-threat-global-security-far-complete.

protection efforts have generated important global security achievements, including reducing the number of countries that possess weapons-usable nuclear materials from 32 in 2010 to 24 by the end of 2015"[22]. As a result of persuasion, HEU had been completely retrieved from 19 nations[23]. The NSS had launched an international initiative to make-safe entire "vulnerable nuclear material around the globe within four years". It actually meant relocating these materials either to the US or to the US managed storage facilities elsewhere.

It has indeed been a gross underestimation of the assignment. Even after six years, the small job was just half done[24]. Double standards galore, during the same timeframe, President Barack Obama had "promised…to spend $80 billion over 10 years to maintain and modernize the nation's nuclear arsenal…" while the UK "announced contract awards of $595 million to begin design of replacements for its four nuclear submarines that carry Trident sub-launched ballistic missiles."[25] And at the same time "financial, technical and political problems" were identified which are responsible for impeding a long overdue US and Russian undertaking to extinguish 68 tons of excess weapon grade Plutonium[26]. Moreover, there is

[22]"The Nuclear Security Summit: Accomplishments of the Process", An Arms Control Association and Partnership for Global Security Report, Arms Control Association: March 2016. https://www.armscontrol.org/reports/2016/The-Nuclear-Security-Summits-Accomplishments-of-the-Process

[23]Sam Nunn, "Press conference on the release of the NTI Nuclear Materials Security Index", Nuclear Threat Initiative, January 11, 2012. http://www.nti.org/analysis/transcripts/Transcript-of-the-press-conference-announcing-the-release-of-the-NTI-Nuclear-Materials-Security-Index/

[24]The NSS Process: Letter or spirit? March 28, 2016. http://www.ipripak.org/the-nss-process-letter-or-spirit/#sthash.hg5UNn7z.dpuf (accessed on April 2016).

[25]Stephen Gowans, "Why UN Sanctions Against North Korea Are Wrong", March 7, 2016. https://gowans.wordpress.com/2016/03/06/why-un-sanctions-against-north-korea-are-wrong/.

[26]Douglas Birch, "US efforts to stem 'extreme threat to global security' far from complete, The Centre for Public Integrity, https://www.publicintegrity.org/2015/03/11/16845/us-efforts-stem-extreme-threat-global-security-far-complete.

hullabaloo over Japan's setting up of one of biggest plutonium factories of the world, whose production has no immediate use, and which is not sufficiently safe-guarded,[27] especially against a terrorist assault. Reports of India building a secret nuclear city, in Challakere, in 2015[28] for producing nuclear weapons and such like revelations expose the inadequacy of preventive measures and systems.

The IAEA held an "International Conference on Nuclear Security" in July 2013; 125 states alongside 21 organizations participated. By comparison, outreach of the NSS process was only about 50 countries and 4 organizations[29]. Global stockpiles of highly enriched uranium and plutonium are estimated to be 1,400 metric tons (MT) and 500 metric tons, respectively. Military stockpiles, which are outside the purview of the NSS process, account for over 80 percent of HEU and 50 percent of plutonium. Mostly these stocks are held by the US, Russia, and India. Only about 15 metric tons of HEU could be converted to LEU; positive point is that a number of reactors using HEU have been either shut down or converted to use alternative fuels[30].

Among the NSS summits' chief accomplishments are the recovery or elimination of more than 1,500 kilograms of HEU and separated

[27]Ibid.

[28]" India building secret city to produce nuclear weapons reports US-based Foreign Policy magazine", *The Indian Express* (New Delhi), December 15, 2015, http://indianexpress.com/article/india/india-news-india/india-building-secret-city-to-produce-nuclear-weapons-reports-us-based-foreign-policy-magazine/.

[29]K Iqbal, "The NSS process: letter or spirit?" *Nation*, March 28, 2016. http://nation.com.pk/columns/28-Mar-2016/the-nss-process-letter-or-spirit

[30]Rakesh Sood "Charting the Course for Nuclear Security: An Indian Perspective", *Carnegie India*, article March 23, 2016. http://carnegieindia.org/2016/03/23/charting-course-for-nuclear-security-indian-perspective/ivt0?mkt_tok=3RkMMJWWfF9wsRonu6zLe%2B%2FhmjTEU5z16eUqX663lMI%2F0ER3fOvrPUfGjI4IRMRkI%2BSLDwEYGJlv6SgFSrnAMbBwzLgFWhI%3D.

plutonium[31]—comparison with the remaining stocks indicates that the entire process has been an eyewash. According to the US, since the last summit in 2014, ten nations have removed or disposed of about 450 kilograms of HEU.[32] Obama, who made reduction of fissile materials around the world one of his top priorities as President, stated towards the fag end of his Presidency that anti-proliferation efforts have led to the elimination of enough HEU "to create 150 nuclear weapons." Compare it with 1500 operational warheads held each by the US and Russia alongside thousands of dormant warheads, which could be made operational on short notice. The United States also revealed for the first time, in more than a decade, its inventory of HEU. It declared ownership of 586 MT of HEU, in 2013, indicating a nominal decline from 741 MT back in 1996[33].

Despite decades' long uproar about the nuclear activities of North Korea and Iran, both were kept outside the NSS process. DPRK is a nuclear weapon country; it also has viable delivery systems in place. Both countries manage a number of nuclear facilities. By their non-invitation to any of these four summits, the NSS had put a serious question on its intent and purpose.

Moreover, in mid-October 2014, Moscow had conveyed to Washington that it would not participate in the NSS 2016. Russian foreign ministry had stated[34]:

> "We shared with our American colleagues our doubts regarding the added value of a forum that is planned to be

[31]No by Line, "The Nuclear Security Summit: Accomplishments of the Process", *Arms Control Association*, March, 2016. http://www.armscontrol.org/reports/2016/The-Nuclear-Security-Summits-Accomplishments-of-the-Process.
[32]Ibid.
[33]David Jackson and Jim Michaels, "Obama touts removal of highly enriched uranium", *The USA Today*, April 01, 2016. http://www.usatoday.com/story/news/2016/04/01/barack-obama-nuclear-security-summit/82489898/.)
[34]"Russia snubs US on nuclear summit", *News 24*, November 06, 2014.
http://www.news24.com/World/News/Russia-snubs-US-on-nuclear-summit-20141106

> held in the United States in 2016…We believe it is unacceptable to create a precedent of such outside interference into the work of international organizations[35] … Washington is trying to assume the role of the main and privileged 'player' in this field", and that the attempts by the NSS to 'impose' the "opinions of a limited group of states" on international structures, which was "unacceptable". The statement had also added that: "Russia would instead focus on its cooperation with the International Atomic Energy Agency (IAEA)."

Without Russia, a major power with largest number of nuclear warheads and fissile material stockpiles, the final communiqué of NSS 2016 indeed lost much of its steam.

