PRINCIPAL CONTENTS

JULY-SEPTEMBER 2017

PERSONALISED HOME LOANS FROM HDFC

TO MATCH YOUR INDIVIDUAL HOUSING DREAMS

We at HDFC have anticipated your needs long before you even felt them. So we are ready with solutions to almost every housing finance requirement. HDFC offers you a wide range of loan options to choose from, depending on your need. Whether it is a **Housing Loan**, a **Home Improvement Loan**, a **Home Extension Loan**, a **Home Equity Loan** or a **Loan for purchasing land for housing**, rest assured we'll make it easy for you. What's more, there are Special Loans for **Professionals** and **NRI's** too. Fixed and variable interest rate options, low interest rates, tax benefits, easy repayment schemes... the list goes on and on.

*Contact HDFC's office to choose a loan
that will make your housing dreams come true.*
Call HDFC Home Line **4111 5111.**   *Apply online at* **hdfc**.com

**HDFC
HOME LOANS
WITH YOU, RIGHT THROUGH**

New Delhi HDFC Home Line - 41115111. Branches at: Lodhi Road, Dwarka, Rohini, Vikas Puri, Faridabad, Gurgaon, Gurgaon-Sec.14, Noida, Ghaziabad, Vaishali Ghaziabad, Meerut, Agra, Gwalior, Jammu

**UNITED
SERVICE
INSTITUTION
OF INDIA**

for

*the furtherance of
interest and knowledge
in the art, science and
literature
of National Security
in general and of the
Defence Services
in particular*

(ii)

(iii)

USI STAFF APPOINTMENTS

Director

Lt Gen PK Singh, PVSM, AVSM (Retd)

Dy Director & Editor	*Dy Director (Adm)*	*Deputy Director (Research)*	*Chief Instructor*	*Secretary and Editor, CAFHR*
Lt Gen Chander Prakash, SM, VSM (Retd)	Maj Gen PK Goswami, VSM (Retd)	Maj Gen BK Sharma AVSM, SM** (Retd)	Maj Gen SB Asthana, SM, VSM (Retd)	Sqn Ldr RTS Chhina, MBE (Retd)
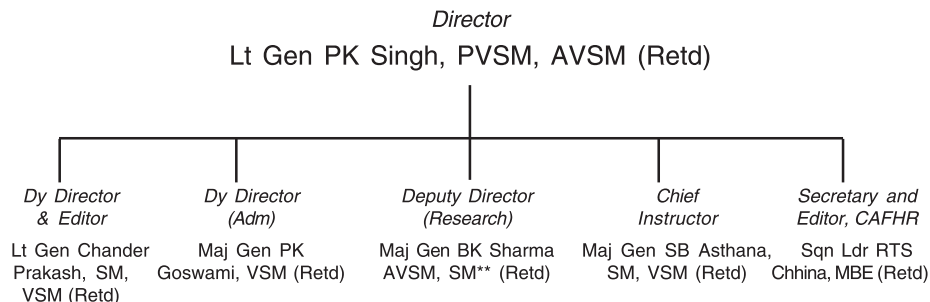
AUDITORIUM / SEMINAR ROOMS RATES W.E.F O1 JANUARY 2017

	Full Day Upto 8 hrs	Half day Upto 4 hrs	Addl Per hour	Addl for Sat/Sun/Holiday	Security Deposit
Auditorium	28,000	18,000	3,500	3,500	5,000
Seminar Room-1	15,000	10,000	2,500	2,500	3,000
Seminar Room-2	8,000	5,000	2,000	2,000	1,500
Seminar Room-3	5,000	3,500	1,500	1,500	1,500
Seminar Room-4	8,000	5,000	1,500	1,500	2,000

RATE OF SUBSCRIPTION FOR USI JOURNAL

The USI Journal has been digitised and can be accessed at www.usiofindia.org. Dispatch of hard copies to the members has been discontinued, however, Formation Headquarters, Units, Messes, Libraries and individuals can subscribe to the USI Journal at the rates as under :-

(a) Single copy   - Rs 300/- plus Rs 40/- postal/ packing charges

(b) Yearly subscription   - Rs 1100/- plus Rs 160/- postal/ (four issues)   packing charges

(c) There is no life time subscription, however, 20 years subscription can be subscribed for Rs 20,000/- including postal charges.

Editor

USI CORRESPONDENCE COURSES

1.   The USI conducts correspondence courses for DSSC – Army and Navy, TSOC (Army) Entrance Examinations and Promotion Examinations Parts B and D.

2.   The Courses have been remodelled to make it more interactive and the admission procedure has been simplified to make it user friendly.

3.   Membership of the USI is mandatory to join any correspondence course.

4.   Schedule of Correspondence Courses 2017-18.

Courses	Commencement of Course	Date of Exam	Cost All Subjects	Cost Per Subject
(a) DSSC (Army)	3rd Week of Nov 2017 Registration Open for 2018	Sep 2018	Rs 6000/-	Rs 1800/- for Tac B Rs 1400/- for MH Rs 1000/- each for CA & SMT Rs 900/- each for Tac A, and Adm & ML
(b) DSSC (Navy)	3rd Week of Dec 2017	Jul 2018	Rs 1000/-	Rs 1000/-
(c) Part B	2nd Week of Dec 2017 Registration Open for 2018	Jun 2018	Rs 2500/-	Rs 700/- for MH Rs 600/- each for Tac and CA Rs 500/- each for Adm & ML
(d) Part D	2nd Week of Apr 2018 Registration Open for 2018	Oct 2018	Rs 3000/-	Rs 900/- for MH Rs 700/- for CA Rs 600/- each for Tac, Adm and ML

5.   **Contact Programmes.** Three contact programmes for DSSC/Army-2018 have been planned. Dates are : **18-23 Jun 2018, 02-07 Jul 2018** and **16-21 Jul 2018.** Separate test papers will be set for each programme. Fees – Rs 4000/- per contact programme.

6.   Correspondence courses for Special to Corps subjects are not conducted.

7.   **Mode of Payment.** Local/multicity cheque or bank draft payable at New Delhi in favour of *Director USI of India* or cash or Bank Transfer.

8.   Contact address   :   Rao Tula Ram Marg (Opposite Signals Enclave)
                                        Post Bag No 8, Vasant Vihar PO, New Delhi-110057

9.   Email/Website   :   **ci@usiofindia.org** / **www.usiofindia.org**

10.   Visiting hours   :   1000 AM to 1230 PM⎫ Monday to Friday
                                    1400 PM to 1630 PM⎭

11.   Telephones   :   Chief Instructor - 26146390
                                Course Section - 26148682, 26146756 Extn 210

12.   Prospectus and Forms : Available on Website and from Course Section.

MEMBERSHIP FEES

	Entrance	Subscription Three years	Total
Life Membership			
Armed	3000	9000	12000
Civilian	3000	12000	15000
Ordinary Membership£			
Armed	1000	3000	4000
Civilian	1000	4000	5000
Associate Membership£	3000	5000	8000
Course Membership*	900	600	1500
See USI website : www.usiofindia.org for details and form			

£ **(For 3 years commencing 01 Apr)**
* **(One Year for One course only)**

ARTICLES FOR USI JOURNAL

1. Members are welcome to forward original articles pertaining to national security and defence matters for publication in the USI Journal. **Articles should preferably not exceed 2,500 words.** These should be forwarded in double space on A-4 size paper, along with a CD/DVD as a Word document. The articles should be sent to the Editor, United Service Institution of India, Rao Tula Ram Marg, Post Bag No. 8, Vasant Vihar PO, New Delhi-110057. Alternatively, articles may be sent through e-mail on dde@usiofindia.org. The author should render a certificate that the article has neither been published in print or online, nor has it been offered to any other agency for publication. The Editor reserves the right to make alterations.

2. It is mandatory that the author furnishes complete details of the book/journal referred to in the article as end notes. This should include full name of the writer of article/book referred to, title of book/article, journal in which published (in case of articles); issue details, and page numbers. A guide to writing endnotes is given on the next page. Besides endnotes, if the author so desires, a bibliography may also be included, though not mandatory.

3. Abbreviations if any, should be used in their expanded form the first time and indicated in brackets.

4. The full name and address of the author along with a brief Curriculum Vitae should be given. Serving officers are advised to follow the prevailing Services instructions for publications of their articles.

5. The author will receive a copy of the issue of the Journal in which his/her article appears along with three offprints. A suitable honorarium will also be paid after the article is published.

GUIDE TO WRITING ENDNOTES

1.   Endnotes are notes added to the main body of a paper or an article, in which the author directs readers to sources referred to or to add extra comments of his or her own. Endnotes are placed at the end of the paper/article. A superscript number ([1,2,3,4....]) at the end of the sentence signals the reader to look for the corresponding endnote at the end of the article. The endnotes should be numbered consecutively, starting from '1'. Citations should include the author's name, title of the book (in italics), publishing information (in parenthesis) and pages consulted, all separated by commas. For example :-

> [1] Michael Baxandall, *Painting and Experience in Fifteenth-Century Italy : A Primer in the Social History of Pictorial Style,* (Oxford University Press, London, 1988), p. 45.
>
> [2] Lina Bolzoni and Pietro Corsi, *The Culture Memory,* (Bologna : Societa editrice il Mulino, 1992), p. 45.

2.   Use of *Ibid., op. cit.,* and *loc. cit.*

> *Ibid.* refers to the immediate preceding reference; *op. cit.* refers to the prior reference by the same author and *loc. cit.* is used instead of *op. cit.* when reference is made to a work previously cited and to the same page in that work. For example :-
>
> [4] R Poirer, *Learning Physics,* (Academic, New York, 1993), p.4.
>
> [5] *Ibid.,* p. 9.
>
> [6] T Eliot, *Astrophysics,* (Springer, Berlin, 1989), p. 141.
>
> [7] R Millan, *Art of Latin Grammar,* (Academic, New York, 1997), p.23.
>
> [8] Eliot, *op. cit.,* p.148.
>
> [9] Eliot, *loc. cit.*

3.   Where websites have been used to access information, the complete web address of the website should be cited, followed by the date the website was accessed by the author. For example :-

> http://www.fordham.edu/halsall/mod/1497degama.html. Accessed on 06 January 2016.

Additions to the USI Library for the Quarter Ending September 2017

During this period a total of 45 new books have been added. Details of the new book are available on USI Website.

Research Projects

Members interested in undertaking research projects may submit research proposals to USI (CS3 / CAFHR). At present, six chairs have been instituted in CS3; namely, Field Marshal KM Cariappa Chair, Admiral RD Katari Chair, Air Marshal Subroto Mukherjee Chair, Prof DS Kothari DRDO Chair, Ministry of External Affairs Chair, Flying Officer Amandeep Singh Gill Chair and two Chairs in CAFHR namely; Maharana Pratap Chair and Chhatrapati Shivaji Chair. Copies of the Rules for Award of Fellowship Grants and Conduct of Research are available on the USI Website.

Rate Card – Advertisements in Journal

	Black and White	Coloured
Full Page	Rs. 2,500/-	Rs. 12,000
Four Consecutive Full Pages	Rs. 8,000/-	Rs. 44,000
Half Page	Rs. 1,500/-	Rs. 12,000
Four Consecutive Half Pages	Rs. 5,000/-	Rs. 44,000

New USI Members

During the period 01 Jul – Sep 2017, 29 registered as New Life Members ; 06 Ordinary Members renewed their membership and 16 registered as new Ordinary Members.

Course Members

During the same period, 349 Officers registered for Course Membership.

CONTENTS

July-September 2017

NOTE

The views expressed in the Journal are the opinions of the contributors and the Editor, and are not necessarily official views or those of the USI Council.

USI RESIDENCY
SPECIAL ACCOMMODATION PACKAGES
FOR DEFENCE SERVICES OFFICERS ON DUTY

1.   **Gen Officers (and equivalent).**

Rs. 8250/- per day inclusive of taxes for an AC apartment and all meals. There are no charges for accompanying spouse.

2.   **Lt Col To Brig (and equivalent).**

Rs. 4950/- per day inclusive of all taxes for Deluxe AC room and all meals, on single occupancy basis

3.   **Capt/Maj (and equivalent).**

Rs. 2550/- per day inclusive of taxes for Standard AC room on single occupancy basis.

Package Includes

(a)   Breakfast.

(b)   Tea/coffee maker in rooms/apartments.

(c)   Bottled mineral water in room (2 bottles).

(d)   Use of Recreation Room with Pool Table.

(e)   Wi-Fi connectivity for 24 Hours.

(f)   Use of Cyber Café.

(g)   Use of Gym.

(h)   Laundry (2 pieces)

Terms

(a)   Officers would be required to book their accommodation at USI Residency by post or e-mail at least 24 hours in advance and obtain a confirmation.

(b)   Check-in time is 1300 hours and the check out time is 1200 hours.

(c)   Payment in advance or on arrival.

For Reservations

Residency Resorts Pvt Ltd, USI Premises
Rao Tula Ram Marg, Opposite Signals Enclave
New Delhi-110010
Ph : +91-11-2615 5551/52/53 – 91-11-2615 1228/29/30
M : +91-9999889180 to 95
Email : residencyresorts@gmail.com
Website : www.residencyresorts.in

Editorial

The 21st Colonel Pyara Lal Memorial Lecture on the subject 'Transforming the Indian Armed Forces for Meeting Future Security Challenges' was delivered by Lieutenant General Vinod Bhatia, PVSM, AVSM, SM (Retd) former Director General of Military Operations and presently the Director of Centre for Joint Warfare Studies (CENJOWS) on 20 Sep 17.   Military transformation is not an end in itself, but is much needed necessity to address the emerging and long term challenges. Many competing requirements have to be taken care of and, therefore, there are limitations to what can be accomplished. The bottomline is that the Armed Forces have to match, if not overmatch, the opponent's capabilities and be a deterrent to any of the adversary's nefarious designs. Modern technology can be a good tool, but the issue is 'what is available and affordable'.   Shekatkar Committee, of which Lieutenant General Bhatia was a member, has been a step in the right direction taken by the Government of India to enhance the combat potential of the Indian Armed Forces and re-balance defence expenditure. 65 out of 99 recommendations of the Shekatkar Committee pertaining to the Army have been accepted. The implementation of the recommendations may be spread over a period time but cannot be selective.

The next article 'Trajectory and Future of India-Bangladesh Relations' is text of the talk delivered by His Excellency Syed Muazzem Ali, the High Commissioner of Bangladesh to India, at the United Service Institution of India (USI), New Delhi on 06 Sep 2017. The article outlines the historical and emotional bonding, and the challenges in relationship that exist between the two countries. It provides good insight into the Bangladesh's perspective of the relationship between India and Bangladesh on wide range of contemporary issues such as security and terrorism, energy, bilateral and sub-regional connectivity, trade, commerce and the water sharing arrangements. Notwithstanding the fact that the Teesta water sharing issue could not be resolved during the recent visit of the Honourable Prime Minister of Bangladesh Sheikh Hasina to India from 07 to 10 April this year, the bilateral ties between India and Bangladesh are now at a new height. The fact that eleven agreements and twenty-four Memorandums of Understanding (MoUs) were signed during the visit encompassing important sectors such as security, trade, energy, defence and civil nuclear issues etc., are a testimony to this. The efforts on part of Prime Minister Narendra Modi and Prime Minister Sheikh Hasina are aimed at making it a win-win situation for both the neighbours with common heritage, cultural and historical linkages.

Operations by highly trained and motivated troops behind the enemy lines have always been an essential tool of warfare. Air dropping of troops and equipment behind the enemy lines provides the commanders a potent offensive capability that can put off an adversary's defensive plans and preparations. Lieutenant General PC Katoch, PVSM, UYSM, AVSM, SC (Retd), in the next article 'Airborne Operations – Imperative Future Strategic Capability' highlights the value of Airborne Forces. The author underlines the operational, strategic and political significance of the capabilities of the Airborne Forces and makes a strong case for the retention of Parachute Battalions and does not want these to be confused with the Special Operations Forces (SF Units). The fact that the success of the Airborne Forces is greatly dependent on availability of intelligence, air superiority, neutralisation/suppression of enemy's air defence and availability of aircraft etc. is acknowledged by the author.

An adversary's strategy and security objectives need to be studied as these have significant implications for conceptualising and evolving own policy responses. Once the adversary's military strategy is correctly understood, the political, diplomatic and military responses to neutralise it can be accordingly evolved. Chinese military strategists and think tanks periodically undertake this exercise with respect to India and their other adversaries. In

the next article 'Chinese Military Perspective on the Indian Military Strategy', the author, Brigadier Iqbal Singh Samyal, who has been India's Defence Attaché in Beijing, highlights that the Chinese military's perspective is not divorced from the overall strategic environment. People's Liberation Army, being an important pillar of the Chinese political structure, has great influence on building perceptions about Indian military strategy. It is interesting to note that the Chinese analysts are of the view that India's strategic intent vis-à-vis China is to "win a high technology limited conventional war under conditions of nuclear deterrence". In their view, India's strategic objectives are primacy of politics, favourable military employment that facilitates compromise on favourable terms. Hence, it may be incorrect to be of the view that the Chinese perceptions of the Indian military strategy are coloured by historical biases or are subjective.

Owing to China's rapid economic growth, its crude oil consumption has multiplied over the years. Like many other nations, Chinese domestic supply can be increased only modestly. Increasing demand for oil will have to be met mainly through imports. Thus, energy diplomacy has become more and more important for China's energy security. The next article in this issue of the Journal i.e. 'China's Energy Diplomacy and Changing Contours of Security Structure in the Indian Ocean: New Scramble for Sea Power' by Ms Dhanwati Yadav seeks to illustrate how, India and China, following their swelled economies and military modernisation, has triggered a new wave of power projection in the Indian Ocean. She cautions that the People's Liberation Army Navy (PLAN) is emerging as a serious challenge to the Indian Navy in the Indian Ocean Region. The author makes a case for upgrading of India's naval assets quantitatively and qualitatively, and for external diplomatic balancing by deepening ties with island nations in the Indian Ocean Region to secure India's long term strategic national interests.

The Treaty on the Prohibition of Nuclear Weapons also referred to as the Nuclear Weapons Ban Treaty was passed in the United Nations General Assembly (UNGA) on 07 Jul 2017, and signed by 50 nations on 20 Sep 17 at a ceremony held at the United Nations Headquarters, New York, during the period of the recent UNGA session. The Treaty is the product of increasing concerns over the risk posed by the continued existence of nuclear weapons, including the catastrophic humanitarian and environmental consequences of their use. This is the first legally binding agreement which prohibits the proliferation of nuclear weapons with an ultimate objective of their total elimination. It is a comprehensive treaty that prohibits the development, testing, production, stockpiling, stationing, transfer, use and threat of use of nuclear weapons, as well as assistance and encouragement to prohibited activities. For the nuclear armed states signing the Treaty, it provides for a time-bound framework for negotiations leading to the verified and irreversible elimination of their nuclear weapons programme. The Treaty has been opposed by some world powers. The United States, United Kingdom and France did not take part in the negotiations of the treaty and do not intend to sign, ratify or ever become party to it. Japan, the last country to be hit with a nuclear weapon, did not sign on the Treaty either. Dr Roshan Khanijo, in the next article 'Effectiveness of Prohibition of Nuclear Weapons Treaty', examines the current nuclear environment as it prevails and amplifies the characteristics as well as the legal aspects of the Treaty. She highlights the weaknesses of the Treaty and argues that it is not the lack of treaties but the global will that prevents their implementation. While India should support steps taken for global peace, India's response and approach has to be pragmatic and realistic, based on geostrategic realities and her national security objectives and needs.

In the next article 'Nuclear Instability in South Asia: Is Someone Shaping the Narrative', Colonel Inderjit S Panjarath, SM brings out that there is an attempt by Western think tanks and some others to shape a narrative that India is drifting away from its nuclear doctrine of "No First Use" of nuclear weapons to "Strike First".   There is also an attempt by some with vested interests to sow the idea in the minds of the international bodies such as the Nuclear Supplies

Group (NSG) that India's fissile material is unsafe. The author in the said article counters the narrative, but flags that the concerns being expressed should not be ignored and cautions that the authorities must take note of the loopholes and vulnerabilities and suitably address the issues being raised.