Obama's non-proliferation credentials have also been questioned on numerous counts. For example, initially he showed willingness to ratify CTBT, and settle the matter of Fissile Material Treaty at the Conference of Disarmament (CD), but nothing worthwhile was accomplished on either issue during his presidency. Obama's concept of "Global Zero" also did not move beyond political point scoring.

Indo-US 123 Agreement is an example of how commercial and political motives override non-proliferation imperatives. Despite being a non NPT member, India has been allowed to keep eight of its nuclear power plants out of IAEA safeguards. America went overboard to lobby for NSG waiver for India, and now it is trying to convert the waiver to permanent membership. India's energy program is intricately linked with its weapon making program through an intermediary stage of Fast Breeder Reactors. India has neither accepted any restrictions on its FBR program nor on its indigenously fabricated power and research reactors. Its military-civil

[35]Staff Writers. "Russia snubs US on nuclear summit", *Space Daily* (Moscow) November 06, 2014.
http://www.spacedaily.com/reports/Russia_snubs_US_on_nuclear_summit_999.html .

separation plan is in terrible lag and, at times is out of sync with 123 Agreement obligations. On the basis of NSG waiver India has signed Uranium procurement agreement with over a dozen countries, which enable it to divert its entire domestic production of fissile material towards weapon making. IAEA has not yet regained its lost credibility when it acted as an American tool to prepare concocted reports about Iraq's WMDs. These fabricated reports led to invasion of Iraq by the US. Later, IAEA let pass a most relaxed Additional Protocol for India which enable India's smooth sailing for getting an NSG waiver. Due to these contradictions, the international non-proliferation regime has lost its credibility; it is perceived as an American tool facilitating the accomplishment of American strategic objectives under the garb of nuclear non-proliferation. It is also perceived as apartheid motivated drive to freeze the strategic status quo to the disadvantage of NNWS.

North Korea's Military Capabilities

Numerically, DPRK's armed forces are superior to South Korea by a wide margin.[36] As regards number of soldiers and weapons, North Korea enjoys almost a 2:1 advantage. But this abundance of men and material does not mean that its military capability is superior. "North Korea remains reliant on a predominantly obsolescent equipment inventory across all three services," is the finding of the "International Institute for Strategic Studies" (IISS) [37]. While, on paper, DPRK air force possesses 563 combat-capable aircrafts, in reality, "every one of these planes was grounded for a short period in 2014" because of problems with maintenance and serviceability[38].

[36]David Blair, "North Korea v South Korea: How the countries' armed forces compare", The Telegraph, (London) September 15, 2015.
http://www.telegraph.co.uk/news/worldnews/asia/northkorea/11603665/North-Korea-v-South-Korea-How-the-countries-armed-forces-compare.html
[37]Ibid.
[38]Ibid.

South Korea has 'lean and mean' military, benefiting from state of the art America supplied arms, munitions and weapon systems. Its inventory includes: over 2,000 tanks and hundreds of top of the line warplanes like F-5, F-15 and F-16, compatible with fighter and bomber roles. More importantly, South Korea nestles under the US security umbrella[39], comprising, inter alia 28,500 US troopers permanently lodged in South Korea. Hence, North Korea finds itself pitched against combined military might of South Korea and the US. This imbalance is the underlying cause for North Korean regime's anxiety to build a nuclear armory. North Korea harbors a compelling perception that it could only out-maneuver its rival by possessing a nuclear armory.[40].

DPRK's eagerness for nuclear arms dates back to the beginning of Cold War era. Progressively, it has achieved "nuclear fuel cycle" capability. It has reasonably mature uranium and plutonium enrichment programs which could produce requisite fissile material for two parallel streams of nuclear weapons. In May 2008, DPRK had declared that it roughly had 38.5 kilograms (kg) of weapons category plutonium gotten from spent fuel rods[41]. However independent appraisals vary. DPRK brought to light a uranium enrichment program, in November 2010, apparently focused on producing LEU for power reactors; reportedly DPRK has the capability of producing weapon grade HEU as well[42].

[39]Mutual Defense Treaty Between the United States and the Republic of Korea; October 1, 1953. http://www.jstor.org/stable/2213963?seq=1#page_scan_tab_contents).
[40]David Blair, "North Korea v South Korea: How the countries' armed forces compare", The Telegraph, (London) September 15, 2015. http://www.telegraph.co.uk/news/worldnews/asia/northkorea/11603665/North-Korea-v-South-Korea-How-the-countries-armed-forces-compre.html .
[41]"North Korea", Nuclear Threat Initiative, http://www.nti.org/learn/countries/north-korea/
[42]No by line, "Overview: North Korea, Nuclear Threat Initiative, (http://www.nti.org/learn/countries/north-korea/ , Last updated: March, 2016.

Most analysts estimate that North Korea has 10-20 crude atom bombs[43], based on the Yongbyon nuclear reactor's plutonium production, and assuming that North Korea must have conservative bomb designs, using 5-8 kilograms of plutonium in each weapon[44]. North Korea is also perceived to have a clandestine nuclear weapons program, probably mostly underground, using uranium centrifuges and perhaps other technologies. Some analysts estimate that if North Korea has more sophisticated bomb designs, using smaller amounts of plutonium for example, it could have over 100 nuclear weapons[45]—an exaggerated estimate by any standards.

North Korea has overtly tested five nuclear devices, and more tests may be in the offing. "If the US and other hostile forces persistently pursue their reckless hostile policy towards DPRK, and behave mischievously, the DPRK is fully ready to cope with them with nuclear weapons at any time," Kim Jong Un stated before last year's nuclear tests[46]. DPRK is now trying to master the ability to launch nuclear missiles from submarines; once done, its triad would be complete, and its nuclear weapons would also become immune from destruction by a pre-emptive attack.

North Korea abandoned the NPT in 2003 and carried out its first nuclear test on October 9, 2006; its estimated yield was less than a kiloton. On May 25, 2009, it carried out second test (2-7 kilotons). On February 11, 2013, North Korea reported its third successful nuclear test: device had lighter warhead and more force than the previous two tests had. South Korean experts estimated the output between 6–9 kilotons. However, the "German Federal Institute for Geosciences and Natural Resources" thought it was 40 kilotons. Fourth test came on January 6, 2016, involving a

[43]Peter Vincent Pry, " Hyper-proliferation in North Korea", *Washington Times,* March 3, 2016. http://www.washingtontimes.com/news/2016/mar/3/peter-vincent-pry-hyper-proliferation-in-north-kor/

[44]Ibid.

[45]Ibid.

[46]Jethro Mullen, "North Korea warns U.S. it's ready to use nuclear weapons 'any time'", CNN, September 16, 2015, http://edition.cnn.com/2015/09/15/asia/north-korea-nuclear-program/index.html

hydrogen device; claim is unsubstantiated as collected data points towards a 6-9 kiloton yield. Fifth nuclear test was conducted on September, 09 2016[47]. The Guardian made interesting comments[48]:

> "This year North Korea has engaged in a rapid-fire series of tests. In addition to the two nuclear tests, Kim has successfully launched an intercontinental ballistic missile, a road-mobile intermediate-range missile, a submarine-launched ballistic missile, upgraded medium- and short-range missiles, re-entry vehicle technology, a new solid-fuel rocket engine, and an improved liquid-fuel ICBM engine…Pyongyang has every technological, political and strategic reason to continue testing, and continued launches will only help perfect its technology… Korea watchers endlessly debate the timing and motivation of North Korean actions… Such debate is the lifeblood of analysts but is ultimately worthless. Instead, the focus should be on the North Korean actions – which are provocations, violations of UN resolutions or laws, or deadly attacks – rather than the array of possible regime motivations".

North Korea's long-range missile capabilities remain uncertain. For example, roughly within a month of testing its hydrogen bomb for the first time in 2016, DPRK claimed to have placed a satellite in geo-centric orbit for "peaceful purposes". The pursuit has continued. Such launches have received stern criticism as these are perceived as a cover story for performing an ICBM test[49]. DPRK has presumably made a new category ICBM—KN-14— that the US military says brings it closer to making missiles

[47]"North Korea and weapons of mass destruction", Revolvy, https://www.revolvy.com/main/index.php?s=North%20Korea%20and%20weapons%20of%20mass%20destruction

[48]"North Korea's nuclear test: what should the world expect next?", *Guardian*, September 09, 2016. https://www.theguardian.com/world/2016/sep/09/north-koreas-nuclear-test-what-should-the-world-expect-next

[49]Wikipedia, the free encyclopaedia, "North Korea and weapons of mass destruction". https://en.wikipedia.org/wiki/North_Korea_and_weapons_of_mass_destruction .

that could strike American heartland even with nuclear warheads[50]. KN-14 is an improvement over road launch-able version of KN-8 that made its debut in 2012. Experts say that KN-14 may have a reach between 5,000 to 6,200 miles; enough to strike Chicago and Toronto. Speedy making of KN-14 out of KN-08 indicates that DPRK could make even longer range missiles capable of reaching Washington. Moreover, launcher of Taepodong-2 missiles also functions as launchers for space satellites[51]. North Korea also boasts of having a tested version of a "warhead re-entry shield" that enables warheads to re-enter atmosphere while not burning out. Perfection of such missiles need numerous tests; hence DPRK has a reason to continue testing.

Soon after the KN-14 paraded for the first time on October 10, 2015, the commander of the US Northern Command, Admiral William Gortneyg, had told Congress: "I agree with the intel (intelligence) community that we assess that they have the ability, they have the weapons, and they have the ability to miniaturize those weapons, and they have the ability to put them on a rocket that can range the homelands"[52] . News of DPRK's new long-range missile came amid mounting tensions.

Each spring, massive joint US-South Korea military exercises are conducted. This event radiates tremendous emotional heat. In 2016, war games were the largest ever. Troops amassed south of the "Demilitarized Zone" had worked out a new simulated scenario into their training: a "beheading mission" involving Kim Jong Un[53]. Kim also reciprocated

[50]Bill Gertz, "Pentagon Confirms New North Korean ICBM", *National Security*, March 31, 2016. http://freebeacon.com/national-security/pentagon-confirms-new-north-korean-icbm/?mkt_tok=3RkMMJWWfF9wsRonu63LdO%2FhmjTEU5z16eUqX663lMI%2F0ER3fOvrPUfGjI4IRctlI%2BSLDwEYGJlv6SgFSrnAMbBwzLgFWhI%3D.)

[51]Ibid.

[52]Ibid.

[53]Carnegie Endowment for International Peace, "Talk of Kim Jong Un "Beheading Mission" Fans Korea, Tension", CBS News, March 10, 2016. http://carnegieendowment.org/2016/03/10/talk-of-kim-jong-un-beheading-mission-fans-korea-tension/iv1q

through an articulation to use nukes against the US and RoK. DPRK also posted a YouTube video on March 25, 2016, entitled "Last Chance", which animated a nuclear projectile hitting the American capital. Video closed with a rhetoric depicting "unhesitatingly strike … with nuclear [weapons] … US imperialists … if they move even a little bit." DPRK has also released a movie depicting a mock attack on President's palace in Seoul.

DPRK's case for Nuclearization

Presumably North Korea had joined the (NPT) on some assumption. The treaty commits treaty members "to pursue negotiations in good faith on measures relating to…nuclear disarmament [Article VI]." Such disarmament negotiations are not in sight.[54] In 2003, it instantly withdrew from the NPT invoking Article X of the treaty (it did not, however, serve a mandatory three months prior notice), and then pursued its nuclear weapon program. Therefore, North Korea presumes that it is not under any international compulsion for not using nuclear know-how for weapon making purposes. It is also of the view that the country is not in violation of any law barring the usage of rockets to place satellites into orbit. In its assessment, "no such law exists". Moreover, DPRK maintains the type of rocket it employed for satellite launching in March 2016 "was not a ballistic missile, (and) there are no laws which prohibit ballistic missile development, possession, or testing"[55].

According to North Korea, "its nuclear weapons are purely defensive". This may be a sound assessment. Its nuclear armory is too small, and delivering platforms rudimentary leading to uncertain end results, such a

[54]Stephen Gowans, "Why UN Sanctions Against North Korea Are Wrong", March 7, 2016. https://gowans.wordpress.com/2016/03/06/why-un-sanctions-against-north-korea-are-wrong/

[55]Ibid.

capability does not permit it to fire first nuclear shots and hope to survive the response. According to the Stimson Centre, "the United States threatened North Korea with nuclear destruction on six separate occasions. On one occasion the United States' top soldier, Colin Powell, warned North Korea that the United States could turn it into a 'charcoal briquette'."[56] Additionally, the US "issued a virtual declaration of war against North Korea in 2002, when the Bush administration declared the country part of an 'Axis of Evil,' along with Iran and Iraq"[57]. Soon after, Iraq was occupied by America and its allies on the basis of a fabricated report by IAEA about possession of WMDs by Iraq. And, following the Iraqi invasion, the US Undersecretary of State for Arms Control, John Bolton, had cautioned DPRK to "draw the appropriate lesson".[58]

NPT enshrines the principle that NWS won't use nukes for threatening or endangering NNWS. This motivated DPRK to join the treaty—to get rid of American nuclear threats. Yet, the US never stepped back from its self-acclaimed "*right of pre-emptive nuclear strike*". The US maintains that as and when US "interests" are in jeopardy, "it always has the right to use its nuclear weapons for pre-emptive purposes". Based on these concerns, a North Korean diplomat had defended his country's "decision to exit the NPT and embark on the development of nuclear weapons".