The international community is striving hard to build norms for cyberspace so that the cyber security problems can be mitigated. Robust cyber security norms are required to prevent cyber-attacks. There are three main reasons to have robust cyber security norms. Firstly, and very obvious is that the information and communication systems are complex and have subtle technical weaknesses. Secondly, it is often challenging to identify a sophisticated attacker, for the reason that his location could be anywhere on the globe. Lastly, verification is difficult in cyber space as the weapon is also software. In the next article 'Norms in Cyberspace: United Nations Group of Government Experts and Diplomatic Stasis', the author Ms Natallia Khanijo highlights the efforts being made by several global bodies at the multilateral level to regulate the cyberspace. One of these bodies is United Nations Group of Government Experts (UNGGE) that is deliberating on the "Developments in the Fields of Information and Telecommunications in the Context of International Security". There are challenges of constitution of the world body with regards to its geographical representation and also Information and Communication Technologies (ICT) security architectures that are predominantly western and based on western legal framework. India as an Information Technology superpower is playing an active role in the UNGGE and attempting to bridge the gap between polar ideological stances.

The most notable feature of the Defence Procurement Procedure 2016 (DPP 2016) is the introduction of a new procurement category i.e. "Buy (Indian Designed, Developed and Manufactured)" also known as "Buy (IDDM)". This category stipulates that procurement of products from Indian vendors that are indigenously designed, developed and manufactured should have at least 40 per cent indigenous content. If the product is not designed and developed indigenously, it would then have to have 60 per cent indigenous content; objective being that "Buy (IDDM)" should encourage indigenous design and development. Mr Chandrika Kaushik, Colonel Vijay Jain and Ms Jumi Hazarika Kakoty (all from the Defence Research and Development Organisation), in the next article authored by them 'Defence Procurement Procedure 2016: A Perspective on Indigenous Design and Development', provide their perspective of DPP 2016. They have carried out a status and reality check on self-reliance. In their view, the efforts of the Government of India towards the "Make in India" initiative is a welcome step as it attempts to put in a place a system that should also enhance the Indian Research and Development/Defence Public Sector Units' in-house production capabilities.

Finally, recognising the urgent need to address the emerging cyber security threats and to do our bit towards their neutralisation, USI organised a talk on "Cyber Security Issues in the International Domain" by Dr Gulshan Rai, the National Cyber Security Coordinator on 12 Jul 17 which was followed by a training capsule on Cyber Security in partnership with InnovatioCuris (IC) from 25 Jul to 26 July 201. A total of 22 nominated professionals from the Army, Navy, Air Force and BSF were imparted hands on training to deal with cyber-attacks. The USI is in gratitude of the three Services for their overwhelming support and participation in these events. In future too, we plan to undertake many such initiatives and look for support from our esteemed members.

Read on ………..

Transforming the Indian Armed Forces for Meeting Future Security Challenges*

Lieutenant General Vinod Bhatia, PVSM, AVSM, SM (Retd)@

General PK Singh, Director United Service Institution of India (USI), General VN Sharma, former Chief of Army Staff, distinguished guests, ladies and gentlemen. I am deeply honoured to have been invited to deliver the 21st Colonel Pyara Lal Memorial Lecture at the USI. I thank the Director of USI for giving me this opportunity to interact with a very distinguished gathering. This lecture honours the memory and contributions of a distinguished soldier scholar, Colonel Pyara Lal, whose name is closely associated with the USI. The subject given to me is "Transforming the Indian Armed Forces for Meeting Future Security Challenges."

A Google search of four words, 'Transform Indian Armed Forces', throws up 121 million results. This is indicative of the amount of material written on this subject. This is an apt topic for discussion and debate especially now as the government has implemented certain recommendations of the Shekatkar Committee but shied away from major reforms in the Ministry of Defence (MoD) and addressing macro issues as envisaged by the Shekatkar Committee of experts. While the world over, including India, the focus is on reforms be it economic, social or even police reforms; but when it comes to the Armed Forces it is always "Transformation", be it the US, China, the UK or India. I often wonder why?

I will briefly flag the future security challenges to outline the context and the framework and, thereafter, discuss certain defence reforms leading to transformation of the Armed Forces. The recommendations for transformation are straight out of the Shekatkar Committee on "Enhancing Combat Effectiveness by Rebalancing the Defence Expenditure". To even define the future security challenges is a challenge in itself as technology changes faster than we can absorb and security challenges manifest in heretofore unanticipated domains. Future security challenges in the Indian context need a constant and continuous study. We need to keep the national aim in mind, which is, to transform India into a modern, prosperous and secure nation.

India is the seventh largest country in area in the world and shares 15106.7 km of boundary with Pakistan, China, Nepal, Bhutan, Myanmar, Bangladesh and Afghanistan. India has maritime boundaries with seven countries namely; Pakistan, Maldives, Sri Lanka, Indonesia, Thailand, Myanmar and Bangladesh and has a coastline of 7516.6 km. India's international borders are a unique intermix of mountains, plains, deserts, riverside and jungle terrain with varying degree of habitation and ethnic mix.

India faces full spectrum of security threats from a proxy war, sub-conventional or low intensity conflict (LIC), 4G war, hybrid war, small wars, conventional war, nuclear war, as also a collusive and collaborative threat from Pakistan and China. We have a mischievous Pakistan in the West and a strong adversary in China in the North. Pakistan has waged four wars on India and continues to wage a proxy war for nearly four decades now – if I were to give a date of the commencement of this proxy war it would be 13 Dec 1989. The ongoing proxy war is a state policy of Pakistan which is driven by the Pakistan Army.

With Pakistan we have a 772.1 km of Line of Control (LC) and 126.2 km of Actual Ground Position Line (AGPL) along the Siachen Glacier. An agreed upon ceasefire (CF) unilaterally

declared by Pakistan on 25 Nov 2003 and reciprocated by India is under severe stress. Pakistan's Army constantly violates CF to aid infiltration. The fact that there is hardly ever a CF violation East of Zojila is indicative of Pakistani designs. Violence levels in Kashmir are calibrated from across and terrorist attack in the hinterland like Mumbai, Indian Parliament etc. are engineered and perpetrated by Pakistan. A nuclear Pakistan with possible tactical nuclear weapons (TNWs) has been able to perpetrate terrorist attacks in India with near impunity except for the surgical strikes. India propagates a ''proactive strategy'' of carrying the war into Pakistan territory with the aim to raise the cost for Pakistan's "Low Cost High Effect" proxy war to 'High Cost Low Effect' war; but the key issue is 'Does India have strategic space in a conventional war on account of the nuclear overhang?' The driver for conflict is incident driven – we also may not be able to achieve strategic surprise.

China on the other hand is a strong adversary. 3488 km long India-China border is without a common understanding of Line of Actual Control (LAC). The LAC in practice is a set of four imaginary lines – India's perception of the LAC, India's perception of the Chinese perception, China's perception of the LAC and China's perception of the Indian perception of the LAC; and is a complex issue. The LAC is a set of contradictions, it is the most disputed peaceful border in the world with the last shot in anger fired in Oct 1975. A fragile peace exists with daily transgressions – "Face Offs" like the recent one in Doklam and earlier Chumar; and Depsang is an ever present danger and driver for conflict. However, both nations have ensured peace and tranquility (P&T) based on the five principles of Panchsheel and five agreements. The discipline, commitment and maturity of the two armies has ensured P&T, as the LAC is all along high altitude areas at average height of over 4500 m, where temperatures are low and tempers generally run high. The stand-off at Doklam was a departure in many ways from earlier stand-offs wherein China practiced the much talked about doctrine of three warfares viz. Informational warfare, Legal warfare and Psychological warfare.

Is Doklam the new normal? In my assessment the frequency, depth and intensity of transgressions and face-offs will see an exponential increase and the P&T will be under severe stress and, hence, we need to build capabilities and enhance capacities, about which I will talk later. India has to be prepared for a two front war as a collusive and/or collaborative threat from Pakistan and China is a reality. In the event of an India-Pakistan conflict, China may not directly go to war with India, however in a India-China conflict – Pakistan certainly will.

In this context I quote what our National Security Adviser (NSA) Mr Ajit Doval said during HT Leadership Summit on 23 Nov 2014, *"India has to be prepared for a two front war and build deterrence that ensures conflict is not an option for its adversaries".* He goes on to say *"India has two neighbours, both nuclear powers (which) share a strategic relationship and a shared adversarial view of India,"* There is no denying the fact that we have to be prepared for a two front war.

China-Pakistan Economic Corridor (CPEC) is central to the China's dream of One Belt One Road (OBOR) and any threat or perceived threat to its vital national interest is a driver for conflict, leading to a collaborative or two front war possibly orchestrated by Pakistan. CPEC passes through Indian territory occupied by Pakistan. CPEC is vital to both China and Pakistan as it provides China a direct access to Gwadar, a connect to the maritime route resolving its Malacca dilemma; and for Pakistan it provides strategic depth, hence, balancing India.

The internal security dynamics in Jammu and Kashmir and Northeast are well known, and I will leave it at that. The 24 km wide Siliguri Corridor is the only land bridge to eight and half northeastern states and five crore people. There has been a major shift in demography, especially in Kishanganj posing a security challenge which needs to be addressed. The Left

Wing Extremism is another challenge best left to be taken care of by the Central Reserve Police Force (CRPF) and other Central Armed Police Forces (CAPFs).

Future wars will be multi-domain multi-dimensional wars. Linear wars as we have known are only a critical subset of multi-domain warfare which could be both overt and covert. At Centre for Joint Warfare Studies (CENJOWS), we are in the process of doing a major research project on multi-domain warfare in the Indian context. Multi-domain warfare is essentially all encompassing and impacts the geostrategic, geoeconomic and geopolitical domains. In brief, the essential components are cyber, space and outer space, special operations, informational warfare, psychological operations, legal, electronic, electromagnetic, hybrid, asymmetric, water, energy, autonomous weapons and vehicles including drones, fuelling unrest. You name it and it is there. Coastal security is also a major concern, there is a threat to our 1208 island territories and 2,30,5,143 sq km of Exclusive Economic Zone (EEZ). Domination of Indian Ocean Region (IOR) is an imperative.

On 18 Oct 2014, the Prime Minister, while addressing the Commanders Conference, stated *"Beyond the immediate, we are facing a future where security challenges will be less predictable; situations will evolve and change swiftly; and, technological changes will make responses more difficult to keep pace with. The threats may be known, but the enemy may be invisible. Domination of cyberspace will become increasingly important. Control of space may become as critical as that of land, air and sea. Full scale wars may become rare, but force will remain an instrument of deterrence and influencing behaviour, and the duration of conflicts will be shorter."* Other than security challenges, India is a responsible rising power and a net security provider in the region and, hence, we need capabilities for operations other than war including Humanitarian Assistance and Disaster Relief (HADR).

India boasts of the second largest Army, fourth largest Air Force and blue water Navy. The Indian Armed Forces are also one of the world's most battle-hardened and combat rich force. However, Indian military is a force and not a power. General Shekatkar's vision and concept for the committee was to transform 'Indian military force to military power'.

I will quote Prime Minister Modi again; while addressing the combined Commanders' Conference in December 2015 he said *"At a time when major powers are reducing their forces and rely more on technology, we are still constantly seeking to expand the size of our forces. Modernisation and expansion of forces at the same time is a difficult and unnecessary goal. We need forces that are agile, mobile and driven by technology, not just human valour".* The Prime Minister challenged senior military commanders to reform their "beliefs, doctrines, objectives and strategies". Six areas that require military reforms are : restructuring the higher defence organisation, improving defence planning, synergising joint warfare, enabling manpower rationalisation (teeth to tail ratio), boosting defence procurement and specialising professional military education. Prime Minister Modi's directions can be seen as a challenge to the established structures, systems and organisations of India's military and the mind-set of senior military leaders. The key issue is that the authority to implement the reforms rests with the MoD and hence, the Ministry will need to take ownership of the transformation.

On 29th Aug 2017, the erstwhile Raksha Mantri Shri Arun Jaitley announced that 65 recommendations of the Shekatkar Committee have been implemented, leading to appreciation and applause, discussion and deliberations. It is definitely a first and a good first step, but honestly and at the cost of being politically incorrect, as I am a soldier and need to be militarily correct, these are mostly low hanging fruits - cherry picking. The Shekatkar Committee had made over 200 recommendations aimed to address the concerns of the Services and further the national security interests. Broadly, 30 of these pertain to Tri-Services, 75 to organisations directly under MoD, 80 pertain to the Army, 14 to the Navy and 16 to the Air Force.

The strength of the Indian Armed Forces is approximately 1.4 million with six lakhs civilian or non-uniformed employees; of which 2.6 lakhs are embedded in the services such as base workshops, base repair depots and naval dock yards and many other establishments; and 3.4 lakhs civil manpower is employed in 30 odd organisations functioning directly under the MoD. The defence budget is approximately INR 2.5 lac crores at 1.6 per cent of GDP. The manpower, both military and civil, is sustained and paid for from the defence budget, leaving little for modernisation.

The present sanctioned or accepted force levels have evolved after detailed deliberations and hence, need to be maintained whether these are 14 corps for the Army, a 42-squadron Air Force and a 200-ship Navy. The Government and the Armed Forces need to take a close look at the existing structure and systems, organisations, administrative support and logistics establishments and integrate civil infrastructure and resources to rebalance and maximise defence expenditure. Given the pragmatic but limited nature of the defence budget, the military needs change. It is time for reform to ensure a more effective, efficient and relevant armed forces that are to meet multiple security challenges across the full spectrum of conflict. The defence budget cannot be stretched beyond a point, which means the MoD and the Armed Forces have a tough choice for resource deployment. Reducing revenue expenses and increasing spending for capital pose the biggest challenges for the MoD right now.

The start point is to promulgate and propagated National Security Strategy (NSS). In essence, the NSS is a strategy to protect and project our national interests. This is a national imperative. A rational and well-structured National Military Strategy (NMS) can only flow from a well-defined and holistic NSS. Furthermore, the chain continues down the line as the National Military Objectives (NMO) can only be culled out from the NMS and the Armed Forces derive the military capabilities from the NMO. Present capability building is mostly based on single service requirements that are at best coordinated at the Headquarters Integrated Defence Staff (HQ IDS) to 'please all'. It is an important and a necessary dictate of the budget allocations that military capabilities are synergised in sync with the NSS.

The defence budget needs to be enhanced to 3 per cent of GDP. Despite competing national priorities, security is a prerequisite for the long term and sustained development of the nation and the well-being of the people. Under the circumstances, a constant push towards higher levels of efficiency is essential for safeguarding national interests. This is best by appointing a single authority to ensure operational preparedness in the form of the much deliberated and delayed Chief of Defence Staff (CDS). For the present, the Service Chiefs should continue to be responsible for operational readiness.

It is a national security imperative to appoint a CDS with the requisite authority and mandate. As a first step, the Armed Forces should achieve jointness in five domains i.e. joint intelligence, planning, training, communications, and logistics. Integrated theater commands need serious deliberations and discussion to evolve effective structures by clubbing the existing 17 commands of the Army, Navy and Air Force.

In the present construct, the authority is with the MoD whereas the accountability is that of the Services and Service Chiefs. There is a necessity to align authority and accountability. It is not only the transaction of business/Allocation of Business rules, but the Services need more authority in all spheres.

To address the security challenges in the multi-domain warfare, it is essential to raise the Cyber, Space and Special Operations commands as envisaged by the Naresh Chandra Task Force. The defence budget at present is 1.61 per cent of the GDP, which is grossly insufficient to address the vacuum as also modernise the Armed Forces. The Capital Budget should be a

roll-on budget as it is rare that the Armed Forces have ever been able or allowed to fully utilise the allocated Capital Budget. The policy, procedures and processes need to be reviewed, which has been done to a large extent in the Defence Procurement Procedure 2016. On the positive side, the MoD has signed 110 contracts worth INR 1,13,995 crores and accorded Acceptance of Necessity (AoN) for 101 schemes at a financial outlay of INR 2,39,000 crores, in the last three years.

Meaningful and effective integration of MoD and Services is long overdue. MoD has four departments : Department of Defence (DoD), Department of Defence Production (DDP), Defence Research and Development Organisation (DRDO) and Department of Ex-servicemen (DESW), and all these departments have a critical role in enhancing the operational efficacy and the combat effectiveness of the Armed Forces. The Services need to be integrated with all departments and structures of the MoD. These departments also need major reforms to be responsive to the Services.

The DRDO has a network of 51 laboratories with a 30,000 workforce that unfortunately comprises of only about 7000 scientists, despite spending nearly six per cent of the defence budget. The DRDO has achieved success in strategic defence systems and some cutting-edge technologies but falls far short in meeting the defence needs and soldiers' aspirations of tactical defence systems including small arms in the low-medium technological domain which in effect is nearly 80 per cent of the requirement of the Forces. It is a well-known fact that the Army does not have an effective assault rifle. The soldiers have no faith in the INSAS rifle. The DRDO needs to cut manpower costs as each scientist cannot be supported by four administrative persons (a teeth to tail ratio of 1:4). DRDO should focus on core competencies, close 11 research labs, put in place a robust consultation process with the Services, partner and encourage research and development in the industry. All projects should be cleared by Vice Chiefs/Chiefs of Staff Committee (COSC). The labs should have two heads – a scientific head and an operational head from the Services. A system of incentives needs to be put in place for all distinguished scientists for timely or early completion of projects and exceptional contributions.

Similarly, there is an immediate requirement to revamp the Indian Ordnance Factories (IOF) which have a strength of nearly 90,000 personnel, with most of the factories not being cost effective, forcing the captive Armed Forces to procure Ordnance Factory manufactured products at exorbitant costs and, thereby, adding to the skewed defence revenue budget. The IOFs need to be cost efficient and competitive, or else the Armed Forces should be allowed to source their non-critical needs from the growing private sector. The case of various Defence Public Sector Undertakings (DPSUs) is no better. One method for ensuring efficiency would be if some of the factories functioned on the Government Owned Corporate Operated (GOCO) model. The Directorate General of Quality Assurance (DGQA) and the Directorate General of Aeronautical Quality Assurance (DGAQA) function directly under MoD's Defence Production. The control for contract awarding, ensuring cost effectiveness, timely manufacture and quality assurance is under the Secretary Defence Production. As there are no checks and balances, this leads to the issue of poor quality products with cost and time overruns. It has been reported that over 180 tank barrels have burst during practice firing leading to loss of life and limb. The DGQA, DGAQA and the Directorate General of Quality Assurance (Naval) should function under the HQ IDS. The DGQA has a total manpower of approximately 11,000, but the technical staff, which forms the core competency of the quality assurance and quality checks, is only about 3500; the rest being administrative support staff i.e. a ratio of 1:2.

The defence accounts department of the MoD is an unproductive drain on the defence budget. Instead of being a watchdog and contributing to financial efficiency, the Armed Forces

often feel frustrated on account of the financial delays that take place as a result of archaic regulations, procedures and processes. The Armed Forces are subjected to both pre- and post-audits leading to cost and time overruns in the execution of various projects and contracts with little or no value addition. The 18,000 strong workforce of auditors have raised approximately 65,000 audit objections annually over the last five years, which translates to less than four per auditor per annum. This workforce can be reduced by about 85 per cent without any adverse impact, and the Controller General of Defence Accounts (CGDA) can adopt "e-auditing"/ Computer Aided Audit Techniques (CAAT), thus accruing major savings in manpower costs.

DESW needs to be revamped and serving and retired officers who are aware of the problems and aspirations of the veterans should be on their staff. The DESW has to be veteran-friendly and facilitate a second career for soldiers retiring at a young age. The control and functioning of the Ex-servicemen Contributory Health Scheme (ECHS) should be under HQ IDS with enhanced financial powers. The manning of the DoD should be integrated and Services officers posted to DoD; and similarly civilian officers posted to various branches of the Service HQs including the general staff.