Rudiger Frank, a professor of "East Asian Economy and Society", at the University of Vienna, argued that "three signal events in the last two decades had underscored for Pyongyang that the decision it took to develop nuclear weapons was the right one"[59]. Firstly "Gorbachev's foolish

[56]Ibid.
[57]Ibid.
[58]Ibid.
[59]Rudiger Frank. "Socio-Economic Change in the DPRK and Korean Security Dilemmas: The Implications for International Policy", International Institute of Korean Studies, University of Vienna, October, 15-17, 2014. https://www.academia.edu/28473601/SocioEconomic_Change_in_the_DPRK_and_Korean_Security_Dilemmas

belief that his policies to end the arms race and confrontation with the West would be rewarded by respect for the Soviet Union"[60]; instead, his empire was destroyed piece by piece. The second instance was Iraq's Saddam Hussein[61]. Third was Libya's Qaddafi[62]. "None of this was lost on the North Koreans"[63]. The North Koreans do make a case, "not unconvincingly", that instead of enhancing chances of war, its "development of nuclear weapons has done the opposite; it has deterred the US drive to use military force to topple a government which rejects the US hegemony".[64] Furthermore, DPRK also argues t hat "More than 100 space vehicles are put into the orbit around the earth by carrier rockets in a year on an average worldwide, but only North Korea's satellite launch has been singled out for condemnation by the Security Council. Even India's 2012 test of a long-range ballistic missile had a military not a peaceful intent. Indian officials boasted that it had given them the capability of sending a nuclear warhead as far as China's capital, Beijing"[65]. India was not condemned. On the contrary, "Washington praised India's so-called solid' non-proliferation record", an altogether "incomprehensible tribute to a country that has never been party to the NPT". India is "estimated to have 90-110 warheads, and now has the ability to deliver them over long ranges"[66]. In order for its nuclear weapons to act as a deterrent against aggression, North Korea needs means to deliver a warhead. Since it has no long-range bombers, an obvious choice is an "intercontinental ballistic missile, of the kind India tested". [67]

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[60]Stephen Gowans ,"Why UN Sanctions Against North Korea Are Wrong", March 7, 2016, https://gowans.wordpress.com/2016/03/06/why-un-sanctions-against-north-korea-are-wrong/

[61]Ibid.

[62]Ibid.

[63]Rudiger Frank. "Socio-Economic Change in the DPRK and Korean Security Dilemmas: The Implications for International Policy"

[64]Ibid.

[65]Ibid.

[66]Ibid.

[67]Ibid.

DPRK's Defiance

DPRK has a track record of side stepping UN admonitions. Over half a dozen UNSC resolutions have been adopted since 2006, focused on sanctioning it over nuclear weapons program." DPRK, however, has since been continuously circumventing these[68].Adoption by the UNSC "Resolution 2270 (2016)"[69], through consensus, demonstrated unwavering resolve of the comity of nations to preserve the "global non-proliferation regime" and to target "DPRK's ability to finance its nuclear and ballistic missile programs"[70].

Resolution 1718(2006)[71], called upon DPRK to give up its future nuclear tests or launches and to re-join the talks on the subject[72]. For three subsequent years, DPRK ignored this resolution, thus prompting adoption of Resolution 1874, in 2009[73], that enhanced the scope of the ban on arms transfers to North Korea. It made it obligatory on UN members to "destroy any cargo going through their territories to North Korea that could help it expand its nuclear" (and missile) program (s). Remaining oblivious to it, for another four years, it launched a satellite in 2013, thus triggering Resolution 2087(2013)[74], blaming DPRK for flouting earlier resolutions, and

[68]"Breaking Down North Korea's History Of Breaking UN Resolutions", Future Female Leaders, http://futurefemaleleader.com/breaking-north-koreas-history-breaking-un-resolutions /.

[69]Security Council, "Security Council Imposes Fresh Sanctions on Democratic People's Republic of Korea, Unanimously Adopting Resolution 2270 (2016)", Meeting Coverage7638th Meeting, March 02, 2016.
lhttp://www.un.org/press/en/2016/sc12267.doc.htm.

[70]Burhan Ozbilici, " UNSC Resolution on N.Korea Upholds Non-Proliferation Regime – Mogherini", Assocoated Press, March 02, 2016.
http://sputniknews.com/asia/20160302/1035686209/mogherini-unsc-resolution-north-korea.html.

[71]United Nations Security Council Resolution 1718(2006).
http://www.un.org/press/en/2017/sc12850.doc.htm

[72]Victoria Badge, "Breaking Down North Korea's History Of Breaking UN Resolutions", Future Female Leaders, http://futurefemaleleader.com/breaking-north-koreas-history-breaking-un-resolutions/.

[73]United Nations Security council Resolution 1874 (2009).

[74]UNSC Resolution 2087(2013).
http://www.un.org/ga/search/view_doc.asp?symbol=S/RES/2087(2013)

stressed upon UN members to keep watching it. This Satellite launch indicated that DPRK had employed its ballistic missile wherewithal. The resolution stated that any recurrence would add to sanctions. UNSC Resolution 2094 (2013)[75] came in as DPRK tested another nuclear device which it blamed on UNSC Resolution 2087. Resolution 2094 reinforced sanctions, and called on members for "implementing and monitoring materials that go to North Korea from and through [their respective] territories"[76].

On January 06 2016, DPRK launched its second satellite alongside fourth nuclear explosion, using a "hydrogen bomb". This triggered UNSC Resolution 2270[77], enforcing compulsory inspections of cargo emanating from or destined to DPRK.[78] The US intelligence community's assessment has it that DPRK is not "willing to negotiate over eliminating its nuclear and ballistic missile programs, and is actively seeking international recognition as a nuclear power"[79]. It is an argument that apparently remains valid—though partially.[80] On September 09, 2016, DPRK tested it fifth nuclear device.[81] This time DPRK's "Nuclear Weapons Institute" declared:

> "The standardization of the nuclear warhead will enable the DPRK to produce at will and as many as it wants a variety of smaller, lighter and diversified nuclear warheads of higher strike power with a firm hold on the technology for producing and using various fissile

[75]UNSC Resolution 2094 (2013), http://unscr.com/en/resolutions/2094
[76]Ibid.
[77]UNSC R 2270(2016). http://www.un.org/press/en/2016/sc12267.doc.htm
[78]Victoria Badge, "Breaking Down North Korea's History Of Breaking UN Resolutions", Future Female Leaders, http://futurefemaleleader.com/breaking-north-koreas-history-breaking-un-resolutions/ .
[79]Ibid.
[80]Jeff Becker , "Winning a Game of Nuclear Chicken in Asia", Redux, March 03, 2016, http://www.realcleardefense.com/articles/2016/03/03/winning_a_game_of_nuclear_chicken_in_asia_redux_109098.html .
[81]Siegfried S. Hecker, "What to Make of North Korea's Latest Nuclear Test?" *38 North*, September 12, 2016. http://38north.org/2016/09/shecker091216/ .

> materials. This has definitely put on a higher level the DPRK's technology of mounting nuclear warheads on ballistic rockets". [82]

UNSC Resolution 2321(2016) was the response of international community. It expanded cargo inspections, restricted transportation option and expanded sectoral sanction and added new items to luxury goods ban. UNSC Resolution 2345 of March 23, 2017 further tightened the restrictions[83].

However, a deeper analysis provides an alternative insight. "The rationale of nuclear weapon states for maintaining a stock of nuclear weapons applies with even greater force to weaker states that may come under threat from stronger". neighbors' unmatchable conventional military might. "The smaller and weaker the state, the greater the need for nuclear weapons to make potential aggressors think twice before threatening or invading".[84]

Options for Regional Rivals: Restraint or Proliferation?

While South Korea and Japan would be more than happy to let the process of positive assurances by the US complete, Russia and China could come with some innovations to ward off American nuclear presence in their neighborhood.

Public opinion in South Korea is divided with regard to the presence of Terminal High Altitude Air Defence System (THAAD)[85]. While the military supports it, civilian population clusters poised to live nearby this system have concerns and they oppose it[86]. Opposition parties think that the matter should be debated and voted inside parliament when new political

[82]Ibid.
[83]UNSC Resolution 2345 (2017). http://unscr.com/en/resolutions/2345
[84]Stephen Gowans, "Why UN Sanctions Against North Korea Are Wrong?".
[85]ChoeSang-Hunully, "South Korean Villagers Protest Plans for U.S. Missile Defense System", *New York Times*, July 13, 2016.
https://www.nytimes.com/2016/07/14/world/asia/south-korea-thaad-us.html?_r=0
[86]Ibid.

leadership takes charge after the current uncertainty emanating out of President Park Geun-hye's trial is over[87]. "Under the circumstances, such a critical decision should be handled by the incoming government which will have full legitimacy and authorization", said Song Young-gil representing "Democratic Party of Korea"[88]. "It's not urgent," he said. "The more urgent (and) critical thing is how we can prevent (North Korean) nuclear testing, the sixth test", he added.[89]

RoK is a party to a number of non-proliferation treaties. It has evolved a policy for having a "nuclear-free Korean peninsula." It is also a member of MTCR, which limits its members not to have missiles of more than 500 km range and not more than 500 kg of payload. On account of increasing missile threat from DPRK, South Korea and the US agreed, in October 2012, "to extend the range of South Korea's missiles up to 800 km with 500 kg"; then the US helped South Korea get a waiver form MTCR for extending the range of its 500 kg payload missiles up to 800 km range.[90]

During the 1970s, Seoul gave up its nuclear weapons program. However, it possesses requisite knowhow to produce nuclear weapons.[91] For it North Korea's "advances in nuclear weapons technology" are "increasingly frustrating"[92] , which is encouraging the voices in South Korea like: "Why not us too?" This slogan has powerful supporters. This thought

[87]Kim Tong-Hyung, "Anger grows in South Korea over U.S. anti-missile system", The Associated Press, May 3, 2017. http://www.ctvnews.ca/world/anger-grows-in-south-korea-over-u-s-anti-missile-system-1.3395688

[88]James Griffiths, Alexandra Field and Pamela Boykoff, "Tillerson wades into a political minefield in South Korea", CNN, March 17, 2017. http://edition.cnn.com/2017/03/16/politics/tillerson-south-korea-thaad/index.html

[89]Ibid.

[90]No By line, "Learn Countries South Korea" *Nuclear Threat Initiative*, http://www.nti.org/learn/countries/south-korea

[91]Ibid..

[92]"Pyongyang Forecast: More Missiles Through May", *Defence One*, March 16, 2016. http://www.defenseone.com/technology/2016/03/north-korean-forecast-more-missiles-through may/126839/?mkt_tok=3RkMMJWWfF9wsRonu6zLcu%2FhmjTEU5z16eUqX663lMI%2F0 ER3fOvrPUfGjI4IRMdnI%2BSLDwEYGJlv6SgFSrnAMbBwzLgFWhI%3D .

process could lead to either asking the US to bring back its nuclear weapons which it pulled out of South Korea in 1992, or it could trigger RoK to develop its own nukes. A conservative daily "Chosun Ilbo" penned an editorial in January 2016[93], titled: "South Koreans Must Discuss Acquiring Nuclear Arms"[94]. Likewise, a "Korea Research poll", published a month earlier to this article, reported that 53 percent of interviewed South Koreans favored developing own nukes while 41 percent supported a "nuclear-free Korean Peninsula"[95]. However, options of having nuclear weapons have not found many sympathizers within the government and senior politicians, and the then President Park had "unequivocally dismissed it, saying that the whole peninsula should be free of nuclear weapons".[96]

South Korea has the American "nuclear umbrella". RoK has committed through a 1991 arrangement that "it would not manufacture, possess, store, deploy or use nuclear weapons"[97]. Yet some politicians are thinking loud as to why "South Korea shouldn't have its own weapons" program. "We can't borrow an umbrella from a neighbor every time it rains", stated national Assembly floor leader Mr. Won Yoo-cheol, a Saenuri party lawmaker. He added: "It's time for us to seriously consider an effective and realistic countermeasure for dealing with North Korea's nuclear capability".[98] It could take only one and a half year to enrich plutonium from RoK's nuclear power facilities into a functional weapon. "It would take time to construct a large-scale reprocessing facility, but it can be done [at a smaller scale] even now in laboratories," said Kim Seung-pyong, a

[93]Ibid.
[94]Anna Fifield, As North Korea Flexes its muscles the other Korea looks at nukes too, Washington Post (Washington DC), March 20, 2016 https://www.washingtonpost.com/world/asia_pacific/as-north-korea-flexes-its-muscles-the-other-korea-looks-at-nukes-too/2016/03/20/e2b1bb22-eb88-11e5-a9ce- ..
[95]Ibid.
[96]Ibid.
[97]" Joint Declaration of South and North Korea on the Denuclearization of the Korean Peninsula", Signed February 19, 1992. *Nuclear Threat Initiative*, last updated on October 26, 2011. http://www.nti.org/learn/treaties-and-regimes/joint-declaration-south-and-north-korea-denuclearization-korean-peninsula/
[98]Ibid.

professor of nuclear engineering.[99] Pointing towards DPRK's more frequent testing of missile and nuclear tests during the last one year, South Korea and the US had been publicly stressing the necessity of speedy deployment of the an anti-ballistic missile (ABM) system which could shoot incoming missiles from North Korea. Decision to this effect was taken by the Obama administration in July 2016; Trump has faithfully followed it through. [100] These deployments would weaken the deterrence and, in turn, compel North Korea to increase its warheads.