The Military Engineering Service (MES) is another white elephant manned by over 80,000 personnel with a budget of approximately INR 14,000 crores, spending over 70 per cent of the budget on salaries. The MES can easily be reduced to about 30 per cent of its present strength by outsourcing the maintenance services in all cantonments and military stations during peacetime, leaving the MES to execute only capital works and maintenance contracts. The effectiveness of MES and Border Roads Organisation (BRO) has also been degraded on account of issue of status equivalence wherein the civil cadre officials drawing Non-Functional Upgrade (NFU) have become senior to their erstwhile superior officers. The solution lies in promulgating NFU for the Services, a common pay structure and career progression schemes to ensure harmony and synergy between military and civilian employees.

India will need to enhance capacities and build capabilities to meet the challenges of the future. Key issues need to be addressed immediately and urgently post Doklam. The borders with China are manned and managed by the Army and Indo-Tibetan Border Police Force (ITBP) often leading to competition and problems in coordination and cooperation. There are also two different channels of reporting and issues of accountability as the ITBP is under the Ministry of Home Affairs (MHA). This dual command and control structure is a recipe for disaster as conflicting directions and guidelines can emanate from the two controlling Ministries i.e. MHA and MoD, and more often than not, by intermediary headquarters. There is an urgent need to resolve the flawed command and control structure and place the ITBP under the operational control of the Army as mandated by the Group of Ministers report of May 2001. The Land Acquisition, Rehabilitation and Resettlement Act, 2013 (LARR) should be amended to exempt all areas falling within 100 km of the India-China border from its purview. This will enable time bound land acquisition leading to inclusive infrastructure development.

There is also a need to evolve an integrated infrastructure development plan where the National Highway Authority of India (NHAI) would be responsible for constructing the main arteries; a revamped Border Road Organisation mandated to construct the feeder roads and the Army to ensure last mile connectivity through its integral resources of operational works. In addition to the plan, the government should constitute a National Infrastructure Development Board under the Niti Aayog comprising all relevant ministries including the representatives from the Army and Navy, fully empowered and accountable to execute and monitor time bound development. The BRO needs to be reconstituted and reorganised on the lines of Delhi Metro Rail Corporation. In July 2013, the government sanctioned a strength of over 90,000 troops at an estimated cost of approximately INR 64,600 crores, including the Mountain Strike Corps, as

part of the accretion forces for the northern borders. The sanctioned funds should be made available immediately for early operationalisation of the Mountain Strike Corps and making up of voids in the border management posture.

World over, the present-day struggle is retention of trained, experienced and quality manpower. Due to the varied terrain and multiplicity of tasks, the Indian Armed Forces need a judicious mix of young, experienced and trained manpower resources. This can be best achieved by enhancing the colour service of the soldier by two years. This will also result in recurring savings in the pension bill of around 13 to 15 thousand crores every year; a sum which can be better utilised for modernisation. The third cadre review for JCOs and OR pending government sanction since 2010 has been sanctioned by the government on 14 Sep 2017 based on the recommendations of the Shekatkar Committee.

The Armed Forces – in particular the Army – need to look inwards too by integrating the civil resources and infrastructure available, outsourcing certain services, identifying force substitutes and revamping policies, procedures and processes. The Army also needs to review certain organisations that are suboptimal in today's environment and context. The outsourcing model cannot be based on L1 alone, the T1 and Q1 have to be factored in the procedure.

The Corps of Electronics and Mechanical Engineers (EME) is the third-largest force in the Army, next only to the Infantry and Artillery. Major savings can be affected by outsourcing the repair and servicing of 'B' vehicles to the original equipment manufacturers' (OEM) service stations. The service stations are now located in most of our border areas and can easily be exploited, as is being done by the Assam Rifles. The maintenance of specialist vehicles should continue to be the mandate of the EME. The EME also needs to reduce the number of echelons of repairs. It is envisaged that major savings of up to 30,000 personnel can be affected from the EME alone by changing archaic procedures and outsourcing repairs without any adverse impact on combat effectiveness. The Army Base Workshops should be corporatised on the basis of the government-owned contractor operated model. Additionally, the many station workshops located in cities and major towns have become redundant establishments which can be disbanded, and their workload can be outsourced to civil service stations by the units.

The Army Ordnance Corps (AOC) also needs to modernise and cut down its long chain to enhance effectiveness, save time and manpower costs and aid efficiency. It is unpardonable that in today's information age the Army has been unable to capture the four lakhs plus inventory, thus leading to unnecessary wastage and manpower costs. The vehicle depots and companies also need to be disbanded and the OEMs should be instructed to deliver the vehicles straight to the user units.

Similarly, the Army Service Corps (ASC) too needs to close down the butcheries and resort to procurement through trade. The number of integral transport units can be reduced, and vehicles can be hired through contracts, which will further reduce manpower, acquisition and maintenance costs, particularly since provisions already exist to requisition civil transport during emergencies. The operational need for animal transport needs to be reviewed as roads and tracks now connect more and more areas in the forward zone. This will also facilitate a reduction of the Remount and Veterinary Corps. Similarly, the petroleum units can be done away with by resorting to direct dependency and holding of reserves by the trade.

The communications requirements manned by the Corps of Signals can contribute to major redeployment of manpower for cyber and electronic warfare, post review. The Air Formation Signal Regiment is an example where the same can be applied. The communications architecture should be theatrised and all stakeholders should be able to plug and play. The

various dedicated signal regiments – from command, corps, division and brigades should be restructured to form theatre-specific communication groups, except the signal elements of the Strike Corps. The Armed Forces should move towards joint communications by optimising all resources including the civil.

Certain organisations need to be closed down without delay, such as the military farms, butcheries and stationery depots. The Army Postal Service and the Army Education Corps (AEC) could also be closed. Review and improvement in the staffing norms at Military Hospitals, restructuring of Field Ambulance to Divisional Medical battalions is required.

Indian Navy is a growing service; maritime security is a major concern and domination of the Indian Ocean, a geostrategic imperative. Indian Coast Guard (ICG) is the fourth service mandated to ensure coastal security and policing. The ICG should either be placed under the MHA as border management is under the MHA or else its Director General should be from the Navy for better coordination. The Navy should also review the manning levels of ships. The government must constitute a National Maritime Authority headed by a maritime security advisor to synergise maritime security and resources.

The Indian Air Force (IAF) needs to review and optimise its training, administrative and maintenance organisations to meet accretion plans to match force level enhancements. The accounts, navigation, education and meteorology branches can be optimised. The roles of Southern Air Command and the Maintenance Command need review. The tropo units can be merged to save on manpower, and a judicious mix of former IAF pilots on contractual basis with training establishments will enable the redeployment of pilots to operational squadrons.

I would like to conclude with a quote from the "Distance Drums" written by Manohar Malgonkar, a Maratha Light Infantry officer in 1960 *"From then on, it was typical, service talk. It went in the same circles, people invariably said the same things which had been said hundreds of times before in clubs, messes and your own bungalows. Its principles were simple: your own service, your directorate, battalion or regiment was the best, the most hard-worked and the most misunderstood and its only drawback was the shockingly incompetent officers holding the higher posts. The Navy were the most idle, the Air Force, the most pampered, but the civilians were the ones who created all the problems".*

Thank you very much and Jai Hind.

Trajectory and Future of India-Bangladesh Relations*

Mr Syed Muazzem Ali@

Esteemed Director of the United Service Institution of India (USI), Chairperson, distinguished members of the USI, senior government officials, excellencies, distinguished guests, ladies and gentlemen, good morning to you all. It is a great pleasure for me to be here at the USI.

I commend USI for their sustained efforts in organising this lecture series every year. Indeed, the Institution has established itself as a true platform for sharing of ideas and thoughts on contemporary issues, including that of security, among scholars from different disciplines. I was pleasantly surprised to note that the quarterly USI Journal is the oldest surviving defence journal in Asia, having first appeared in 1871. This also reflects on how, as a platform, USI is continuing to be the torchbearer of knowledge from generation to generation. I hope we can identify areas where USI can engage in newer areas of cooperation between Bangladesh and India.

As I speak here this morning to reflect on "Trajectory and Future of India-Bangladesh Relations", I would say that indeed the two countries have been able to sustain and deepen the relations despite profound geo-political changes around the world. You would certainly agree that some of the global changes in the recent times have been 'transformational', as we reflect on global politics. New political leaderships in different parts of the world and changed position of the States on key global issues have already changed the traditional perceptions of the geo-politics and diplomacy, putting the world on a roller-coaster.

Amid all these transformations, uncertainties, tension and volatility, Bangladesh and India have been able to further strengthen and consolidate the friendly bilateral relations that so happily exist between the two countries which the former President of India, Shri Pranab Mukherjee had termed as "best ever since 1974". It is my great pleasure to tell you that indeed our cooperation is fast moving ahead based on mutual benefit, equality and respect for sovereignty and as an example of progress in looking at a shared future.

Visit of Honourable Prime Minister of Bangladesh to India

Let me start with the most recent event i.e. the visit of our Hon'ble Prime Minister, Sheikh Hasina to India from 07 to 10 April this year. The visit was a grand success and both the Prime Ministers have taken our bilateral ties to a new level which is well beyond the "strategic partnership". The 11 agreements and 24 MoUs signed during this visit virtually encompass every important sector in our bilateral cooperation; namely, security, trade, connectivity, energy, civil nuclear agreement, defence and introduction of new bus and train services etc.

The visit was also high on the optics. The fact that Prime Minister Modi broke protocol and received our Prime Minister at the airport and was present at "Sommanona" (to honour the Indian martyrs of Bangladesh Liberation War) and other events, Hon'ble President Pranab Mukherjee's invitation to our Prime Minister to stay at Rashtrapati Bhavan and the former hosting a banquet in her honour clearly underscored the very special relationship which exists between our two countries. In addition, a prominent road in New Delhi has been named after Bangabandhu Sheikh Mujibur Rahman, the Father of our Nation.

In addition to the two earlier Line of Credits (LOCs), India during this visit has extended a fresh LOC to the tune of USD five billion which also includes USD 500 million for defence purchase. Bangladesh will utilise this credit for the projects that she needs on priority basis.

Likewise, she will utilise the defence credit on the purchase of the items as she requires. Our private sectors also made their valuable inputs when they signed Memorandum of Understanding (MoUs) for the investment to the tune of USD13 billion primarily in the energy sector.

Despite all round success, the biggest disappointment during the visit has been the lack of progress on the Teesta Water Sharing issue. However, Prime Minister Narendra Modi has assured us that the issue would be resolved soon. Let me clarify here that we need water sharing only during the critical 90-day lean period. I will reflect on the water sharing issue little later.

The Emotional Bond Stemming from History

Now let me highlight a bit on the historical perspective of the relations between the two countries. It is indeed most appropriate that our multifaceted relations are rooted in our shared history, geographical proximity and commonality of our culture and heritage. As a freedom fighter diplomat posted in Washington DC in 1971, I recall with deep appreciation and gratitude, the whole-hearted support and cooperation that we received from the Government and people of India during the critical period of our Liberation War. The emotional bonds stemming from the invaluable contributions of the Government and the people of India during Bangladesh's War of Liberation remain a dominant factor in the country's political, cultural and social wave.

Bangladesh Perspective – A Shift from the Past

Bangabandhu Sheikh Mujibur Rahman, the Father of our Nation, soon after our Independence, had laid down the foundation of our close and cooperative ties with India and had taken every step to resolve all outstanding problems between us. After his tragic assassination on 15 August 1975, our relations had suffered a major setback. However, after his able daughter Sheikh Hasina assumed charge as the Prime Minister, she has been relentlessly working for all round cooperation between our two countries based on mutual trust and confidence. Both the countries are jointly making efforts to strengthen and expand bilateral cooperation in existing and newer areas.

Prime Minister Sheikh Hasina has taken the bilateral relations to a new height. Since assumption of power for the second time in 2009, Prime Minister Sheikh Hasina has consistently tried to restore mutual trust and cooperation and she has brought a change in our mindset in our bilateral ties. There is now a greater recognition on both sides that the destinies of our countries are inescapably intertwined and we must grow together. Our stability and prosperity are inextricably linked with each other. Given our geographical proximity and objective condition on the ground, our long-term benefit can best be served by strengthening relations. India is a fast emerging global power with strong economic growth coupled with scientific and technological advancement, and Bangladesh should take full advantage of the high growth of the Indian economy to further her own economic development. On the other hand, a strong and stable Bangladesh provides the best security guarantee for India which surrounds Bangladesh on all three sides with a huge maritime boundary on the South.

Prime Minister Narendra Modi after assumption of office little over three years ago, had also expressed his keen desire to promote all-round bilateral cooperation. His historic visit to Bangladesh in June 2015 has taken our ties to newer heights. Sixty eight years after the Partition of 1947, and forty-one years after the conclusion of the Indira-Mujib Border Accord of 1974, the Land Boundary Agreement (LBA) between the two countries was concluded and ratified. Premier Narendra Modi had demonstrated how a long-standing complex bilateral issue could be resolved unanimously through consultation, compassion, and consensus-building. The

successful conclusion of the LBA also signaled fulfillment of the vision of Bangabandhu Sheikh Mujibur Rahman who had taken the initative soon after the Independence of Bangladesh.

Coincidentally, the longstanding maritime boundaries issue between the two countries was also resolved in July of 2015 through United Nations arbitration. Good borders make good neighbours, as disputed boundaries very often create tension, and nations do resort to the use of force to settle their disputes. With the LBA and the demarcation of maritime boundary, that chapter should be over for India and Bangladesh and peace and security prevail on our borders.

Security and Terrorism

It may be recalled that the security issue had bedeviled Indo-Bangladesh ties in the past. Prime Minister Sheikh Hasina, since assumption of power in 2009, has firmly controlled the situation and has not allowed any terrorist activities, or any terrorist group, to use Bangladeshi soil to launch any attack against India or any other neighbouring country. Naturally, Bangladesh expects strict reciprocity from all her neighbours on this account.

Since then, security cooperation has been the high point of our relations. It is the principled and unequivocal position of Bangladesh to not tolerate terrorism in any form and not allow its soil to be used against the interest of any country, particularly India, has significantly strengthened confidence of both sides. But we have to be vigilant and alert.

The Coordinated Border Management Plan (CBMP) which had started in 2011, has significantly improved the security climate in the area. We have signed MoUs on prevention of human trafficking, smuggling and circulation of fake currency notes, drugs and narcotics etc. as well as cooperation between our Coast Guards to effectively meet any unconventional security threats. Border killings have been substantially reduced, but it should be our common endeavour to bring it down to zero level soonest possible. It is a highly emotive issue. The recent visit of our Prime Minister has given new directives towards further strengthening of our bilateral cooperation in this area.

Both countries are now setting up Integrated Border Check Posts (ICPs) to facilitate and closely monitor passage of people and transportation of goods. So far, three such ICPs have been established in Agartala-Akhaura, Benapole-Petrapole and Phulbari-Banglabandha areas. These ICPs will also significantly improve the connectivity between our two countries and in the sub-region.

Energy Cooperation

Cooperation in the energy sector is the hallmark of our renewed engagements. There is a positive momentum in cooperation between our two countries in the power sector and the achievements so far have been highly encouraging. Currently, 600 MW of power is flowing through the two existing inter-connections between India and Bangladesh at Bheramara-Bahrampur and Tripura-South Comilla. From the additional inter-connection with Parbatipur (Bangladesh) with Bornagar (Assam, India) and Katihar (Bihar, India) for power evacuation facilities, Bangladesh could further draw 1000 MW of power from Assam-Bihar transmission line. There has been further discussion on the supply of 340 MW from various NTPC Ltd. stations. Besides, Indian state-run Oil and Natural Gas Corporation Limited (ONGC) has been awarded gas exploration in two blocks of Bay of Bengal.

We have also signed MoU on renewable energy and nuclear cooperation between the two countries. It has further been agreed that India would release hydro-power from its northeast across Bangladesh territory.

Bangladesh has also expressed its desire to participate in hydro-power projects in the northeastern states of India as well as in Bhutan and Nepal. Cooperation in other sectors of power/energy is also taking shape, especially in the fields of supply of, *inter alia,* High-Speed Diesel (HSD), natural gas, Liquefied Natural Gas (LNG), Liquefied Petroleum Gas (LPG), trans-boundary pipelines etc. Bangladesh has decided to purchase the excess diesel from one of the Indian refineries in Assam (Numaligarh Refinery). Besides, MoU has also been signed between Petrobangla and Petronet for the setting up of a Joint Venture re-gasification LNG Terminal at Kutubdia Island.

In the Private sectors, the major Indian conglomerate like Adani Groups and Reliance also concluded agreement on supply of electricity; and the total Indian investment in energy projects would be of USD nine billion.

Bilateral and Sub-regional Connectivity

It is heartening to note that Prime Minister Modi has not only expressed his interest in strengthening Bangladesh-India bilateral ties but has also viewed these cooperative ties as a catalyst for regional and sub-regional integration, progress and stability. Bangladesh also figures prominently in Prime Minister Modi's 'Look and Act East' policies and both countries are working on strengthening sub-regional connectivity under the Bangladesh, Bhutan, India and Nepal (BBIN) as well as inter-regional cooperation with South East Asian countries under the aegis of the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) and Association of Southeast Asian Nations (ASEAN).

Taking advantage of its unique geographical location, Bangladesh is poised to play its natural role as hub of connectivity. We are keen to establish seamless connectivity with sub-region and beyond which we believe would bring about unprecedented benefits for all the countries. Bangladesh is also actively participating in other regional connectivity initiatives such as the the Bangladesh-China-India-Myanmar Forum for Regional Cooperation (BCIM) Economic Corridor. BCIM, originally a civil society initiative/private sector initiative, has made considerable progress. But further progress will require consensus building among the nations. A study team had been formed at the governmental level to work out a possible framework for the BCIIM. All these demonstrate our commitment to establish a better connected South Asia with other adjoining regions.

To ensure unhindered movement of people and goods in the region, the two countries are also working to restore road, rail, and coastal shipping links that had existed in the pre-partition period. At the same time, new land ports and better infrastructure are being built to facilitate greater trade. Building a bridge over Feni river, establishment of rail connectivity between Akhaura and Agartala and development of Ramgarah-Subroom may look like small steps but those will be "game changer" which would directly connect northeast Indian states with the Chittagong Port.

We have opened up new inter-country bus routes between the cities to connect the northeast with West Bengal. Both governments are currently working on the restoration of eight railway links between West Bengal and the north-eastern India with Bangladesh which were snapped during 1965 Indo-Pakistan war. Last April, both the Prime Ministers jointly inaugurated the newly restored railway link between Birol (Bangladesh) and Radhikapur (India). We have done Dhaka-Delhi cargo trial run successfully in October 2016 and we have already concluded the trial run of a passenger train between Khulna and Kolkata. We are also working on establishing a new rail link between Panchagarh (Bangladesh) to Siliguri (India). We are trying our level best to make the train services cost effective and user friendly and we are urging to the

Indian side to complete their immigration and custom formalities in the train itself, instead of asking them to get down from the train and board a new train. Dhaka has gone one step further and has proposed completion of the customs formalities at the point of origin. Recently, both the Prime Ministers inaugurated bus service between Kolkata-Khulna-Dhaka which would definitely facilitate people-to-people contact between the two countries. Our people have achieved much higher purchasing power and hence, air connectivity between Bangladesh and other northeastern cities should be considered on a top priority basis.

We have agreed to further facilitate the movement of goods through our waterways to the northeastern hinterland. It may be recalled that in the past, the products from Assam were transported through Bangladesh waterways to Kolkata. With the passage of time, owing to the constant siltation, the navigability of these rivers has shrunk to an alarming extent. The earlier passage of sea-going has now reduced to small motor launches. It is now necessary to jointly dredge these water-ways and restore their hitherto navigability which in turn, would promote tourism and trade in our region and beyond.