Japan possesses a facility for reprocessing plutonium. It could improvise it to make sufficient nuclear fuel for nuclear weapons within 12 weeks[101]. Japanese constitution does not prohibit it from possessing nuclear weapons, "contrary to popular belief", an official under Prime Minister Shinzo Abe stated on April 01, 2016[102]. This came as a Japanese Cabinet's reply to a parliamentarians inquiry, clarifying that the "nation could own and use nukes"[103], the daily Asahi Shimbun of Tokyo reported. But it also observed that "the government firmly maintains a policy principle that it does not possess nuclear weapons of any type under the three non-nuclear principles"[104]. Abe's government also referenced a 1978 address by then-Prime Minister Takeo Fukuda suggesting that nuclear weapons were constitutionally acceptable. "Even if it involves nuclear weapons, the constitution does not necessarily ban the possession of them

[99]Ibid.
[100]Patrick Trucker, "North Korean forecast more missiles through May", Defence One, http://www.defenseone.com/technology/2016/03/north-korean-forecast-more-missiles-through may/126839/?mkt_tok=3RkMMJWWfF9wsRonu6zLcu%2FhmjTEU5z16eUqX663lMI%2F0 ER3fOvrPUfGjI4IRMdnI%2BSLDwEYGJlv6SgFSrnAMbBwzLgFWhI%3D (accessed on April 03, 2016)
[101]Anna Field, As North Korea Flexes its muscles the other Korea looks at nukes too, Washington Post, March 20, 2016 .
[102]Ibid.
[103]Ibid,
[104]Ibid,

as long as they are restricted to such a minimum necessary level" [105], it read

China had urged the US and RoK to desist from THAAD deployment. According to Mark Tokola of Korean Economic Institute of America "China feels that THAAD's sensors could spy on China's military activities, instead of tracking North Korean missiles and jeopardize its capacity to respond to an attack on its own soil".[106] According to the US Forces in Korea, THAAD is "aimed solely at defending South Korea against missiles from North Korea".[107] Leading opinion in China has it that America is using DPRK as a scapegoat for justifying the deployment of THAAD system, which has the capability to degrade China's nuclear deterrence.[108] Russia has also been unhappy with the US since it deployed its missile shield in states like Poland and Czeck Republic[109]. New such addition in the region is not likely to please Russia. Back in 2015, Russia had joined China in voicing concerns against THAAD deployment[110]. Russia perceives such American actions as a well thought-out American strategy to encircle Russian deterrence[111]. On April 02, 2015, the then Russian ambassador to RoK had declared (then) proposed THAAD deployment on Korean peninsula "a security concern for the region". In an interview Mr Alexander Timonin, a former ambassador

[105]Julia Glum, "Japan's Constitution allows nuclear weapons says Abe's government after Donald Trump's comment", *International Business Times* (Tokyo), April o4, 2016. http://www.ibtimes.com/japans-constitution-allows-nuclear-weapons-say (link no-longer active).
[106]Paula Hancocks and Joshua Berlinger, "Missile defense system that China opposes arrives in South Korea", CNN, March 08, 2017. http://edition.cnn.com/2017/03/06/asia/thaad-arrival-south-korea/index.html .
[107]Ibid.
[108]Ibid.
[109]Karoun Demirjian, "Russia says it would match any U.S. military buildup in Eastern Europe", *Washington Post*, June 15, 2015. https://www.washingtonpost.com/world/europe/russia-says-it-would-match-any-us-military-buildup-in-eastern-europe/2015/06/15/7db91350-1361-11e5-8457-4b431bf7ed4c_story.html?utm_term=.3abfa082a897
[110]"China, Russia Angry About US THAAD In S Korea:, Sputnik News, July 28, 2016. http://www.amtvmedia.com/china-russia-angry-about-us-thaad-in-s-korea/
[111]John Power, "Russia: Korean THAAD Deployment Is a Security Threat", Diplomat, April 02, 2015. http://thediplomat.com/2015/04/russia-korean-thaad-deployment-is-a-security-threat/

to North Korea had stated: "What concerns us is that a US missile defence system could be placed in areas not far from Russia, adding to worries over THAAD's radar system or technology".[112]

In July 2016, Russian foreign ministry made another comment[113] :

> "We have been consistently warning that this decision would prove hazardous," but its warning was disregarded. THAAD deployment "undermines the strategic balance established both in and beyond the Asian-Pacific Region" and is capable of "whipping up tension in the region, which will make resolution of the complicated situation on the Korean Peninsula, including its denuclearization, ever more challenging."

And on actual deployment of THAAD, Russian Foreign Minister Sergey Lavrov said that it was disparate to the threat posed by North Korea. "The US global ballistic missile defence poses a deep risk to the security of the Asia-Pacific region", he added. Russian foreign ministry reacted:

> "Such a development is fraught with the most serious negative consequences for international and regional strategic stability... In the Asia-Pacific region, where an uneasy security situation already exists, a new, destructive factor has emerged that can further complicate the nuclear question and other problems on the Korean Peninsula and provoke a regional arms race involving missiles". [114]"

The Way Forward

The UN Security Council has passed several resolutions aimed at

[112]Ibid.
[113]Konstantin Asmolov, "Deployment of THAAD in South Korea: Reaction and potential consequences", New Eastern Outlook, July 17, 2016. https://www.sott.net/article/322388-Deployment-of-THAAD-in-South-Korea-Reaction-and-potential-consequences
[114]"US missile deployment in South Korea threatens regional stability: Russia", PressTV, Iran. March 10 2017. http://www.presstv.ir/Detail/2017/03/10/513762/Russia-Foreign-Ministry-US-THAAD-deployment-regional-stability

enforcing incrementally tougher sanctions on DPRK.[115] However, their efficacy remains to be ascertained. Despite enhancement of sanctions after every major event like nuclear or missile test and satellite launch, there are no signs of DPRK caving in. The Wall Street Journal has reported that "the United States had secretly agreed to hold talks with North Korea, just days before the North's nuclear test, although Washington rejected further negotiations following the test.[116] This suggests that the United States might be willing to hold peace treaty talks with Pyongyang on the condition that the discussions include denuclearization. As a starting point, one could suggest a declaration of non-aggression, and the US may announce suspension of its joint military exercises on Koran peninsula.

This would create a sense of security for DPRK, and it may go for halting nuclear and missile tests, which could lead to resumption of multilateral talks, under six partite or a modified format, for working out further details[117]. On 17 February, 2016 the Chinese foreign ministry has floated a very meaningful proposal "the issues of a peace treaty and denuclearization could be discussed at the same time under the framework of the Six Party Talks. In so doing, it is necessary for all sides to reaffirm that the end goals remain the full denuclearization of the Korean peninsula and the signing of a peace treaty"[118].