Coastal shipping is another mode of transport that could enhance connectivity significantly between the two countries. The Agreement on Coastal Shipping for movement of cargo was signed during the visit of the Indian Prime Minister to Bangladesh in 2015 and in this regard, Standard Operating Procedure (SOP) was signed later in the same year during the Shipping Secretary level talks. A coastal vessel of Bangladesh (MV Harbour-I) made its maiden voyage from Chittagong to the Indian Port Krishnapatnam on 23 March 2016 marking the operationalisation of the coastal shipping services. Simultaneously, trans-shipment of goods through the Ashuganj River Port under the Protocol on Inland Water Transit and Trade (PIWTT) has been started. During the visit of the Prime Minister Sheikh Hasina to India, we have concluded MoUs concerning cooperation on 'Aids to Navigation and Passenger and Cruise Services in Coastal and Protocol Routes' which definitely added a new dimension to water route connectivity.

Water Sharing Issues

Bangladesh and India share 54 common rivers and the issue of water sharing during the lean season has been a sensitive and delicate one as it has a direct impact on the food production and quality of life of our teeming millions. As mentioned earlier, Ganges Water Sharing Agreement was signed during Prime Minister Sheikh Hasina's first term. After the assumption of power in 2009, she took the initiative to break the deadlock on the Teesta water sharing issue during the lean period. The two countries had also worked out a solution for an interim water sharing agreement in 2011 but it could not be concluded due to last minute objection raised by the West Bengal Government. Since then, the Union Government has been undertaking internal consultations with the Government of West Bengal and Prime Minister Modi has assured our Prime Minister that the agreement would be finalised during his current term of office. Bangladesh is eagerly looking forward to an early conclusion of the Agreement as it would open up newer opportunities for cooperation.

The common rivers which we share require joint management as constant siltation has significantly reduced their capacity to hold water for the lean season and consequent flooding in monsoon. As the latest evidence, we have disastrous flood this year both in the northeast India as well as Bangladesh. The rivers are unable to hold rain water and any excess rain has been passed on to the downstream, resulting in floods and causing havoc in terms of agricultural production. The Joint River Commission between our two countries needs to be strengthened and it should undertake more frequent consultations to redress the situation. The navigability of the joint rivers also has a direct impact of the riverine connectivity between our two countries.

Recently, positive and encouraging steps have been taken for joint development of the Ganges Barrage on the river Padma in Bangladesh. A 'Joint Technical Sub Group on Ganges Barrage Project' will study the riverine border in the upstream area of the project. We are optimistic that the matter would be further taken forward.

Water sharing is a very emotive issue and it must be addressed on a top priority basis, with care and compassion, to reach a win-win solution. In the final analysis, it will be necessary to involve all the concerned countries under joint basin management schemes for a full and comprehensive solution.

Trade and Commerce

Let me now address cooperation in trade and commerce areas. You will agree that in this age of globalisation, greater economic integration is the call of the day worldwide. Synergies of our two economies, which are growing at high rates in the past several years, could be harnessed further to the benefit of not only the two countries but also for the prosperity of the entire region. India has allowed duty-free and quota-free access to all Bangladeshi items to the Indian market except for a few items on the South Asian Free Trade Area (SAFTA) negative list, while we have offered two Special Economic Zones for Indian investors with the hope that they would invest more in Bangladesh which in turn would lead to expansion of Bangladesh's exports to India and thus create a balanced trade and commercial bilateral ties.

The balance of trade, however, is still largely in India's favour. Bangladesh imported goods worth USD 5.4 billion and exported goods worth USD 689.60 million in FY 2015-16. It is necessary to point out here that a small and capital shy economy like that of Bangladesh would need substantial investment to broaden her exportable base. The most practical cause of action would be to set up series of "buy-back" projects. Similar equation exists between US-Canada and US-Mexico. Indian investors should take advantage of our cheaper labour costs and closer proximity to northeast markets. To this end, several Indian mega companies like Hero-Honda, Tata group or CEAT Tire companies have set up such projects in Bangladesh. These are small projects but they mark the beginning of a much needed process. It may be mentioned here that within a very short time, Canada and Mexico have emerged as the largest trading partners of the USA. If they can do it, we can do it as well.

We are happy that, during the visit of Prime Minister Sheikh Hasina, private sectors of both the countries have signed agreements that should result in investment of over USD nine billion in Bangladesh, primarily, in the energy and communication sectors. Both the sides are working on dismantling the Non-Tariff Barriers (NTBs) and Para-Tariff Barriers (PTBs). A few Border *Haats* are already in operation and some others are also in the pipeline. These *Haats* are formalising the informal border trade. Recently, we have concluded MoU and Mode of Operation on Border *Haat.*

The projects under First Line of Credit (LoC-1) have been already utilised, while implementation of various projects under the Second Line of Credit (LoC-2) is underway. These credits have enhanced capacities in vital areas such as roads, railways, bridges and inland waterways connectivity. Recently, under the 3rd Line of Credit (LOC 3), the Indian Government has given USD 4.5 billion to Bangladesh. In the meantime, infrastructural development of Land Customs Stations/Land Ports is continuing for boosting smoother exchange of goods.

People-to-People Contact

Last but not the least, is the people-to-people contact. There is no alternative to peoples' camaraderie in any bilateral relations. We are lucky that the emotional bond and people-to-people contact between our two countries, having genesis in our common history and struggle,

form the strongest and most treasured part of our relationship. It has a profound effect on the psyche of the people of the two countries and a huge salutary impact on the overall bilateral relations. The people-to-people contact has increased manifold over the past years. During Premier Modi's visit to Bangladesh, we started Dhaka-Guwahati and Dhaka-Kolkata and Agartala bus services. We have already upgraded our Mission in Agartala to Assistant High Commission level and opened new Assistant High Commission in Guwahati. Earlier we opened a Deputy High Commission in Mumbai with a view to facilitating the issuance of visa and other consular services. Now we are soon going to open a new Mission in Chennai basically to strengthen our cooperation with the southern States. To ensure greater mobility of people between the two countries, visa regime has been relaxed by issuing five years multiple entry-exit visas for the senior citizens. Medical visas have further been streamlined. Recently there has been a decision by the Indian Government to ease the restrictions on entry/exit of Bangladeshi visitors. Now the travelers in addition to the designated points can also travel through any airport and two ICPs. Besides, Bangladesh and India also exchange each other's books at book fairs held in Dhaka, Kolkata, and Delhi. Recently *Akashvani* has started its *"Moitree"* programme. We should now focus on greater air-connectivity between Bangladesh and northeast India.

It is natural to have bilateral problems with one's neighbours, more so, for India and Bangladesh which share huge land and maritime boundaries, and also use common rivers, rail, road and river networks. However, it is heartening to note that the earlier mistrust and tensions between Bangladesh and India have been largely cleared.

Bangladesh and India can neither change their common history and heritage nor their geography. The only way to resolve the outstanding issues between them is through sustained dialogue with an open mind.

Therefore, as close neighbours, Bangladesh and India should take note of each other's sensitivities and vulnerabilities, and demonstrate greater political will to establish mutually cooperative ties. A stable, strong and friendly neighbourhood is a necessity for any country, big or small, and especially in our region where several armed terrorist groups are eager to exploit differences between the two countries to further their own objectives.

Before I conclude, I would like to mention about the "Sommanona Programme" that was jointly organised by the Governments of India and Bangladesh during the visit of our Prime Minister Sheikh Hasina. This was a gesture from Bangladesh in recognising the supreme sacrifice made by 1661 Indian martyrs for the liberation of Bangladesh. Never in the history of the world has a country recognised the contribution of another country by honouring the martyrs at their motherland. The spirit of comradeship of 1971 still remains the foundation stone of our ties and we must remain faithful to it.

Conclusion

In conclusion, let me underscore, that the recent developments, have taken our bilateral ties to a new multi-dimensional, multi-faceted and comprehensive platform and we have to proceed with a view to establishing a win-win equation for the benefit of our two countries and for the entire region.

Long live Bangladesh-India friendship and cooperation.

Thank you all.

@**Mr Syed Muazzem Ali,** the Bangladesh High Commissioner to India is a former Foreign Secretary of the Government of Bangladesh. Mr Ali had joined the Pakistan Foreign Service in 1968, and retired from a distinguished career in the Diplomatic Service in December 2001. Mr Ali regularly contributes articles on South Asian and international issues to various newspapers, magazines and journals. His current interests lie in the interplay of democracy, security, development, and regional cooperation.

Airborne Operations – Imperative Future Strategic Capability

Lieutenant General PC Katoch, PVSM, UYSM, AVSM, SC (Retd)[@]

The Context

During the US invasion of Afghanistan in 2001, Indian newspapers had reported that the US had deployed 20,000 Special Forces in Afghanistan. Obviously, the difference between airborne operations and special operations was not understood. Factually, these were troops from the 82nd and 101st Airborne Divisions of the US Army, not part of Special Forces. Till recent times, the US Special Operations Command (SOCOM) had a strength of only 60,000 troops, of which the cutting edge Special Forces numbered only 15,000, rest being support elements including civilians. Besides, United States Special Forces (USSF) were then operating in some 200 countries, though not fighting in all. The October 2003 Issue of US Army publication 'ARMY' brought out that that the largest deployment of US Special Operation Forces (SOF) was during Operation 'Iraqi Freedom' involving 90 Operational Detachments-Alpha (ODA) (each ODA being 8-10 men), surpassing the total number of ODAs engaged at any one time during Vietnam War – about 85. Obviously, Special Forces are not a game of numbers.

After World War II, airborne drops, as part of combat operations have been undertaken in Panama, Vietnam, Grenada, Bangladesh, Falkland, Afghanistan, Iraq, Ivory Coast and Mali.[1] In March 2003, the US 173rd Airborne Brigade was airdropped into northern Iraq. In 2009, Pakistan Army paratroopers conducted airborne operations during Operation *'Black Thunderstorm'* and Operation *'Rah-e-Nijjat'* in North Waziristan against Pakistani Taliban to seize strategic mountain areas for supporting special forces and infantry. In January 2013, French paratroopers from the 11th Parachute Brigade jumped into northern Mali to support offensive for capturing Timbuktu. In operations like in Falklands, the airborne troops had a much larger role than Special Forces, and it is the paratroopers that covered themselves with glory.

According to 'Pakistan Defence', *"Airborne forces are military units, usually light infantry, set up to be moved by aircraft and 'dropped' into battle, typically by parachute.[2] Thus, they can be placed behind enemy lines, and have the capability to deploy almost anywhere with little warning. The formations are limited only by the number and size of their aircraft, so given enough capacity a huge force can appear 'out of nowhere' in minutes, an action referred to as vertical envelopment."* Interesting excerpts from this article in 'Pakistan Defence' on whether Pakistan needs an Airborne Division are as under :–[3]

(a) To be honest we do lack Paratrooper Division. A division armed with special light arms, airborne vehicles and strategic heavy lifter can be a game changer during the battle. Paratrooping at the start of battle is bit suicidal, but during course of the battle, airdrops can take place behind enemy lines to cease supply lines or whatever mission is given to them.

(b) Do you think world's most sophisticated armies are outdated to have these (Airborne)? First, one has to learn the role of airborne troops and as for effectiveness, in 2009, Pakistan Army paratroopers conducted airborne operations during Operation *'Black Thunderstorm'* and Operation *'Rah-e-Nijjat'* against Pakistani Taliban to seize strategic mountain areas in support of special forces and infantry. So it still is the fastest way to deploy our troops behind enemy lines.

Four countries, the US, China, France and Russia, maintain division-sized or bigger airborne forces. In addition, another 48 countries across the world maintain brigade-sized or smaller airborne forces, these are : Argentina, Australia, Austria, Bangladesh, Belgium, Brazil, Bulgaria, Canada, Chile, Croatia, Czech Republic, Egypt, Finland, Gabon, Germany, Greece, Honduras, Hungary, India, Indonesia, Iran, Ireland, Israel, Italy, Japan, Jordan, Malaysia, Mexico, Nepal, Netherlands, Poland, Philippines, Portugal, Rhodesia, Serbia, South Africa, Spain, Sri Lanka, Sweden, Switzerland, Syria, Taiwan, Thailand, Turkey, Ukraine, the UK, Venezuela and Vietnam. China's Wuhan-based 15th Airborne Corps (which remains untouched in the ongoing PLA reorganisation) comprises the following:-[4]

(a) 43rd Airborne Division, Kaifeng; 127th, 128th, 129th Para Regiment and one light artillery regiment.

(b) 44th Airborne Division, Yingshan; 130th, 131st, 132nd Para Regiment and one light artillery regiment.

(c) 45th Airborne Division, Huangpi; 133rd, 134th, 135th Para Regiment and one light artillery regiment.

Value of Airborne Forces

Airborne Forces are a threat in being from the very outset. Their employment or mere threat of employment to spearhead an operation has great strategic value, which demonstrates significant resolve.[5] Above mentioned French airborne operation for capturing Timbuktu in Mali highlights the usefulness of retaining the airborne capability for quickly gaining territory in denied areas. It also made a political statement of the French resolve to both the people of Mali and the Islamist fundamentalists. In 1994, the military show of force by USSF ground operations and airborne forces en-route for an airborne assault into Port-au-Prince, Haiti, proved decisive in reinstatement of Haitian President Aristide.[6] The operation underway was then changed from a forcible entry to permitted entry; 20,000 troops of a 15-nation force air-landed or arrived by sea ports for Operation 'Restore Democracy'.

Future operations will require the speed, mobility and discipline of airborne units, for gaining foothold and securing lodgment for link up by follow-on forces.[7] These operations could include kinetic forced entry to humanitarian and disaster relief operations. The capabilities inherent in air delivery demonstrates the greatest strength of airborne forces – a capability to rapidly project strategic power over great distances. Airborne forces are characteristically flexible, customised and ready to be able to provide surprise effect. The employment of airborne forces requires prudent planning but can create disproportionally huge effect compared to its size or capabilities, and may be the opening move to seize the initiative, including for evacuating non-combatants or quelling civil unrest.

Tasking of Airborne Forces

Combat employment missions of airborne troops allow a commander to insert surface forces directly and quickly into battle and to sustain combat operations.[8] For example, combat missions may involve air dropping paratroopers behind adversary lines. Combat sustainment missions may consist of reinforcement of front-line forces engaged with the adversary. Airlift affords commanders a high degree of combat manoeuverability permitting adversary troop strongholds to be bypassed. This provides to friendly forces a potent offensive advantage, complicating the adversary's defensive preparations. The combat employment and sustainment mission usually accounts for a small percentage of total airlift sorties; nevertheless, its importance is far greater than what the number of sorties indicates. This is a capability which, in most circumstances, cannot be accomplished by other means.

Airborne Forces can be tasked for a variety of missions that could be strategic, operational, or tactical.[9] Some examples of these are as follows:-

(a) **Strategic**. Airborne Forces are 'threat in being' and simply alerting airborne forces conveys political signal at the strategic level. Strategic missions may require airborne forces to seize an airhead from which follow-on ground or air operations can be launched. Given their strategic mobility, they can move from distant bases to strike at important targets deep in enemy-held territory with little warning.

(b) **Operational**. Airborne Forces can be tasked to seize objectives like airfields, bridges, passes or other key terrain deep in the enemy's rear areas as part of operational tasking, linked to the operational-level commander's concept, simplifying the accomplishment of his assigned tasks. These airborne operations are usually short and require a linkup by ground forces keeping in mind the ground holding capability of an airborne force. The advantage is that Airborne Forces can be employed anywhere in the theatre of war. They attack deep to achieve operational level objectives.

(c) **Tactical**. Airborne Forces assault in the rear or to the flank of the enemy, preferably where few fixed defences exist and where well-organised enemy combat units are not initially present. Airborne units both assault their objectives and move to link up with ground forces, or seize an objective and hold ground till the arrival of ground forces.

Indian Scene

India has one Parachute Brigade (reserve formation of Army Headquarters) and a total of five parachute battalions, including three parts of the parachute brigade and two new parachute battalions in over the last five years, signifying that the Army understands the value of airborne capability. During Operation 'Brass Tacks', the then Army Chief wanted to quickly re-establish the second Parachute Brigade which had been converted to an Infantry Brigade. However, he was informed that converting this Infantry Brigade back into a Parachute Brigade would require many years.

In 1995, then Army Chief, General BC Joshi ordered the creation of a Special Forces Regiment and a Special Forces Headquarters to formulate policies to equip, train and task the regiment.[10] This was pursuant to a comprehensive army study ordered by Lieutenant General BC Joshi when he was Director General of Military Operations. The study recognised the need for separating the *Special Forces from the Airborne Forces; Special Forces being force multipliers and airborne forces being infantry units in airborne role meant for power projection and supporting army operations.* Accordingly, the Special Forces Regiment and the Special Forces Headquarters were formed. The then Director General of Military Operations (later Vice Chief of Army Staff), Lieutenant General Vijay Oberoi, was appointed Honorary Colonel of the Regiment to ensure adequate patronage to the fledgling regiment. Significantly, when the need to raise a fourth Special Forces battalion came up, the Parachute Regiment, which had been the traditional manpower source for Special Forces battalions, declined because now there was a separate Special Forces Regiment.

Unfortunately, General BC Joshi passed away in harness. Under pressure from the veteran paratroopers, the new Army Chief disbanded the Special Forces Regiment and the Special Forces Headquarters.[11] Manpower of the latter was merged into Army's Military Operations and Infantry Directorates. One reason given to disband the Special Forces Regiment was that the Special Forces battalions that time numbered three (now they are nine); but that was poor cover to deflect peer pressure because surely the fact that there were three Special Forces battalions only was taken into account while establishing the Special Forces Regiment. The new Army Chief later called the Commander of the disbanded Special Forces

Headquarters to his office and told him, "The *Gaon Boodas* (Village elders) from your Regiment had virtually blown up the roof top of my office till such time I agreed to scrap this new Special Forces Regiment".[12] General Vijay Oberoi's remarks on this retrograde decision were, *"In the past, the Special Forces have been stymied by successive Colonels of the Parachute Regiment for short-term gains."*[13] He rightfully felt that there is no place for "narrow regimental loyalties" in a professional army. Needless to mention, that the strategic, operational and tactical setback because of this disbandment was considerable to the Army.

In Indian Army, the Parachute units and Parachute (Special Forces) are housed in the same Regiment; 'The Parachute Regiment'. Ironically, the Airborne Forces that have a distinct and important role at the operational, strategic and tactical levels began concentrating more on conversion to Special Forces. Cases were projected to Army Pay Commissions for equating the pay and allowances of both types of forces, but these were turned down by successive Army Chiefs. In 1999, the Perspective Planning Directorate, Army Headquarters had opined, *"By their very nomenclature, the Parachute (Special Forces) Battalions are unique. Therefore, there is a need to de-link and distinguish them from other similar organisations. While some of the tasks that they may perform may be similar to those of regular Infantry / Parachute Battalions, the similarity ends here. Unless this uniqueness is accepted and enforced in all aspects of organisation, equipment, training and administration of these units, they may not achieve their potential".*[14]

In 2002, a presentation was made to Lieutenant General RK Nanavatty, then Northern Army Commander, for converting the Parachute Brigade to Special Forces.[15] General Nanavatty's response was, *"I find the vision blurring in certain quarters on the issue of Parachute and Parachute (Special Forces) units. I am very clear that a Parachute Battalion is simply an infantry battalion in airborne role and has nothing in common with a Special Forces Battalion…. As regards the Parachute Brigade, I view them as a rapid reaction force to be used within and outside the country".* He added that the Parachute Brigade should have been first responders to the massive earthquake that had occurred in Gujarat. In 2009, when General Deepak Kapoor, then Army Chief visited the Parachute Brigade, the sole demand was for converting the Parachute Battalions to Special Forces. When the Chief said he needed the Parachute Brigade, response was that the Chief could raise more Parachute Units. But then the Chief responded that the moment new Parachute Units were raised, they too would start vying for converting to Special Forces.