DPRK's nuclear program is mainly driven by its (in) security dilemmas. Hence all efforts must focus at alleviating DPRK's security concerns, rather than following an economic approach. New situation has emerged as DPRK has acquired new ones and upgraded its previous nuclear capabilities

[115]Sangsoo Lee and Alec Forss, "Time to rethink North Korea strategy", March, 17 2016 .
[116]Ibid.
[117]"North Korea open to talks but not with US 'brandishing a nuclear stick'", *The Guardian*, April 17, 2013. https://www.theguardian.com/world/2013/apr/17/north-korea-talks-us-nuclear-stick
[118]Sangsoo Lee and Alec Forss, "Time to rethink North Korea strategy", *East Asia Forum*, March, 17 2016 . http://www.eastasiaforum.org/2016/03/17/time-to-rethink-north-korea-strategy/.

"since previous agreements were inked". Thus all previous agreements may be revisited and reviewed on the basis of relevance.[119]

Understandably the current focus is on DPRK's nukes and missile tests. Each set of sanctions generates added pressure on the regime. But, if sanctions are not coupled with credible efforts for engaging DPRK, it may opt for digging its heels further. This requires political will and resolute diplomacy. Until then, each nuclear or missile test ups North Korea's stature. With the passage of time, it will be more difficult to coerce or entice it to denuclearize. Both the US and DPRK need a realistic policy review towards each other and engage into dialogue constructively.

Conclusion

A wide range of prudent strategists are urging "to bring North Korea back to the table" to find a viable solution to its nuclear issue.[120] It is also argued that arm-twisting DPRK to "foreign demands to denuclearize, could well mean more than humiliation and disgrace for the North Korean leadership"—hence such an approach is a non- starter.[121] Chinese President Xi Jinping has aptly pointed out that: "the solution of the crisis lies only and only in dialogue and consultation process". It's time for Washington to make a bold course correction with regard to its North Korea policy[122] like it did in the cases of Iran and Cuba. China enjoys influence on DPRK leadership—though this is diminishing. Washington could still seek the assistance of Beijing to bring the North on the table of negotiations. To

[119]Sangsoo Lee and Alec Forss, "Time to rethink North Korea strategy", March, 17 2016 .
[120]Nicholas Eberstadt, "Wishful Thinking Has Prevented Effective Threat Reduction in North Korea", Conservative News 24/7, March 07, 2016. https://conservativenews247.com/news/243310_wishful_thinking_has_prevented_effective_threat_reduction_in_north_korea .
[121]Nicholas Eberstadt, "North Korea nuclear threat reduction strategies need updating", March 7, 2016 http://www.nationalreview.com/article/432378/north-korea-nuclear-threat-reduction-strategies-need-updating .
[122]Christine Ahn, "To End North Korea's Nuclear Program, End the Korean War", *The Nation*, January 7, 2016 https://www.thenation.com/article/to-end-north-koreas-nuclear-program-end-the-korean-war/

create a helpful environment, the US will also have to come up with a package of worthwhile confidence-building measures showing a pathway towards lifting of sanctions and the evolution of a peace treaty for peaceful reunification of the two Koreas. Pre-conditioning talks with stopping nuclear and missile tests by DPRK would not lead anywhere. Strategy of sanctions has already hit the point of diminishing returns; pursuing it may not halt DPRK's nuclear and missile pursuits. It will surely unleash a humanitarian crisis and that too earlier than expected. It is a moment of reckoning for the DPRK leadership, a self-appraisal is in order to assess whether it is unwittingly doing American bidding, America may be interested to earn a request from South Korea to reposition the nukes which it withdrew in 1992. Under the current geostrategic environment in Asia-Pacific, which is focused on containing China, America is poised to add more and more military might to Asia-Pacific theatre. And, if that be so, then nuke rattling and missile firing DPRK suits America.

Book Reviews

India – Pakistan Nuclear Diplomacy: Constructivism and the Prospects for Nuclear Arms Control and Disarmament in South Asia

Mario E. Carranza (Rowman & Littlefield, 2016, 288 pages)

Reviewed by Attiq-ur-Rehman*

Scholarly well-organized and theoretically well-structured study of Carranza on South Asian nuclearization stays outside the Realist/Neo-Realist paradigm. It is mainly an attempt to provide a legitimate foundation to global social and normative environment and its unavoidable impacts on Indo–Pak nuclear race. Dr. Mario E. Carranza, a professor in the Department of History, Political Science, and Philosophy at Texas A&M University-Kingsville, tries to release the nuclearized South Asian subcontinent from theoretical monopoly of realism. The idea of debating differently Islamabad–New Delhi nuclear competition comes from Stephen Cohen's analysis, according to Carranza. Cohen views the nuclearized South Asia "is no longer merely a regional matter" and it has significantly become an international issue on the basis of good and bad news. The notion of good news refers to appropriate application of Nuclear Nonproliferation Norm (NNPN) on Indo – Pak nuclear diplomacy, and the bad news denotes the fragile status of nuclear taboo in the presence of enduring conflicted Islamabad – New Delhi interaction. The strategic antagonism, in this way, between both states has proclaimed them good rivals and bad neighbours.

Overwhelming regional and global impact of persistently swelling Indo – Pak nuclear capabilities has alarmed the strategic circles of international community, because the protracted hostility between unfriendly nuclear neighbours has fabricated a different, strategically new environment, contrary to cold war. The unanswered questions belong to the positively visualizing prospects of normalization and the peaceful settlement of Kashmir conflict parallel to establishing a South Asian version of arms control regime academically convinced Carranza to express his views in a book. Apart from Cohen, the second inspirational source of Carranza is

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President Obama's Prague speech which introduces the American way of looking at the future of international nonproliferation regime and the probable scope of disarmament in the twenty first century. Therefore, a combination of Cohen and Obama may be considered as being primary motivational sources of the book.

The writer's scholarly insight tries to justify the association of Constructivism to the swiftly changing dynamics of world politics. The principal argument of Constructivism explains and predicts the unavertable changes of international political system by highlighting the main shortcomings of both Realism and Neo-Realism. The inability of evidently unfolding and constantly changing attributes of international relations by Realism provided sufficient place for the growth of Constructivism. Chapter Three of the book mentioned few readings in support of Constructivism which appeared in post-Cold War environment when the proponent of Realism were unable to explain the peaceful end of four decades long US – USSR confrontation.

The book is divided into seven chapters, and every chapter carries a specific theme respectively while debating the core argument of the book. First chapter of the book provides a comprehensive survey of existing literature discussing the South Asian strategic conundrum and its effects on international nonproliferation regime generally and Indo – Pak enduring rivalry under nuclear shadows specifically. Alternatively structured Constructivist approach and its role in generating the New Delhi – Islamabad normalization which could ultimately lead both nuclear neighbours towards a nuclear-free region is the core theme of the seventh chapter. In short, the book starts debate from South Asian strategically perplexing security environment and ends in a final chapter on expectantly formulating a probable way forward to the problem of India – Pakistan ferocious nuclear journey.

The interesting discussion in second chapter speaks generally about South Asian strategic culture in which nuclear optimists and nuclear pessimists define their contrasting positions on the deterring role of nuclear weapons. A theoretical review of proliferation optimist – pessimist arguments and their South Asian directions covers the third chapter after briefly examining the contesting role of international relations theories.

Finally a well-built Constructivist framework to analyze the impacts of global social and normative attributes with reference to India – Pakistan nuclear diplomacy is central theme of fourth chapter. Fifth and sixth chapters analyze the role of external forces in introducing the prospects of normalization and substantially convincing the leaders across the border on averting their nuclear cannons instead of assisting them in improving their strategic muscles.

The book explicitly highlights the role of extra-regional powers in nuclear politics of India and Pakistan. The perpetual Indo–Pak enmity under American influence portrays a worrisome future of South Asia because of New Delhi – Washington strategic partnership. Indo – US civil nuclear deal along with deranged Dehyphenation policy of the US impartially reflects the prevailing dichotic standards of American foreign policy for engaging both nuclear powers of South Asia. The critical appreciation of Carranza's analysis over ongoing American regional policy for treating rival India and Pakistan differently in last two chapters unequivocally suggests few applicable ways to Washington for overcoming the disastrous consequences for American foreign relations with territorially adjoining nuclear rivals of the world. The continuation of present strategic interaction between Washington and Islamabad equivalent to Washington and New Delhi strategic alliance possess enough potential to cause an unthinkable Indo – Pak clash in future, according to Carranza.

The principal objective of Carranza is to offer a non-traditional theoretical foundation of viewing South Asian nuclear race. He overestimates Constructivism in identifying the role of international norms in shaping New Delhi and Islamabad's strategic posture. The writer adequately lacks or ignores the regional and domestic attributes of Indo – Pak conflict. No doubt, there are several other rational theories available to read the regional nuclear order of South Asia, but the historical record of Indo – Pak nuclear efforts could not be outrightly divorced from the Realist paradigm. The central theme of the book emphasizes purely the Constructivism and reluctantly ignores the other theoretical claims which hold their own legitimate rationales for studying nuclear arms race in India – Pakistan context.

Prior to India – Pakistan Nuclear Diplomacy, Carranza has written three books and published various research papers on different political aspects of international non-proliferation regime. His academic insight generally covers South American and South Asian regions. He always attempts to provide a nonconventional account of interesting arguments in his writings. The recent book is more theoretical and less argumentative to mainly understand the present status of strategic interaction of three powers, US, India, and Pakistan. By unambiguously challenging the conventional wisdom, Carranza intends to forecast the future of South Asian arms race parallel to irresistibly growing Indo – Pak toxic diplomatic communication.

Learning to live with the Bomb: 1998-2016

Brig. (R) Naeem Salik (Oxford University Press, 2017, 328 pages)

Reviewed by Beenish Altaf*

Brigadier (Retd) Naeem Ahmad Salik is a Senior Fellow at the Center for International Strategic Studies, Islamabad. He holds a PhD from the University of Western Australia. Brig. Salik helped establish Pakistan's Nuclear Command and Control after the May 1998 nuclear tests, and served as Director, Arms Control and Disarmament Agency at the Strategic Plans Division. He wrote two important books on Pakistan's nuclear discourse. The first book, titled *Genesis of South Asian Nuclear Deterrence: Pakistan's Perspective,* was published in 2009, and the second book, titled *Learning to Live with the Bomb: Pakistan: 1998-2016*, has been published recently in 2017.

The book comprehensively covers Pakistan's nuclear program its history, doctrines, command and control, nuclear safety and security, and export controls issues. It is a full scope study of how we learned about Pakistan's nuclear history stage by stage and issue by issue. Critically, the book majorly discusses the Post-Nuclearization era. The author remains on the safe side where it was easy for him to provide tangible evidences. The chapters on evolution of nuclear doctrine and command and control are the most important in the book. All other chapters are also important in correcting the suspicions and apprehensions about Pakistan's nuclear program, and about its role as a responsible nuclear weapons state. But the essential point remains that Pakistan has a bomb and now the question: is what purpose does it serve?

On Indian nuclear policies, Dr. Salik points out the BJP stance that India should give up its policy of NFU option, which India subscribed to in the past. He is of the view that India had been challenging the credibility of Pakistan's nuclear deterrence through prism of doctrinal as well as technological developments. He discusses Pakistan's learning curve as a nuclear power and says that Indian moves like the recent chatter about transformation from a

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passive NFU to pre-emptive disarming strikes had kept Pakistani strategists on their toes.[1]

He has stressed the learning factor, namely that we have not only got to study our side of the game, we also have to watch out what is happening on the other side so that we learn from there also and reform our own processes as well. He endorses Pakistan's accelerated learning process because of continually remaining under international scrutiny but cautions at the same time that though "learning has been substantive, there is no room to be complacent". Since Sept 2001, a lot of literature is coming out on the issues of nuclear safety and security. Pakistan has demonstrated strong learning in the field of nuclear safety and security measures to secure radioactive material, nuclear weapons, fissile materials and nuclear installations from terrorists groups, and illegal use. The author has also touched upon the issues of export of nuclear technology at international level.

There is much that could have been presented from Pakistan's perspective. National narrative could have been explained in a much detailed way. Pakistan discards the victim card and takes pride for the steps it took to develop its nuclear program. Nuclear learning to post-acquisition phase could have been discussed with many other elements, for instance, what necessitated those nuclear developments that Pakistan underwent and what led to the crisis that took place in nuclear South Asia.

The book indirectly narrates issues of physical reliability and robustness, which are not much worked. The author could have gone directly with references as to where the debate of high reliability stood at present. Being nuclear optimistic, Pakistan has a pride to be a nuclear power but from where and how these nuclear technologies are coming, and where Pakistan is heading should also have been discussed. The volume presents a comprehensive picture of learning and problems of the organizational culture; however, the individual perspective and what could interest the international audience is missing.

[1]"Disclosure about Indian N-doctrine confirms worst fears," *Dawn,* April 1, 2017, https://www.dawn.com/news/1324135

Nevertheless, the book is an excellent piece of work as there is a lot this book offers while addressing some important questions that have been raised about Pakistan's nuclear program from time to time. The book, *Learning to Live with the Bomb: Pakistan: 1998-2016* provides useful material for research on the subject, and identifies the gap in the backdrop of academic discourse and theoretical framework in Pakistan's nuclear program. For those who want to examine deeply as to how Pakistan handled various facets of its nuclear weapons program, the book is of immense value.

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