With the proposal to establish a Special Operations Command/Division, the military Special Forces are being integrated into the new organisation. This would permit the airborne troops to retain their individual entity. It must be acknowledged that airborne operations are at a distinctively separate level, whereas, within Special Operations are the more focussed operations that are undertaken by Special Forces. It is not without reason that the US maintains its airborne divisions separate from the Special Operations Command. In fact, the airborne troops provide volunteers for SOCOM, who have to undergo rigorous selection process.

The Future

As a regional power, progressing towards becoming a global power, India would need power projection capabilities in future perhaps more than now. There is no doubt that high air defence environment threatens airborne operations but such operations need not be at the outbreak of hostilities. What about degrading enemy surveillance and air defence capabilities optimising futuristic technologies (cyber, electronic, space) together with special operations, not just aerial suppression, to create a corridor for airborne operations for specific period of time. Besides, are we looking at airborne operations only against Pakistan and China? What about Out of Area Contingencies (OOAC) and other tasks discussed above? Not many know that when Maldives

had asked for assistance, then Prime Minister Rajiv Gandhi tasked the National Security Guard (NSG) for it but Inspector General (Operations) of the NSG told him that NSG was not trained in parachuting and if Male airfield was held, they would have to fly back wasting hours. That is how the task was given to the Parachute Brigade. It is for similar reasons that PLA is retaining its 15th Airborne Corps, and Nepal, Bangladesh and Sri Lanka maintain airborne capability. There may also be occasions where India may have to undertake operations in concert with strategic partners, with or without formal military alliance. We must also acknowledge that such airborne capability cannot be recreated when emergencies arise. As for the Special Forces Division, it is not a game of numbers, and there are enough Special Forces in the country anyway. At a recent seminar 'Future Contours and Trends in Warfare' held at New Delhi on 06 Sep 2017, Lieutenant General DS Hooda, former Northern Army Commander highlighted the poor state of heliborne training in infantry battalions due to lack of helicopter effort. The parachute battalions can perform such tasks very well. On balance, prudence lies in retaining the parachute brigade and parachute battalions for airborne tasks.

Conclusion

The viewpoint that airborne operations are a thing of the past is gross misnomer. The mere fact that four countries maintain divisional or above level airborne forces, and 48 countries maintain these forces at brigade or smaller level is proof enough to the contrary. The single lift capability should not be inhibiting factor either; China's 15th Airborne Corps has single lift capability with military aircraft of only one brigade at a time. We must also acknowledge that such airborne capability cannot be recreated when emergencies arise. India will continue to need airborne forces in the foreseeable future. Our parachute brigade and parachute battalions must be maintained and nurtured for airborne tasks. This capability should not be mixed up with the Special Operations Command/Division that is being established.

Endnotes

[1] 'Airborne Operations', GlobalSecurity.org, https://www.globalsecurity.org/military/ops/airborne.htm

[2] 'Do Pakistan Armed Forces Lack Dedicated Airborne/ Airborne/Paratrooper Division???, 'Pakistan Defence', September 12, 2017, https://defence.pk/pdf/threads/do-pakistan-armed-forces-lack-dedicated-airborne-paratrooper-division.432568/

[3] Ibid.

[4] Ibid.

[5] 'Airborne Operations', GlobalSecurity.org, https://www.globalsecurity.org/military/ops/airborne.htm

[6] 'The Future of Airborne Forces in NATO', NATO Defense College Conference, Rome, Italy, 11-12 April, 2013, https://www.files.ethz.ch/isn/166780/Report_FutureAirborneForcesNATO_Lasconjarias.pdf

[5] 'Do Pakistan Armed Forces Lack Dedicated Airborne/ Airborne/Paratrooper Division???, 'Pakistan Defence', September 12, 2017, https://defence.pk/pdf/threads/do-pakistan-armed-forces-lack-dedicated-airborne-paratrooper-division.432568/

[7] 'The Future of Airborne Forces in NATO', NATO Defense College Conference, Rome, Italy, 11-12 April, 2013, https://www.files.ethz.ch/isn/166780/Report_FutureAirborneForcesNATO_Lasconjarias.pdf

[8] 'Airborne Operations', GlobalSecurity.org, https://www.globalsecurity.org/military/ops/airborne.htm

[9] Ibid.

[10] Saikat Datta, 'Special Forces Circus', Outlook, November 08, 2004, https://www.outlookindia.com/magazine/story/special-forces-circus/225600

[11] Ibid.

[12] P C Katoch and Saikat Datta, 'India's Special Forces – History and Future of Indian Special Forces, Vij Books India Pvt Ltd, New Delhi, pp 112

[13] Saikat Datta, 'Special Forces Circus', Outlook, November 08, 2004, https://www.outlookindia.com/magazine/story/special-forces-circus/225600

[14] PC Katoch and Saikat Datta, 'India's Special Forces – History and Future of Indian Special Forces, Vij Books India Pvt Ltd, New Delhi, pp 48

[15] PC Katoch and Saikat Datta, 'India's Special Forces – History and Future of Indian Special Forces, Vij Books India Pvt Ltd, New Delhi, pp 117

@**Lieutenant General PC Katoch, PVSM, UYSM, AVSM, SC (Retd)** is a veteran Special Forces officer, a leading defence analyst, a visiting fellow in foreign think tanks who contributes regularly for Indian and foreign publications. He was an elected member of the USI Council from 2011 to 2016.

Chinese Military's Perspective on the Indian Military Strategy

Brigadier Iqbal Singh Samyal@

Introduction

Since the 1990s, India and China have invested in a host of confidence building measures, including agreements and protocols, to maintain peace along the disputed borders. The Chinese military, as an important pillar of the Chinese political structure, has considerable influence on Chinese perceptions on India. This has been borne out by the recent developments along the India-China border. In this context, understanding the Chinese military's perspective of the Indian military strategy is an important constituent of interpreting Chinese outlook towards India.

The Science of Military Strategy or Zhanlue Xue is an influential military publication periodically published by the PLA's Academy of Military Science (AMS) since 1987. This article is primarily based on the review of Indian military strategy carried out in the Zhanlue Xue 2013 (hereafter referred to as ZX 2013), available, as of now, only in Chinese language.

The Overall Context

The Chinese military's perspectives of the Indian military strategy is not divorced from the overall strategic environment. Historical biases and contemporary issues, often termed as six "Ts"[1] by Chinese analysts, coalesce with the Chinese strategic assessment, in which Comprehensive National Power (CNP) plays a major role, to influence Chinese views on India. Though dated, Pillsbury (2000)[2] contains a short review of Chinese views on India at the turn of the century. In 1990, while comparatively India figured low on the CNP index, Indian military strength was considered significant in comparison to other elements of national power. This is echoed in more contemporary analyses, with one Chinese analyst terming it as India's "unusual enthusiasm for strengthening and upgrading its military capability"[3] particularly in the naval and strategic fields. Apprehensions related to India being part of an Asian balance of power system to 'contain' China also play on the Chinese mind.

Even amongst the Chinese analysts, the defence related community is more likely to assume a hard line viewpoint[4] (probably applicable to all countries) and in some opinions, in comparison the military has a greater say in the policy towards India.[5] Lastly under the current leadership, Chinese assertiveness and self-perceptions have undergone a sharp change buoyed by the rapid economic rise and the pace of military modernisation. The Chinese perspective on Indian military strategy reflected in the ZX 2013 has to be viewed in this context.

The Science of Strategy (ZX 2013) and Indian Military Strategy

The ZX 2013 briefly analyses the military strategy of the 'contemporary world's big countries' namely USA, Russia, Japan and India.[6] It traces the evolution of Indian military strategy since Independence and then gives out the prominent characteristics of the strategy.

The ZX 2013 reviews the development of Indian military strategy in three phases from Independence till the end of the Cold War.[7] It analyses that in the first phase (1947-1960), due to the 'economy first' policy, the military strategy was 'limited offensive' (youxian jingong) towards Pakistan, as it was viewed as a direct threat, and 'territorial expansion' (lingtu

kuozhang) towards the India–China border. The second phase (1960–1970), after the 1962 conflict, led to defence being given priority. The inflow of aid and support from both the US and USSR and improved military capability led to 'military expansion thought'. This phase witnessed the formulation of the 'two front expansion' (*liang xian kuozhang*) policy and 'West offensive North defensive' (*xi gong bei fang*) guideline. The third phase (1970s and 1980s), after the 1971 Indo-Pak War led to the 'pattern of Indian hegemony in South Asia becoming established'. Changes in the international situation, withdrawal of some powers from the Indian Ocean Region and with the land strategic intent being realised, the strategic orientation increased towards the Indian Ocean leading to the formulation of the military strategy of 'defend land control sea' (*bao lu zhi hai*).

The period after the Cold War, in Chinese perception, witnessed change to 'regional deterrence' (*diqu weishe*) from 'regional offensive' (*diqu jingong*) strategy, implying that from aiming to capture territory or destroying enemy forces, a region covering area from the Himalayas to the Indian Ocean and Myanmar to Iran, was sought as a circle of deterrence from outside interference or influence.

According to the ZX 2013, the 21st Century has seen an increase in India's CNP with military strength surpassing the South Asian nations. The ZX 2013 analysis of this period, somewhat mirror images, the Chinese theoretical military strategic structure on the Indian military strategy.[8] It states that a large scale total war *(da guimo quanmian zhanzheng)* with either China or Pakistan is less probable and with growing terrorism, separatism and military operations other than war (MOOTW) threats, the possibility of 'mid to small scale limited boundary conventional war' becomes more probable. This perception has led to the strategy of 'regional deterrence' acquiring a new offensive intent of 'punitive deterrence' *(chengjie weishe)*. In their view, the Indian strategic intent is to 'win high tech limited conventional war under conditions of nuclear deterrence' *(da yinghe weishe tiao jinxia de youxian zhanzheng)*. Under this intent, the strategic objectives for India (zhanlue mubiao), in their perception are – primacy of politics, flexible military employment and influencing enemy's anti-India policies facilitating compromise on favourable terms. This strategy *(zhanlue zhidao)* requires adopting a form of preemption or active initiative *(jiji zhudong)* to gain initiative by striking first *(xian fa zhiren),* and not waiting for the enemy to enter borders, thereby seizing favourable position and preventing large scale offensive by the enemy. The operational guidance *(zuozhan zhidao),* in their view, is of joint operations by three services and the strategic deterrence guidance *(weishe zhidao)* is combined nuclear and conventional deterrence with conventional military strength as the offensive 'spear' and nuclear strength as the defensive 'shield'.

The ZX 2013 summarises four main characteristics of Indian military strategy[9]; strong regionalism *(diyuanxing)* or geopolitics, comprehensive inheritance *(jichengxing),* limited offensive intent and all round deterrence. The first characteristic reflects the Indian geostrategic outlook of being the center of the South Asian sub-continent, and using it as a strategic base for controlling the Indian Ocean. The second characteristic reflects not only the inheritance of British territory but also the British 'expansionist military thought'[10] with the "India centric theory" *(yindu zhongxin lun)* having Kashmir, Nepal, Sikkim, Bhutan and Assam as "Inner line of Indian defence" and Tibet as 'buffer state' in its sphere of influence. In present context, the ZX 2013 cites the Nehruvian policy of having a 'security inner circle' encompassing the sub continent and Indian Ocean. The third characteristic is based on the premise that Indian national strategic aims are – dominating South Asia, controlling Indian Ocean and striving to be a world class powerful nation *(zhipei nanya, kongzhi yinduyang, zheng dang shijie yiliu qiangguo;* a phrase commonly found in Chinese writings to describe Indian strategy). This makes the Indian military strategy offensive in intent even though it is claimed to

be defensive. The past wars and other developments in the sub-continent, including 'provoking' the
1962 India-China conflict, are quoted to substantiate this intent. Further, in their perception, the Indian offensive intent is increasing with increase in national power and military strength. The fourth characteristic of overall deterrence refers to the use of deterrence in every sphere to compensate for the contradiction between hegemonic ambitions and limited national power. India, it states, has strengthened ties with big powers like the USA and Japan after the Cold War. India in their view adopts a 'dissuasive' *(quanzu)* deterrence towards China and 'punitive' *(chengfa)* deterrence towards other South Asian nations.

Table I summarises the Chinese military perspective on Indian military strategy in various time periods as stated in the ZX 2013. Though the latest doctrinal developments are quoted more often, contemporary Chinese writings when convenient often cite the strategy of previous periods. There are shared viewpoints and phrases in the ZX 2013 analysis and other Chinese military articles reflecting a common military thought process about the Indian military strategy.

Table I : Summary of Chinese Perspective

Time Period	National Strategy Pattern	Military Strategy	Strategic Guidance	Operational Guidance/
1947-60		Limited Offensive (West) Territorial Expansion		
1960-70		Two Front Expansion	West Offensive North Defensive	
1970s & 80s After Cold War 21st Century	Dominate South Asian Subcontinent, Control Indian Ocean, and Strive to be a world class power	Defend Land Control Sea Regional Deterrence Regional Deterrence with Dissuasive and Punitive Intent Combined Nuclear and Conventional Deterrence	Active Initiative (Strike first to gain initiative) Offensive Defence	Joint operations, Manoeuvre Warfare and Information operations

Other Chinese Military Viewpoints

The ZX 2013 is a publication of the PLA's Academy of Military Science. At least two other articles by researchers from the PLA's National Defence University (NDU), an influential military institution, reflect similar viewpoints and phrases indicating a common thread in the military's perceptions about Indian military strategy. Similar to the ZX 2013, the first article mentions Indian hegemonic designs in South Asia and Indian Ocean while tracing the evolution of Indian military strategy using similar phrases, 'limited offensive', 'two front offensive', 'defend land control sea', 'regional deterrence' and 'punitive deterrence'[11]. The second article by a Professor in the Research Department of the PLA's National Defence University[12] reflects some additional concerns while sharing viewpoints with the ZX 2013. It commences with the same phrases, as in the ZX 2013, to describe Indian strategy "based in South Asia, controlling Indian Ocean and striving to be a world class powerful nation".[13] It reiterates the formulation of aiming to 'win high tech limited conventional war under conditions of nuclear deterrence', 'punitive deterrence', active initiative and gaining initiative by striking first. The offensive intent of Indian military strategy is even more pronounced in the second article quoting the 'Cold Start' *(leng qidong)* doctrine. It covers in fair amount of detail the strengthening of strategic deterrence in the nuclear and space domains, the modernisation of the armed forces, developments in the individual services and the ever increasing military diplomacy between India and other advanced armed forces. The key aspects highlighted in the article are that in recent years, India is expanding influence towards the Asia Pacific region and the formulation of a combined land sea strategy

which includes; strong deterrence and deployment towards Pakistan, active involvement in Central Asia, 'infiltrating military strength' towards South West Asia, and striving to get an acknowledged place among big powers. It states that India using the 'Towards East Ocean Strategy' *(dongfang haiyang zhanlue),* wants to control the Indian Ocean as well as have expeditionary capability towards the Asia-Pacific region thereby expanding 'forward defence'. This reflects the rising Chinese concern about Indian military strength in the Indian Ocean as the growing arc of Indian and Chinese interests intersect in the Indo-Pacific region.[14]

China's rise has changed its self-perception and more significantly its interests, which are expanding outwards bringing new dimensions to the fore including the maritime, network and space domains.[15] Developments in the Indian military are closely monitored particularly in the strategic and maritime domains. Recurring themes in contemporary Chinese articles on Indian military are about increases in defence budget outlay, major defence acquisitions and the fact that India is the largest arms importer in the world, advances in strategically important defence technology fields like missiles and space, military diplomacy and training with other armed forces across the world. Chinese media highlights that India, with comparative ease has access to advanced weaponry and technology and diverse arms/weapons from the USA and Russia.[16] While acknowledging some strengths, the weaknesses highlighted are the defence industry, heavy reliance on imports from various countries and related logistics difficulties, and the inferior infrastructure along India's northern borders.[17]

Views on the Chinese Perspectives

The Chinese views on the Indian military strategy are coloured in historical and other biases, hence, do not objectively address Indian security concerns. It is not surprising that growing Chinese military power and its implications in the region are underplayed. The Chinese belief of Indian regional hegemony and expansionism, especially in the light of historical Chinese expansionism and unfolding events in the Asia-Pacific, should be taken as national narrative. ZX 2013 mirror images the Chinese strategic construct on the Indian military strategy, particularly in light of the developments in the 21st Century period. However this approach is not particularly unique to Chinese military writings.

In the 1950s, Chinese concerns were based on Tibet and the India-China border. Currently with growing maritime interests, China is becoming preoccupied with the Indo-Pacific and efforts to 'contain' China's rise. The Chinese concerns are accentuated by Chinese vulnerabilities in the region.[18] The Chinese military's apprehension of India aiming to 'control the Indian Ocean' plays into these fears. So much so that, while considering it a contemporary challenge, Chinese analysts trace India's ambitions in the Indian Ocean far back, ascribing them to Nehru's vision and KM Panikkar's writings.[19]

The overall analysis in the ZX 2013, looking at the likely future conflict scenarios, classifies border disputes and maritime conflicts at par, as middle to small scale and medium level intensity conflicts.[20] However, on the land borders, at the operational level, two important aspects of the Chinese views are highlighted. The ZX 2013 states that though Indian military posture towards China is overall defensive, but at the same time "is offensive for defence, actively strives for dominance in a part (area), combines continuous nibbling (*canshi;* at the border) during peace and by defence create conditions for offensive during war"[21]. The nibbling *(canshi)* or anti-nibbling *(fan canshi)* of borders is an old term which can be traced to Mao Zedong's time.[22] It finds currency even now as articulated by President Xi Jinping[23] and finds mention in the *PLA Military Terms* definition of the Border Defence Forces.[24] The second aspect is the marked 'offensive defence' intent attributed to the Indian military strategy in the contemporary period. This outlook has been also echoed in other commentaries[25] as some

Chinese analysts posit that 'Indian military could occupy unoccupied areas' to gain favourable negotiating position post conflict. While on land, Chinese views acknowledge that strategically the military outlook towards China is defensive; at the operational and tactical level the view is that the offensive intent is increasing with growing military strength.

Conclusion

The salience of the ZX 2013 analysis is that it reflects a common military framework within the PLA looking at Indian military strategy. Despite its shortcomings, it provides a vital window into the PLA's outlook towards the Indian military. Aside from the strategic and operational implications, the framework provides a basis for identifying aspects which need to be addressed by military diplomacy in order to improve the efficacy of the confidence building measures between the two countries. It also underscores the need for faster military modernisation, both at sea and on land, to balance growing Chinese influence in the region.

Endnotes

[1] "Territorial disputes, Tibet, threat perceptions, trilateral relationships (implying India China Pakistan, India China USA and India China Russia), trade, India's accession to NPT" in Jing Dongyuan, *India's Rise after Pokhran II: Chinese Analyses and Assessments,* Asian Survey, Vol.41, No.6 (Nov-Dec 2001), pp.978-1001.

[2] Michael Pillsbury, *China Debates the Future Security Environment,* National Defence University Press, Washington D.C., 2000.

[3] Maj Gen Pan Zhenqiang (Retd), *The Rise of India and China-India Relations,* in Dipankar Banerjee & Jabin T. Jacob, eds., *Military Confidence-Building and India-China Relations: Fighting Distrust,* Pentagon Press, New Delhi, 2013, p.31.

[4] Jing Dongyuan, *op cit.*

[5] Linda Jakobson and Dean Knox. *New Foreign Policy Actors in China.* SIPRI Policy Paper No 26. p.13. Accessed at http://books.sipri.org/product_info?c_product_id=410 on 07 Oct 2016.

[6] Shou Xiaosong, ed., *Zhanlue Xue (The Science of Military Strategy),* 3rd ed., Academy of Military Science of the People's Liberation Army, Military Science Publishing House, Beijing, 2013, p. 50.

[7] *Ibid.* pp.64-66.

[8] As per the *Zhanlue Xue* 2013, the Chinese strategic system, though not fully implemented, consists of three levels and five categories: national strategy- military strategy- service strategy, theatre strategy, significant domain strategy (nuclear, space & network). The theoretical strategic structure varies from text to text but commonly involves some or all of these terms: strategic purpose/aim(*mudi*), strategic tasks (*renwu*), strategic guidelines (*fangzhen)*, strategic direction (*fangxiang),* strategic guidance (*zhidao)*, strategic means (*shouduan*), strategic layout/deployment(*buju/bushu).Ibid.* pp.5-8 & *Zhongguo Renmin Jiefangjun Junyu (PLA Military Terms)*, Military Science Publishing House, Beijing, 2011, pp.52-62.

[9] *Ibid.* pp.66-68.

[10] A point also made before in Michael Pillsbury, *op cit.,* p.147.

[11] Abstract of Xiang Ruisheng, *Yindu xiandai junshi zhanlue de yanbian* (Development of Contemporary Indian Military Strategy), Journal of NDU, No.5, 2006 accessed at http://wenku.baidu.com/view/1aec3fa865ce0508763213b1.html on 07 Oct 2016.

[12] Xinhua Wang, *"guofang daxue jiaoshou: yindu quanfangwei tiaozheng junshi zhanlue* (NDU Professor: India All-Around Adjusts Military Strategy)", accessed at http://news.xinhuanet.com/mil/2008-11/13/content_10351945. htm on 07 Oct 2016.

[13] The phrase commonly used is *zhipei nanya, kongzhi yindu yang, zheng dang shijie yiliu qiangguo.* Often the term *zhipei nanya* (dominate South Asia) is replaced by lizu nanya (based on South Asia).

[14] Toshi Yoshihara, *Chinese Views of India in the Indian Ocean: A Geopolitical Perspective,* Strategic Analysis, 36:3, 2012, pp.489-500.

[15] Information Office of the State Council, The People's Republic of China. *China's Military Strategy (National Defence White Paper) 2015.* Accessed at http://eng.mod.gov.cn/Database/WhitePapers/ on 08 Aug 2015.

[16] Zhongguo Junwang, *"yindujun gou: zuo-you feng yuan zhong zai pingheng",* 21 November 2015, Accessed at http://www.81.cn/bqtd/2015-11/21/content_6779354.htm on 07 Oct 2016.

[17] Xinhua Wang, *"zhuanjia touxi:yindu junshi shili daodi you duo qiang,* (Expert Analysis: Indian Military Power Finally has many Strengths)"accessed at http://news.xinhuanet.com/mil/2010-03/31/content_13272946.htm on 07 Oct 2016.

[18] Michael Pillsbury, *The Sixteen Fears: China's Strategic Psychology,* Survival: Global Politics and Strategy, 54:5, pp. 149-182.

[19] Toshi Yoshihara, *op, cit.*

[20] Shou Xiaosong, ed., *op. cit.,* p.99.

[21] *Ibid.* p.67.

[22] Wang Qitian, Tian Dongliang & Gong Xiaogang, *Mao Zhuxi Bianfang Sixiang Yanjiu* (Research on Chairman Mao's Border Defence Thought), Mao Zedong Thought Study, Vol 30 No 1, November 2013,pp.71-74.

[23] Zhongguo Junwang, *"Xi Jinping: jiaqiang fan canshi, fan fenlie, fan kongbu douzheng* (Xi Jinping : Strengthen Anti-Nibbling, anti-Separatism, Anti-Terrorism Struggle)",02 January 2014, Accessed at http://www.81.cn/jwgd/2014-01/02/content_5717070.htm on 07 Oct 2016.

[24] *PLA Military Terms 2011,* op.cit., p.334.

[25] Jing Dongyuan, *op cit.* p.990.

@**Brigadier Iqbal Singh Samyal** was commissioned into the KUMAON Regiment in December 1990. He has served as India's Defence Attaché in the Embassy of India, Beijing from October 2011 to November 2014. Presently, he is commanding an Infantry Brigade.

China's Energy Diplomacy and Changing Contours of Security Structure in the Indian Ocean: New Scramble for Sea Power

Ms Dhanwati Yadav[@]

Introduction

Architecting international economy through global trade, competitiveness to expand sphere of influence and military posturing have consequently heightened the strategic value of the Indian Ocean. As a result, the security structure in the Indian Ocean is reaching at the brink of sharp transformation with the proliferating demand for Sea Power. By turning words of 19th Century American naval strategist Alfred Mahan into reality, the Indian Ocean has come on the forefront on the geopolitical map of the world as a major 'game changer' in allotting power to different contestants.[1] The Indian Ocean Region (IOR), world's third largest water body has garnered mounted importance from the geopolitical and economic point of view for the last two decades.[2] The tectonic shift in the race for wielding power from the Atlantic Ocean to the Asia-Pacific, more certainly to the Indian Ocean involving emerging actors besides the traditional ones has vivified this scenario. The Indian Ocean has emerged as a centre theatre for the challenges of the 21st Century.[3] The existing interest of the traditional powers in the region exhibits the continual geo-strategic vitality of the region for the world. It provides critical sea trade routes that connect the Middle East, Africa, and South Asia with the broader Asian continent to the east and Europe to the west. Some most important strategic chokepoints of the world that drives more than 50 per cent of the world's maritime oil trade figure in this region.[4] Some 36 million barrels per day – equivalent to about 40 per cent of the world's oil supply and 64 per cent of oil trade travel through the entryways into and out of the Indian Ocean, including the Straits of Malacca, Hormuz and the Bab-el-Mandeb.[5] Today, almost 90,000 vessels in the world's commercial fleet transport 9.84 billion tonnes per year. This represents an almost four-fold increase in the volume of commercial shipping since 1970.[6]

On the security realm, the non-traditional security challenges like terrorism, piracy, smuggling activities, possession of weapons of mass destruction, environmental crisis etc. are some matters of stern concern which draw collective attention of the major powers. There are seven key chokepoints in the IOR: the Lombok Strait, the Sunda Strait, the Malacca Straits, the Strait of Hormuz, the Suez Canal, Mozambique Channel, and the Bab-el-Mandeb. If these strategically vital key points fall under wrong hands, the future of the IOR will be encountering uncertainty having a crippling effect on dependent economies.[7]

The present Sino-Indian neo-rivalry on the Ocean waters has triggered various questions marking new contours of power equations. The strategic dynamic is changing with the emergence of China and India rising as naval powers at a moment of relative American decline.[8] Undoubtedly, a powerful China in any manner can potentially jeopardise India's strategic interests and national security. To abate China's growing influence, India strictly needs to revive its maritime policy while introducing slight modifications in its foreign policy as well with the aim of consolidating its alignment with the littoral states.

India's Historical Maritime Imperatives and Policy

Our present is unconditionally attached with the remnants of our history. Historical archives unveil that the inception of the golden phase of Indian seafaring is marked with the very dawn of the Indus Valley Civilization. India was much affluent and secure when she was chiefly connected to the world through 'Sea'. India has evolved as a vibrant and rich maritime culture over the centuries. Indian maritime performance has traditionally been extended from Gujarat's coastline (*Lothal*) in the west to the *Kalinga* in the east. Ancient Indian civilisation had recorded activities like building ships, navigating the sea and monopolising international trade both by sea and land. The unfortunate fact is that our maritime history is not documented in a requisite manner. The available literature pertaining to maritime records is largely written by western historians. Admiral Arun Prakash, former Chief of the Indian Navy summarises this phenomenon as ''one of the reasons for our maritime blindness is that as a nation we have been indifferent to the reading as well as writing of history; both our own and that of others. Whatever little history we do study, has been recorded by western historians who have made full use of the literary license to give it the slant that they wished to''.[9]

Pandit Jawaharlal Nehru, India's first Prime Minister had concluded – owing to the history, *"We cannot afford to be weak at sea. History has shown that whoever controls the Indian Ocean has, in the first instance, India's sea-borne trade at her mercy and in the second, India's very independence itself"*.[10] India has since claimed the Indian Ocean as India's ocean and considers its legitimate role in the security of the Ocean region. Following its *Monroe Doctrine,* it strictly discourages the ingression of the external powers in the Indian Ocean.[11] India has played a much active role in the Indian Ocean since the mid-1980s. When it is a matter of security in the Indian Ocean, India considers no 'ifs and buts'.

During 1983 political crisis in Mauritius, India although didn't intervene militarily to prevent a feared coup but on the contour of security facilitated a political solution to the crisis favouring large numbers of Indo-Mauritians that was termed as *'Operation Lal Dora'.* This had validated India's special role in the region.[12] India's security role in Seychelles in 1986 crystallised over its response during a series of coup attempts made against President Rene led by the Seychelles Minister of Defence, Ogilvy Berlouis. Proving its might and intent to establish peace, India had executed *'Operation Flowers are Blooming'* in Seychelles, when on a request by then-President Rene, Indian Prime minister Rajiv Gandhi instructed the then Indian Chief of Naval Staff, Admiral Tahiliani, to dispatch the frigate INS *Vindhyagiri* to avert a coup.

Under the Prime Ministership of Rajiv Gandhi in 1988, the Indian forces were despatched to the Maldives following *'Operation Cactus'* to foil a coup targeting the then President of Maldives, Maumoon Abdul Gayoom sponsored by Sri Lankan Tamil militants on behalf of the Maldivian businessman Abdulla Luthufi. That was possibly the first time when India learnt what 'out-of-area contingencies' were all about and secured itself as a predominant regional power.

During *'Operation Rahat'* in 2015, India showed exemplary bravery and magnanimity. The Indian Government spared no efforts in evacuating Indians from Yemen as fighting raged between the Houthi rebels and the Yemeni Government supported by aerial bombardment from the Saudi-led coalition. India's effort was so effective that over 26 countries including the US and UK had requested for Indian assistance in evacuating their citizens from Yemen. Operations undertaken by India to establish peace in the IOR are tabulated below:-

Classical Attempts by India to Establish Peace in the Indian Ocean Region (IOR)

Peace Maker Country	Country in Crisis	Year of Operation	Operations	
India	Mauritius	1983	Operation Lal Dora	
India	Seychelles	1986	Operation are Blooming	Flowers
India	Sri Lanka	1987	Operation Pawan	
India	Maldives	1988	Operation Cactus	
India	Yemen	2015	Operation Rahat	

What Fuels Sino-Indian Tension

The ascent of two continental powers, India and China following their swelled economies and military modernisation has triggered a new wave of power projection in the modern history of the Indian Ocean.[13] Discord and tension between India and China has been registered traditionally beyond the borders and the existing confrontation doesn't manifest any new episode of anonymity in the history of Sino-Indian relations. Importantly, their augmented competition is redefining the old power equations in the Indian Ocean while expressing their huge strategic interests. According to James Holmes and Toshi Yoshihara, India and China's quests for energy security, as well as their great-power aspirations have somehow obligated the two countries "to redirect their gazes from land to the seas".

As India claims the Indian Ocean as India's Ocean, an overriding China in the IOR is predictably becoming a futuristic threat for India. In 2015, Prime Minister Narendra Modi had pronounced that Indian Ocean is at the top policy priorities of India. Chinese Peoples' Liberation Army Navy (PLAN) signals the landing of a serious naval power in the world by launching the Shandong or CV-001A, the first 70,000-tonne indigenously produced aircraft carrier likely to be operational by 2020. Notably, President Xi Jinping has launched defence reforms which are taking away resources from land to air and naval power. Chinese naval presence in the Indian Ocean and the larger Pacific is on the increase in an unprecedented way and a blue water navy is seemingly a prerequisite for Chinese ambitions.[14] The PLAN is emerging as a serious challenger and, therefore, forcing India to re-build its naval muscle. It is not a matter of surprise that India is investing in ramping up its naval power. Indian Navy has drawn explicit aspirations for the Indian Ocean with the support of the Government. Unlike China, India has been operating an aircraft carrier since 1961, but delays and shoddy planning continue to mar Indian aspirations to be a prominent power in the region. India's first indigenous aircraft carrier, the 40,000-tonne INS *Vikrant,* was launched in 2013, but its commissioning has been delayed to

2020.[15]

Source: The Economic Times, April 2017

India has so far ripened its geographical dividends by constructing traditional proximity with other nations in the IOR. India enjoys cordial and progressive relations with the littoral states of the Indian Ocean; primarily with Mauritius, that is also known as 'Little India' because of the substantive presence of Indian diaspora (nearly 68 percent) and considerably a closest ally of India in the Indian Ocean.[16] Above all, India is geographically located at the Ocean's centre and privileged by having island territories. Despite this geo-strategic advantage, India is feeling the heat of China's naval expansionism.

Containment of India has been "China's Great Game".[17] It is a considered view that strategically, China retains interest in the IOR for geo-economic (energy security) and geopolitical (restraining India) objectives. After executing its 'String of Pearls' strategy through ports development projects in Gwadar, Hambantota, Myanmar and Bangladesh, it is further planning to encircle India by wooing other littoral states in the region.[18] In case of Sri Lanka, Chinese Foreign Direct Investment (FDI) is roughly five times that of India's investment. Other island nations like Mauritius and Seychelles are setting new instances of receiving affluent Line of Credits (LoCs) from China. Seychelles and Mauritius are regarded as ideal locations for China as a lot of its oil shipments from the Gulf region and its containers containing manufactured goods destined for Europe and America passes through this region.

India's maritime strategy fundamentally stresses over the build-up of its naval-infrastructure which includes a six fold strategy of increasing its naval spending, strengthening its infrastructure, increasing its naval capabilities, active maritime diplomacy, naval exercises in the Indian Ocean and keeping open the choke points. To materialise its maritime objectives, India had introduced the "Maritime Agenda 2010-2020" (MA-20) that has limited impact because of its singular emphasis on ports and harbours leaving behind entire arrangement of infrastructure in the 'maritime domain'.[19] According to *Stockholm International Peace Research Institute (SIPRI)* report, whereas China's military expenditure figure for 2002–11 increased by 170 per cent, India's increased by 59 per cent merely. India does not appear to be capable of advocating a 'containment-cum-counter-encirclement' policy against China in the Asia-Pacific or in the Indian Ocean. Indian Navy has to be made capable of ensuring India's strategic interests in the IOR and for this a sound national security strategy has to be enumerated.

China's maritime strategy, 'Maritime Silk Road (MSR)' founded by President Xi Jinping demonstrates China's Indian Ocean strategy of building an empire of Chinese built ports, initially as economic projects leading gradually to achieving strategic and military ends. Beyond that China is striving to gain mining rights in the central IOR which will eventually became an excuse for its naval presence in the area.

China is extremely vulnerable owing to dependence upon IOR sea lanes of communication (SLOCs) that are straddled by India and pass through narrow choke points at the northwest and northeast corners.[20] Since 2014, Chinese intelligence-gathering ships and submersibles have begun making regular forays into the Indian Ocean. Notably, China has also held its first military exercise encompassing the eastern Indian Ocean - until now such exercises have been only in the Pacific.[21] According to a Pentagon report China initiated the building up of Djibouti base in early 2016, near the US special-operations outpost, Camp Lemonnier. In the similar vein, Marine General Thomas Waldhauser, Chief of US Africa Command, said "you would have to characterise it as a military base. It's a first for them and they've never had an overseas base".[22] C Raja Mohan, the Director of Carnegie India states, "Bases is going to be the name of the game in the Indian Ocean, and that game is going to be pretty attractive." Experts believe that whether or not China is willing to show its intent to secure its permanent presence in the IOR so far, a semi-permanent presence of China in the region is not a matter of

denial, counting on its extraordinary power projection and renewed ties with the littorals in the region.[23] In turn, India will have to brace up for a new era of rivalry in the Indian Ocean.

Source: International Maritime Bureau

Strategic Matrix Positioning US as a Chief Defender

China is seen as a collective threat to India and the US especially when it is found denouncing the United Nations Convention on the Law of the Sea (UNCLOS) in the South China Sea. Traditional dominance of the US, regular claim of India over the Indian Ocean and atop overarching influence of China in the Indian Ocean in the 21st Century has formed a strategic triangle in the region. In a meeting of Indo-US Defence Joint Working Group held in 2007 at New Delhi, it was reported that both sides discussed the rapidly increasing Chinese naval presence in the Indian Ocean. During former US President Barack Obama's visit to India in 2015, a joint statement was issued, where particular attention was drawn to peaceful resolution of maritime territorial disputes and "freedom of navigation", with specific reference to the South China Sea.[24] The US appears incoherent in this context as the policy is missing and so far it has been unwilling in determining the extent of importance it needs to give to the IOR.[25]

On 13 Dec 2011, Chinese Defence Minister had officially announced that Seychelles had welcomed the Chinese Navy to establish facilities in order to resupply and recuperate international ships during escort missions. This had undoubtedly attracted worldwide media attention. As Diego Garcia is merely 600 km away from Seychelles in terms of geography, the US also expressed its deep concerns over this development besides India. However, it has been observed that the US is becoming less interested in policing the Indian Ocean.

The US warships are being transferred to the Pacific region. The most startling evidence that the US is out of the on-going game was the emergence of the Somali pirates between 2005 and 2011. Notably, a superpower like the US could be expected to handle it with a flick of the wrist. Instead, it was Indian and other navies that had to beat the pirates back.[26]

This sort of reluctant attitude can contribute to fostering power of China while boosting its strategic intents. A collective and active approach involving the US and India is desirable and urgently needed rather than undertaking indigenous actions to defeat the growing footprints of China. Constant and close surveillance over the footprints of China in the region is necessary to

check its strategic psyche. Interestingly, the US had recently sent a naval warship near an artificial island in the South China Sea as part of the first "freedom of navigation" operation under President Trump, a move China has denounced in the name of challenging its sovereignty in the region.

The US appears to be showing its inclination for India to emerge as a 'Net Security Provider' in the region. Such a move turning into reality can possibly give India an unparalleled leverage and somehow may prove fruitful for the interest of the US as well by shrinking the existing role of China in the IOR. In the backdrop of gradual wane of the power of the US Navy, India seems well positioned to be the principal net security provider in the region.[27] But, to attain this objective India solemnly needs to walk further. India, who regards the Indian Ocean as its 'backyard' or major 'sphere of influence' is imbibed by large geo-strategic interests. However, India at the moment is not capable of staging its requisite potential against China's 'containment-cum-counter-encirclement' policy directed towards India in the Asia-Pacific or in the Indian Ocean.[28] India needs to strategically reconstruct its internal and external might for ensuring her strategic interests.

Conclusion

The US Quadrennial Defense Review wrote about India's emerging role as a 'net provider of security in the Indian Ocean'. India's desired role of being the net provider of security in the IOR can only be sustained by growth in India's maritime capability. A strong shipbuilding (both warship and commercial ships) and shipping infrastructure is imperative for enhancing the maritime capacity of any country. If India strategically aims to exercise predominant influence in the IOR it needs to adopt an aggressive policy of engagement with the island nations of the region on an urgent basis. With regard to China, India wants to maintain (and not lose) its privileged diplomatic-security links with Indian Ocean States. It should seek to maintain clear military superiority over the Chinese Navy in the IOR. As Raja Menon puts it; 'just because we cannot [globally] compete with China does not mean we do not defend our interests in the Indian Ocean where we wish to attain naval supremacy'. Therefore, to secure its long-term strategic and national interests India should consolidate its position through internal balancing in terms of further upgrading its naval assets and external balancing by deepening ties with the island nations and in other sense with the US. By undertaking such mechanisms India can affirm the security of its strategic interests while attaining grand objective of establishing peace, tranquility and stability in the region.

Endnotes

[1] Kumar Ranjit, Island Nations: High stakes on high SEAS, (Africa Quarterly 2012)

[2] Albert Eleanor, 'Competition in the Indian Ocean' at https://www.cfr.org/backgrounder/competition-indian-ocean (2016) (accessed on 11 June 2017)

[3] Kaplan Robert, Center Stage for the Twenty-first Century: Power Plays in the Indian Ocean, Foreign Affairs, Vol. 88, No. 2, (2009) pp. 16-29, 31-32

[4] Jaishankar Dhruva, Indian Ocean region: A Pivot for India's growth. Brookings India (2016)

[5] "World Oil Transit Chokepoints," U.S. Energy Information Administration, (Nov 2014)

[6] Amit A Pandya, Rupert Herbert-Burns, and Junko Kobayashi, "Maritime Commerce and Security: The Indian Ocean," The Henry L. Stimson Center, (February 2011), p. 36.

[7] Singh Siddhartha, Security Outlook of Indian Ocean and India's Geostrategic interest in the IOR, India Foundation, New Delhi (2016)

[8] Mohan C Raja, "India's rise as an Asia-Pacific Power: Rhetoric and Reality", Australian Strategic Pacific institute, (2012)

[9] A Prakash, ''At Sea about Naval History,'' http://www.bharat-rakshak.com/NAVY/History/1600s/Prakash.html (accessed August 3, 2011). Also see, A Prakash, From the Crow's Nest (New Delhi: Lancer Publishers, 2007).

[10] Menon Shiv Shankar (Foreign Secretary), 'Maritime Imperatives of Indian Foreign Policy', Maritime Affairs 5/2 (Winter 2009), 15

[11] Brewster David, India's Ocean: The Story of India's Bid for Regional Leadership (Abingdon: Routledge, 2014)

[12] Brewster David & Ranjit Rai: Operation Lal Dora: India's Aborted Military Intervention in Mauritius, Asian Security, 9:1, (2013), 62-74

[13] Albert Eleanor, Op. Cit.

[14] (https://swarajyamag.com/magazine/the-dragon-in-the-indian-ocean-is-shaping-local-geopolitics-does-india-have-a-counter)

[15] (http://economictimes.indiatimes.com/articleshow/58390869.cms)

[16] (http://cf.orfonline.org/wpcontent/uploads/2015/03/Occasional Paper_60.pdf)

[17] M Nalapat, 'China's Great Game', Also M. Malik, 'China's Strategy of Containing India', *Power and Interest News Report* (6 Feb. 2006), available at http://www.pinr.com/report.php?ac=view_printable&report_id=434& language_id=1>; C. Griffin, 'Containment with Chinese Characteristics, Beijing Hedges against the Rise of India', Asian Outlook 3 (Sept. 2006)

[18] Kumar Ranjit, (2012), Op. Cit.

[19] Ghosh, PK and Naryan, Sripathy, Maritime Capacity of India: Strength and Challenges, Observer Research Foundation, (2012)

[20] Pathak Vidhan, China and Francophone Western Indian Ocean Region, Journal of Defence Studiesw,Vol 3. (2009) No 4

[21] Chaudhuri Pramit Pal, Making Waves in Indian Ocean: Modi building bridges to island states, available at http://www.hindustantimes.com/india/making-waves-in-indian-ocean-modi-building-bridges-to-island-states/story-kPGjODlHJO2 vlwgaaGhEdL.html (2015)

[22] 'The U.S military is worried about China building overseas bases right next to their own' at http://www.businessinsider.in/the-us-military-is worried-about-china-building-overseas-bases-right-next-to-their-own/articleshow/59042831.cms, (accessed on 2 June 2017)

[23] Bhaskar Uday, Strategic Sustainment? China's Ships, silk roads, and Indian Ocean presence, IHS Jane's Navy International, Vol. 119, (2014), Issue 10

[24] Choudhury Avinandan, India-US Naval Alliance: Chinese threat in Indian Ocean, available at http://www.dailyo.in/politics/india-us-naval-alliance-chinese-threat-indian-ocean/story/1/17780.html (2017)

[25] Brewster, David (2014), Op. Cit.

[26] Chaudhuri, Pramit Pal (2015), Op. Cit.

[27] Choudhury, Avinandan (2017), Op. Cit.

[28] Brewster, David (2014), Op. Cit.

@**Ms Dhanwati Yadav** is a PhD Research Scholar at Jawaharlal Nehru University. Her research concentrates on Mauritius Security Engagements with India and China.

Effectiveness of Prohibition of
Nuclear Weapons Treaty

Dr Roshan Khanijo[@]

Introduction

The call for banning nuclear weapons is not a new phenomenon. In fact, the mandate for the

elimination of nuclear weapons has existed since the invention of the bomb itself. Innumerable measures have been taken by the world community to turn back the clock to a prelapsarian state preceding the proliferation of nuclear weapons; however these efforts have had little success. There has been a tremendous amount of debate regarding the use of nuclear weapons. Realist school proponents believe in the maintenance of credible nuclear deterrence for the sake of maintaining sovereign boundaries and rights. While other theorists have opposed the need for such devastating deterrent mechanisms by citing the ethical and humanitarian costs of a nuclear arms race. A number of disarmament efforts like the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), Comprehensive Nuclear Test Ban Treaty (CTBT), Fissile Material Cut-off Treaty (FMCT), Strategic Arms Reduction Treaty (START) etc. have all lost their way due to the constant power plays being orchestrated by major powers and the increasingly volatile geopolitical situation. Another draft treaty on the "Prohibition of Nuclear Weapons" has been introduced in the United Nations on 07 July 2017, where 122 nations voted for banning nuclear weapons permanently. The hope is that, once the required 50 ratifications are achieved, the treaty will come into force within 90 days. But before determining the future of the treaty, it is necessary to first analyse the various factors surrounding it such as the prevalent environment, historical trends, current feasibility and the overall practicality of the draft treaty.

Current Environment

The positive facet of the nuclear environment is that there has been a drastic decline in the numbers of nuclear weapons. From its peak of 70,000 nuclear warheads in the mid-1980s, now the nine nuclear weapon states have a total of 14,935 nuclear weapons (in 2017) and the operationally deployed weapons being 4150.[1] However; the negative aspect is, none of these States is inclined to give up their nuclear assets in the near future, in fact they are involved in modernising and developing new variants which are more precise and lethal. A tremendous amount of money is being spent on the modernisation of these weapons by the USA, Russia and China. The US is expected to spend more than one trillion dollars on its arms development programme in the next 30 years and this will include the new Air Launched Cruise Missile (ALCM) known as the Long Range Standoff Missile (LRSM) and the Intercontinental Ballistic Missile (ICBM) fleet - the Ground Based Strategic Deterrent (GBSD), B-21 the new strategic bomber and Colombia class new ballistic missile fleet.[2] Similarly, the Russian Strategic Rocket Force is prioritising the deployment of multiple independently targetable re-entry vehicles (MIRVs) on its new RS-24 Yars (SS-27 Mod 2) mobile ICBMs, and it is also developing a new silo-based 'heavy' ICBM- RS-28 (Sarmat or SS-30), that can carry up to 10 MIRVed warheads. The Russians are also trying to develop the Borei SSBNs that will each carry 16 Bulava (SS-N-32) submarine-launched ballistic missiles (SLBMs) armed with up to six warheads.[3] Given this modernisation surge, the Chinese have also redoubled their efforts at upgrading their arsenal, in an effort to make it more robust and survivable. This effort at modernisation corresponds with their doctrine of assured retaliation, and they are leaving no stone unturned in trying to achieve parity with the US and Russia on all fronts. The maturation of new technologies has led to the

recent addition of road-mobile ICBMs, improved nuclear-powered ballistic-missile submarines, and MIRVs-capable silo-based ICBMs, as well as the ongoing development of hypersonic-glide vehicles and MIRV-capable mobile ICBMs, thus China is fielding a more capable nuclear deterrent force.[4] In addition to the modernisation efforts being made by these three countries, the current environment of geostrategic volatility can also be attributed to emergent nations, such as Pakistan which is currently lowering the nuclear threshold by their policy of Tactical Nuclear Weapons (TNWs), and North Korea whose belligerence and volatility is a cause of global concern. Given the current environment, it is evident that major Nuclear Weapon States (NWS) as well as newly declared NWS are inclined towards continuing their development of nuclear resources for ensuring the security of their sovereign boundaries. Realistically speaking, therefore, there are apprehensions regarding the plausibility of successfully prohibiting the use of nuclear weapons.

Treaty on Prohibition of Nuclear Weapons

Enthusiasts of the Treaty believe that *"The agreement was a victory for the United Nations and multilateralism,… Despite the resistance from Nuclear Weapons States, it was possible to adopt a treaty that reflects the historical aspiration from the large majority of the international community to ban the existence of such weapons…..This unprecedented step must be ascribed to the persistence of those who for the last 70 years have kept alive the hope of a world without nuclear weapons; to a diverse and plural coalition of governments and civil society actors who have not resigned themselves to the existence of such weapons."*[5] These enthusiasts, therefore, reinforce the fact that any use of nuclear weapons would be contrary to the rules of International Law applicable to armed conflict, and more importantly – would be a direct breach of International Humanitarian Law as well. As a counter mechanism, they suggest the establishment of a legally binding treaty that is verifiable, irreversible, and comprises of transparent mechanisms aimed at achieving a world free of nuclear weapons. While this is a tall order, enthusiasts believe that the Treaty tries to incorporate and deal with some of these concerns at the very least.

The Treaty currently has 20 Articles dealing with various aspects related to the prohibition of nuclear weapons. Article 1 entails that nations are never to, under any circumstances, develop, transfer, receive, use, assist, seek and allow any stationing/deployment of any nuclear weapons/nuclear explosive devices on its territory or any place under its jurisdiction.[6] There is also a 'Declaration' caveat in the Treaty (Article2) where States are supposed to submit to the Secretary General of the United Nations (within 30 days of their entry into force) their status on the nuclear assets, whether they possess, owned or controlled nuclear weapons/nuclear explosives devices and whether they had eliminated their nuclear weapons programme.[7] The States are also required to maintain the safeguards and obligations (Article 3) recommended by the International Atomic Energy Agency (IAEA). The States also need to provide credible assurance regarding the non-diversion of declared nuclear material away from peaceful nuclear activities as well as the absence of undeclared nuclear material (or activities as a whole), thus ultimately working towards the irreversible elimination of their nuclear weapons programmes altogether (Article 4). The Treaty further states that if a State possesses nuclear weapons or explosive devices then it needs to decommission and subsequently get them verified in a legally binding time bound plan. Lastly, the Treaty emphasises the fact that all these agreements should enter into force no later than 18 months after the date of initiating these negotiations.

The other parts are mainly concerned with the financial aspect of the Treaty, and how international cooperation and assistance can be given in terms of technical and material assistance to the affected party and how further amendments can be made to the treaty.

Weaknesses

After describing the primary characteristics of the Treaty it would be wise to prudently examine the lacunae that emerge while analysing it. The biggest weakness of this Treaty is that none of the NWS has endorsed it yet. The US, the United Kingdom and France expressed strong opposition to the Treaty in a joint statement made on 07 July 2017, where they stated that *"This initiative clearly disregards the realities of the international security environment. Accession to the ban treaty is incompatible with the policy of nuclear deterrence, which has been essential to keeping the peace in Europe and North Asia for over 70 years."*[8] They proceeded to elaborate by firmly denying the possibility of ever becoming a part of this Treaty. They conclusively declared that *"We do not intend to sign, ratify or ever become party to it…we would not accept any claim that this Treaty reflects or in any way contributes to the development of customary International Law."*[9] A second major flaw with the Treaty as noted by several academics is that "it lacks effective verification and compliance protocols, in addition to ignoring the reasons why States fail to comply to begin with… also historically, it can be stated that successful ban treaties have strong verification procedures as their foundation".[10] Therefore, the complete absence of redressal as well as review mechanisms casts aspersions on its potential efficacy as well as applicability. Thirdly, the Treaty also contains a caveat that clearly states that States should work to "irreversibly" eliminate nuclear weapons. This is a fundamental logical paradox given the volatility of the current world order. One cannot undo time or the effects of civilisational progress. Once a State has mastered the use and foreseen the potential applications of nuclear technology, how can it go back and irreversibly eliminate it. Furthermore, even with regards to developing redressal/review mechanisms, there are certain fundamental questions that remain unanswered, such as – which competent international authority would verify compliance? What if States do not agree on who the international authority would be? What powers would this international authority have? What happens when a State is caught non-complying?[11] A fourth issue that some analysts like Mathew Harris have flagged, is that this Treaty is aimed at nations having a democratic set-up where there can be a free and fair debate about this issue by the activists in contrast to countries like Russia or China where he says that "the ban treaty will not encourage Russia or China (let alone North Korea) to disarm, or even to participate more actively in bilateral or multilateral arms control initiatives.[12]

Lastly, critics have also complained that this Treaty will undercut the authority of NPT, undermine prevalent treaties like the CTBT (has still not entered into force), and marginalise initiatives like the FMCT. The main issue that they raise is that – it's not the lack of treaties that is an impediment to the ban on nuclear weapons; but an overall absence of global will (which is hampered by geostrategic realities) that poses hurdles that prevent the implementation of prohibition mechanisms. Furthermore, the complications of locational political allegiances further reduce the number of nations willing to commit to such a drastic manoeuvre. For example, the nuclear umbrella that the Americans provide to various nations is one such complication that needs to be addressed. What would be the impact of signing such a treaty for nations dependent on America's nuclear umbrella? Agreeing to such drastic measures might bring legal difficulties in carrying out the extended-deterrence operations and cause issues in maintaining credible minimum deterrence.

India's Response

Historically speaking, India's response has been embedded in theoretical beliefs of non-violence and the development of global peace. However, given its precarious geostrategic positioning and the volatile belligerence of its neighbours to the North and to the West, over the years, India has been forced to adapt a more realistic geostrategic approach. In line with these sentiments, India's Permanent Representative Amandeep Singh Gill had stated that *"We appreciate the sincere effort behind the initiative and remain willing to work with the sponsors to reduce the role*

and military utility of nuclear weapons, to prohibit their use under any circumstances and to eliminate them globally." Nevertheless, that being said it would be foolhardy to agree blindly to a potentially selective de-nuclearisation policy without taking into consideration the geographical and political realities of the sovereign state. Also, the debate should feature under the Conference on Disarmament which has been especially looking into these affairs. Mr Gill further stated that India feels, "an agreed multilateral framework" is required to deal with nuclear issues and the United Nation's Conference on Disarmament (CD) "is the right place for pursuing nuclear disarmament in all its essential elements… as it has the mandate, the membership and the rules for embarking on the path to nuclear disarmament."[13]

As mentioned earlier, historically, India has been an ardent supporter of nuclear disarmament. India's erstwhile Prime Minister Mr Rajiv Gandhi had introduced an Action Plan for a world free of nuclear weapons in an address to the United Nations General Assembly's Third Special Session on Disarmament as early as 1998. The Action Plan had suggested implementing a binding commitment from all nations including NWS to eliminate nuclear weapons in stages. If the plan had been followed, the world would have been free of nuclear weapons by 2010. Given the precarious middle position it embodies, India had understood that the objective of eliminating nuclear weapons could not be achieved if NWS were not taken into confidence. Hence, India believes that a holistic nuclear disarmament has always been the real answer to this problem. As Indian Ambassador, DB Venkatesh Varma states, *"nuclear disarmament contains three essential pillars – prohibition, which is largely legal in content; elimination, which pertains to the physical destruction of the weapons; and the supporting infrastructure and verification, that provides assurance, confidence and credibility to the implementation process. These are the three major pillars that need to be taken into consideration for a potentially comprehensive future Nuclear Weapons Convention[14]"*

Currently, this treaty is unable to address this strategic imbalance and hence, it would remain a utopian concept where, despite the best intentions of signatory nations, the Treaty is unable to achieve its true objective.

Conclusion

In conclusion, it is not the addition and promulgation of multiple treaties dealing with varying aspects of nuclear prohibition that is required; but there are certain systemic imbalances in the global power structure that currently exist, which need to be tackled, before conversations regarding a potential nuclear ground zero can begin. Nations need to come together and universally commit to the implementation of current treaties and the process of nuclear de-escalation. The time for words is long past, and concrete actions need to be taken – particularly by NWS – to make the world a safer place. As Ambassador DB Venkatesh Varma aptly states, *"the only way to reduce the centrality of nuclear weapons is to reduce their military utility – by practical measures of de-alerting and reducing chances of accidental or unauthorised use or their access by terrorists, by doctrinal measures of narrowing the circumstances of their use, leading to a global treaty that would nail down deterrence as the sole purpose of nuclear weapons, until their elimination and capped by an international legal instrument that would de-legitimise nuclear weapons by prohibiting their use under any circumstances."*[15] Thus, any treaty which wants to eliminate nuclear weapons need to take Nuclear Weapon States on board so that an effective progress on the issue could be achieved.

Endnotes

[1] Trends in World Nuclear Force,2017,SIPRI Fact Sheet, at https://www.sipri.org/sites/default/files/2017-06/fs_1707_wnf.pdf accessed on 04 August 2017.

[2] Kingston Rief, 'US Nuclear Modernisation Programme', Arms Control Association 2017, at https://www.armscontrol.org/factsheets/USNuclearModernization accessed on 04 August 2017.

[3] Trends in World Nuclear Force,2017,SIPRI Fact Sheet, at https://www.sipri.org/sites/default/files/2017-06/fs_1707_wnf.pdf accessed on 04 August 2017.

[4] Eric Heginbotham, Michael S Chase, Jacob L Heim, Bonny Lin, Mark R. Cozad, Lyle J. Morris, Christopher P Twomey, Forrest E. Morgan, Michael Nixon, Cristina L Garafola, Samuel K Berkowitz, "China's Evolving Nuclear Deterrent",2017 Rand Publication at https://www.rand.org/content/dam/rand/pubs/research_reports/RR1600/RR1628/RAND_RR1628.pdf accessed on 07 August 2017.

[5] Towards a World Free of Nuclear Weapons, Foreign Affairs. 17 July 2017, at http://www.itamaraty.gov.br/en/speeches-articles-and-interviews/minister-of-foreign-affairs-articles/16886-rumo-a-um-mundo-sem-armas-nucleares-folha-de-s-paulo-17-7-2018?mkt_tok=eyJpIjoiTnpZMU9EYzJNR1l4 WWpBMSIsInQiOiJqUUNqYUYwUTdJQ1VkNlVHZWswNm5KSVNvX C9QRmxLRGJ0NlVhOWJEcURaUGkxUlcrK1o4TFhWUkpLU05M RU1wQVwvOEJwNSs0Nm1NXC9GZXl4Z3JuOVN6N3ZFW m1yZHNaK0dnd1RRdXkzOFpLYnB6OEx5WjQ4VzAyOXZeTZra1p5YiJ9 Accessed on 6 August 2017.

[6] Draft Treaty on the prohibition of Nuclear Weapons, UN General Assembly Accessed on 10 August 2017.

[7] Ibid.

[8] Alicia Sanders-Zakre, Banning the Bomb—A Blog of the Nuclear Weapons Prohibition Talk, 07 July 2017, Arms Control Now, at https://www.armscontrol.org/blog/2017/banning-the-bomb Accessed on 14 August 2017.

[9] United States Mission to the United Nations Joint Press Statement from the Permanent Representatives to the United Nations of the United States, United Kingdom, and France Following the Adoption of a Treaty Banning Nuclear Weapons, 07 July 2017 at https://usun.state.gov/remarks/7892 Accessed on 16 August 2017.

[10] Mathew Costlow, "The Nuclear Ban treaty is way off Target", War On Rocks, 28 July 2017, at https://warontherocks.com/2017/07/the-nuclear-ban-treaty-is-way-off-target/ Accessed on 16 August 2017.

[11] Ibid.

[12] Mathew Harris, 'The real Problem with a nuclear Test Ban Treaty",15 March 2017, Carnegie Endowment for International Peace.at http://carnegieendowment.org/2017/03/15/real-problem-with-nuclear-ban-treaty-pub-68286 Accessed on 16 August 2017.

[13] Devirupa Mitra, "India Joins Boycott Of Nuclear Weapons Ban Treaty Talks By Big Powers " The Wire ,29 March 2017, at https://thewire.in/119566/india-boycotts-nuclear-ban-talks/ Accessed on 18 August 2017.

[14] Statement by Ambassador D.B. Venkatesh Varma at the International Seminar ''A World Free of Nuclear Weapons'' on Fiftieth Anniversary of the Treaty of Tlatelolco, Mexico City (February 13, 2017)February 17, 2017 at http://www.mea.gov.in/Speeches-Statements.htm?dtl/28076/Statement+by+ Ambassador+DB+Venkatesh+Varma+at+the+In ternational+Seminar+on+Fiftieth+Anniversary+of+the+Treaty+ of+Tlatelolco+Mexico+City+February+13+2017 Accessed on 18 August 2017.

[15] Ibid.

@**Dr Roshan Khanijo** is the Senior Research Fellow and Research Coordinator at United Service Institution of India since 16 Apr 2012. Her area of research is Nuclear Issues.

Nuclear Instability in South Asia: Is Someone Shaping the Narrative?

Colonel Inderjit S Panjrath, SM[@]

Introduction

The 2017 Carnegie International Nuclear Policy Conference took place on March 20 and 21, 2017. On the agenda was a plenary session on the topic, "What are the most likely scenarios for the first use of nuclear weapons in the next five years on the NATO-Russia periphery, in South Asia, and in Northeast Asia?"[1] Dr Vipin Narang, author and Mitsui Career Development Associate Professor of Political Science at Massachusetts Institute of Technology (MIT) and a member of MIT's Security Studies Programe, set the cat among the pigeons by suggesting that India's nuclear strategy, if not the doctrine, might be undergoing some significant changes by suggesting that, "there is increasing evidence that India will not allow Pakistan to go first; and that India's opening salvo may not be conventional strikes trying to pick off just Nasr batteries in the theatre, but a full 'comprehensive counterforce strike' that attempts to completely disarm Pakistan of its nuclear weapons".[2] Ironically, Narang's assessment, that India plans to junk the No First Use (NFU), throws out of the window his own analysis of India's nuclear posturing – that of 'Assured Retaliation' based on his 'theory of optimisation' so eloquently articulated in his much acclaimed book, "Nuclear Strategy in the Modern Era".

Narang's analytical U-turn is not an isolated one-off observation. Earlier in January, Hannah Haegeland, in her piece, *"The Terrifying Geography of Nuclear and Radiological Insecurity in South Asia"*[3] built a case to suggest that, contrary to conventional wisdom, it is India's nuclear facilities that are more vulnerable to terrorists and non-state actors, than those of Pakistan. They say that the devil lies in the detail. However, this idiom gets an entirely new meaning when statistics and figures are used to prove a point, howsoever out of context; for example, India is estimated to have 57,443 medical X-ray units and more than 12,000 devices that use radioactive materials for industrial and medical applications and these are all vulnerable to low probability but extremely high-risk threat of nuclear and radiological terror. The same figures could well be utilised by the World Health Organisation to reflect the dismal state of healthcare facilities in the world's second most populated country. No wonder Evan Esar believed that statistics is the science of producing unreliable facts from reliable figures!

The Stimson Centre, too, has recently launched its 'Off the Ramps Project' aimed at generation of creative ideas that can help ameliorate and decelerate this dangerous triangular nuclear competition between China-India-Pakistan. In his inaugural article titled, *"Launching an Expanded Missile Flight-Test Notification Regime",* Frank O'Donnell posits that, "China, India and Pakistan are engaged in a nuclear competition of growing intensity".[4] What is the message that is intended to be conveyed and is it justified?

Is NFU of Nuclear Weapons Still the Best Choice for India?

Let's return to Narang's observations which are primarily premised on the statements of India's former Raksha Mantri (RM), Shri Manohar Parikar in response to a question on nuclear defence, some articles questioning the robustness of India's Nuclear Doctrine by Lieutenant General BS Nagal, PVSM, AVSM, SM (Retd) former Commander-in-Chief Strategic Forces Command (SFC) and most importantly the

writings of Ambassador Shiv Shankar Menon, former National Security Adviser (NSA) of India in his book, *'Choices – Inside the Making of India's Foreign Policy'.*

Firstly, Menon's essay titled, 'Why India Pledges NFU of Nuclear Weapons' is a detailed and informed articulation of rational possibilities in the Indo-Pak nuclear scenario to prove a moot point that resorting to NFU remains the best choice for India in current circumstances. As is expected from any balanced analysis, this too describes scenarios which stray away from what is common wisdom by suggesting various alternatives and that is where Vipin Narang seems to have a problem, particularly with two paragraphs. Menon writes, *"Circumstances are conceivable in which India might find it useful to strike first, for instance, against a Nuclear Weapon State (NWS) that had declared it would certainly use its weapons, and if India were certain that adversary's launch was imminent. But India's present public doctrine is silent on this scenario"* and *"If Pakistan were to use tactical nuclear weapons against India, even against Indian forces in Pakistan, it would effectively be opening the door to a massive Indian first strike, having crossed India's declared red lines. There would be little incentive, once Pakistan had taken hostilities to the nuclear level, for India to limit its response, since that would only invite further escalation by Pakistan… In other words, Pakistani tactical nuclear weapon use would effectively free India to undertake a comprehensive first strike against Pakistan."*[5] When read in isolation, these can be suggestive of a policy drift away from NFU, however, that is not true in case of the above two paragraphs if appreciated in context. The former, is preceded by a preamble that states, *"What are the alternatives to first use?......a first strike doctrine is surely destabilising, and does not further our primary purpose of our weapons deterring….."* - unambiguously bringing out the true perspective. As regards the second paragraph, notwithstanding the terminology used, it is a reaffirmation of India's declared stance – a first strike by Pakistan, regardless of yield and location, would invite massive retaliation by India.

That there has been selective and unfair citing of an article to push a particular hypothesis by Narang is further proven if one turns the pages to Chapter 3 of Menon's book, "Restraint or Riposte?" where after analysing the decision to not militarily respond to the 26/11 attack on Mumbai, Menon argues that the then Prime Minister Manmohan Singh made the right decision by concluding, *"Pakistan's steady slide into incoherence, its disintegration into multiple power centers, and the diminishing writ of the State also means that support for cross-border terrorism could actually grow in the future,"* he writes. *"Indian policymakers and diplomats must be prepared for the long struggle to continue without decisive military solutions, and set ourselves modest political goals in this struggle. Temporary silencing the cross-border terrorists is the best we can hope for…"*[6] Wouldn't he be fundamentally contradicting himself by suggesting a nuclear first strike against the same belligerent Pakistan in a later chapter of the same book?

Therefore, selectively picking out these paragraphs to give an alarmist hue to an impartial and balanced analysis is something that merits an explanation. In this background, Michael Krepon in his article, *"The Counterforce Compulsion in South Asia",* presents a more realistic interpretation of Menon's views, while continuing to reinforce the West's scepticism about India's NFU.[7]

Secondly, as regards the statement of Shri Manohar Parrikar, the same was an off the cuff answer to an isolated question and that too expressly qualified to be in his 'personal capacity'. Too much credence is not justified, especially when the same has not been backed by any official statement. Further, is it wise to selectively prop up the former RM's personal remark while playing down the then Prime Ministerial candidate, Shri Narendra Modi's commitment to NFU in Apr 2014? *"It is necessary to be powerful - not to suppress anyone, but for our own protection,"* Modi had said in an interview with the ANI television service. *"No first use was a great initiative of Shri Atal Bihari Vajpayee - there is no compromise on that. We are very clear.*

No first use is a reflection of our cultural inheritance," Modi told ANI when questioned on the BJP's manifesto which pledged to review the nuclear doctrine, whose two main pillars were a NFU commitment and building a credible but minimum nuclear arsenal.[8]

Similar analogy applies to General Nagal's writings, which too seem to have been referred to out of context. Narang cites the General questioning the morality of the NFU, an input he believes adds credence to his hypothesis. While he may have picked up these views from some article or statement by the ex-SFC Chief, the context of these beliefs is difficult to ascertain in absence of specific citations. In order to arrive at a balanced view, it would not be out of place to quote a paragraph from an article published in the Centre for Land Warfare Studies (CLAWS) Journal, Winter 2015 edition by General Nagal where he unambiguously states, *"Whilst theorists may deliberate on the escalation ladder and thresholds when nuclear weapons will be used, practitioners of nuclear strategy will not lower the threshold unless the very existence of the state is in danger. If a state wishes to lower the threshold knowing fully well the implications of the adversary's policy, it may be an act of brinkmanship or miscalculation. Any nation which wants/considers use of nuclear weapons at low levels of war, is probably not aware of the dangers that the initiating country is being exposed to by such an action. Hence, there will be no confidence in the future rationality of that leadership"[9]*

Why selectively pick out one of Nagal's articles when so many Indian scholars have steadfastly defended the robustness of NFU, to cite just a few – Brigadier Gurmeet Kanwal, Late Air Cmdre Jasjit Singh, Dr Manpreet Sethi, Dr Roshan Khanijo et al.

Having analysed the arguments put across by Vipin Narang, how credible is his rather 'over-the-top' hypothesis that India plans to discard NFU of nuclear weapons as a policy?

As regards the 'discernible shift in India's NFU stance', while there has been, and continues to be considerable debate within the Indian security establishment regarding the need to review, there seems to be no apparent change in policy. It is important to understand why. The answers perhaps lie in India's decisions to not only go overtly nuclear in 1998, but also become the only country to put out officially, in writing, a formal nuclear doctrine in Jan 2003. India assured the world that *nuclear weapons are political instruments for deterrence, not for warfighting – a belief which it stands by even today.* India's nuclear doctrine has four crucial aspects namely, "building and maintaining a credible minimum deterrent"; "a posture of 'No First Use" (NFU); "nuclear weapons will only be used in retaliation against a nuclear attack on Indian territory or on Indian forces anywhere"; and, finally, "nuclear retaliation to a first strike will be massive and designed to inflict unacceptable damage"[10] As Shivshankar Menon concludes in his now famous Chapter, *'Why India Pledges No First Use of Nuclear Weapons'* this is the only doctrine that makes sense for India. Nuclear weapons, he points out, *"are primarily political weapons, the currency of power in the nuclear age, rather than effective war-fighting weapons."* India's nuclear arsenal exists to ensure the country is not blackmailed by another nuclear actor, and not to give itself blackmailing abilities. *"Assured retaliation combined with a NFU policy also means that it is not the number of nuclear weapons that India or its adversaries possess that matters. What matters is India's ability to inflict unacceptable damage in retaliatory strike or strikes."[11]* He summarises it in one line: *first strike equals aggression, no-first-use equals deterrence.*

Further, even if we assume for a moment that the argument is true and India has taken the decision to junk the NFU – what next? How, with what resources, on what targets and in what time frame does India intend to strike first into Pakistan? And having done so, does she expect that Pakistan will not retaliate – what are the mechanisms to absorb the retaliation? Surprisingly, there are no explanations or even plausible theories on offer. Analysts may argue it is not

necessary for the Government to officially announce a change, however, it would be reasonable to assume that some definite indicators would accompany such a major shift in policy. Are there any such indicators? Are there any compelling reasons for this policy shift? Is there a change in how India views nuclear weapons – from instruments of political deterrence to those of war-fighting? Has there been a spurt in India's defence spending? Are there reports of any out of the ordinary trends in India's strategic programme or civil nuclear establishment? Are there any indications of a policy shift in India's response to Pakistan sponsored terrorist attacks which point towards nuclear overtures? The answer to all the above questions is a firm No – implying that NFU with massive retaliation remains the backbone of Indian doctrinal thinking regarding use of nuclear weapons.

It would suffice to say that major changes in national nuclear doctrines or strategic concepts are not based on views expressed in isolated writings or off the cuff interviews or statements. On the contrary, they are a consequence of protracted deliberations and serious debates, especially in responsible democracies like India whose nuclear behaviour and non-proliferation credentials can put to shame the actions of some nuclear powers who are even signatories to the NPT.

A Hidden Narrative?

Though it does not question India's approach to nuclear weapons use, an analysis of Hannah Haegeland's article is also important as it represents views and perceptions shared by many Western think tanks which provide essential inputs in shaping opinion of international bodies such as the Nuclear Suppliers Group (NSG). The article cites a number of thesis and papers to establish a case that India's fissile material is unsafe because, (a) India has not separated its civilian and military nuclear activities, (b) there have been number of instances of lapses (though minor) of security of fissile material (incidentally the source being quoted is an internal audit report by Indian agencies responsible) and (c) the expanding threat environment in South Asia. While their anxieties are appreciated, it would be reasonable to accept that despite all the concerns, there has been no major incident so far which adds credence to these. Further, India's strategic partnership with the US – now famous as the 123 Agreement and its subsequent clearance by consensus by 46 members (2005) of the NSG stand testimony to the nation's commitment to non-proliferation as well as highest standards of nuclear safety and security. It is also reasonable to accept that matters pertaining to strategic weapons, force structuring, procedures and protocols fall under highly classified matters and there is a limit to what can be put out in the open domain.

Suffice to say that if the Western Powers who are responsible for exposing the world to these dangers can be trusted with their respective strategic programmes, there is no reason to doubt the credibility of similar programmes by responsible nations like India with a proven track record.

Having discussed the credibility of claims by the scholars and think tanks cited above, let's come to the consequences of the message being conveyed. While it is fair for a nation's policies and security strategies to be subjected to healthy scrutiny and criticism, selective nit-picking to shape a loaded narrative is something that needs to be guarded against. In the current instance, the moot point is not whether India's Nuclear Doctrine and NFU stance merit a relook or that India needs to tighten its procedures and handling of nuclear material - but that a seemingly alarmist twist is being accorded to an otherwise desirable evolution of security strategy by a nation with exemplary credentials and commitment to global peace.

What is most startling is that these analysts seek to publicise, rather dramatise issues which are in the conceptual domain and represent their own illusion of events which may occur

in the future (past trends of threshold maintenance in a seven decades old conflict notwithstanding), while conveniently disregarding the events which are unfolding in full view of the world – unjustified ramping up of Pakistan's nuclear arsenal, persistent attempts to lower the nuclear threshold by inducting and deploying Tactical Nuclear Weapons, brandishing the nuclear bogey to fuel the proxy war against India and continued Chinese support to Pakistan's nuclear programme. While the incumbent hue and cry may bring instant fame and attention to the concerned analysts for their ostensive ability to read between the lines, it is not without attendant consequences of simulating crisis like situations when there are none. For a nation like India which is facing multiple conventional and sub-conventional threats on multiple fronts, such articles are most damaging. Not only do these contribute towards India being viewed by the West through the same prism as Pakistan, they are perfect ingredients for the hysteria so desperately sought by the confrontational adversary who is perpetually in search for excuses to ramp up its arsenal vis-a-vis India. As a result, peace and stability remain a distance dream in the Indian sub-continent.

While there is and has been tension along the Line of Control (LoC) between India and Pakistan, the conflict has remained largely localised and controlled over the last seventy years. Is it fair to brand nuclearisation of the sub-continent as the proverbial whipping boy in an age where unsuspecting innocent civilians face a much greater threat from horrific terror attacks on the streets of Paris, Manchester or New York? And if one considers the events of the past year in due fairness, the actions of the new administration in the US as well as activities of Russia and China have not helped the cause of global peace and stability. So why is it that South Asia in general and India in particular are being selectively singled out as threats to global security when there are far more serious concerns – the Islamic State, Al Qaida, Taliban and belligerent North Korea being a few of them. Viewed from the Indian perspective, the reasons could be interesting, but not entirely surprising.

The first reason is perhaps, the perceived indispensability of Pakistan as a geo-political pivot for the security needs of the West. Despite its near failed state status with an overbearing military control (an understatement of sorts) as also the fountainhead of global terror, Pakistan remains a state which is not easy to let go off. It is not only its utility as a rentier state with an important geo-strategic location, but also as a counter balance to the two growing Asian powers, China and India. Also, there is a valid morbid fear of a disintegrated Pakistan – implying that it is better off in its present form and any move to isolate and abandon it may have disastrous consequences. Therefore, a favourable edge to India in the Indo-Pak equilibrium would be a threat to Pakistan in its present form and seen as inimical to western interests – hence, the need for effective counterbalances.

The second reason is the emergence of India as growing power. The rise of China has not been easy to digest and if there is one country that has similar potential, it is India. The West would never want to allow this shift in the global order and no matter what, the 'strategic apartheid' is here to stay. India has time and again displayed its resurgent capabilities, be its nuclear programme despite sanctions post 1974 or 1998, its handling of East Pakistan crisis in 1971 or the economic revival of 1990s and is now well on its trajectory of overall growth despite pressures and conflicts of internal chaos associated with its third world status. What has perhaps raised hackles in the West is the emergence of a majority regime which has shown a determined resolve to break the *status quo,* not only in hitherto-fore lethargy towards domestic reforms but also travel the extra mile in dealing with matters of foreign policy and national security. The decision to go in for surgical strikes on terror launch pads across the LoC, large scale demonetisation and initiatives to curb the black economy, the Prime Minister's personal push towards foreign policy initiatives across the globe and the recent passing of the Finance Bill, all point towards the will of the government with a passion, alacrity and perseverance not

seen in Delhi for decades. The fact, this has the backing of the hugely diverse Indian populace (as proved by recent elections) further substantiates that the drift is here to stay and is not just a passing phase.

Therefore, the trends in writings, themes and agendas of various Western think tanks highlighted above seem to be in sync with a narrative being shaped to place the Indian security establishment on a back foot. This is not to suggest that the security concerns being expressed should be totally ignored. However, while the powers that be must take cognisance of the loopholes and vulnerabilities to plug the gaps wherever required, the underlying agenda to shape the narrative needs to be countered on facts and logic.

The Road Ahead

This trend is also particularly significant in view of the upcoming Summit on 'Countering WMD Terrorism' to be hosted by India in 2018, wherein these issues are likely to be raked up. [12] The stakes are high for India given the security scenario in the subcontinent, our rising clout and influence in the world order and our endeavours towards entry to the United Nations Security Council, the NSG, the Australia Group and the Wassenaar Arrangement. At a time when India is facing stiff resistance by the China-Pak combine to block the above initiatives, a resurgent hybrid war in a nuclear backdrop by Pakistan and sustained efforts by China to gain strategic footholds in the Indian subcontinent – be it through the China-Pakistan Economic Corridor (CPEC), One Belt One Road (OBOR) or heightened PLA naval outreach in the Indian Ocean, it is important that we not only prepare adequately to counter the narrative being built up, but also carefully select leitmotifs and agenda for such summits.

Towards this, recently published articles, *"India's Nuclear Doctrine is Robust and Requires no Review"*[13]*, "Time to Nuke the Storm in the Teacup"*[14] and *"India is not Changing its policy on No First Use of Nuclear Weapons"*[15] are well timed and germane. However, we need to further carry this message and what better platform than the upcoming summit in 2018. While the agenda for the same may have already been formalised, there is certainly room for including a few themes so necessary to deal with the situation India seems to be confronting. Two such themes are suggested.

The first theme relates to *"Challenges of Nuclear Safety in the Era of Hybrid Warfare."* The aim of this theme is to bring to fore the difficulties and complexities of nuclear safety in a world increasingly engaged in non-traditional hybrid warfare - where the boundaries and limits of warfare as well as the protagonists - are progressively diminishing. Can the world afford to watch with impunity the stockpiling of nuclear arsenals, especially those meant for battlefield use in an environment where faceless non-state actors and terror outfits are gaining dominance and it is becoming almost impossible for even established players to ensure their safety and prevent misuse? Is there a need for the world to stand united in banning such weapons whose utility and cost effectiveness has already been established to be worthless post the Cold War? What are the measures which may be taken to put an end to development and deployment of such weapons with particular reference to the role expected to be played by Permanent Members of the Security Council?

The second suggested theme seeks to discuss and bring out a policy framework on the *"Needs, Role and Responsibilities of Regional Nuclear Powers towards Nuclear Disarmament and Non-Proliferation."* The nuclear weapons were a product of the Cold War and most postulates, theories and concepts are based on the dynamics of that war. Even the nuclear disarmament and non-proliferation initiatives are based on the experience of global powers viz., the USA and Russia. Today's reality is very different, as seven out of the nine nuclear weapon

states are regional powers - implying that success of any peace initiative involving nuclear weapons would yield credible results if and only if, these regional players are afforded a greater role in decision making. Fielding of such a theme, in the author's view would help bring to the table, greater accountability and responsibility among such players – especially China and India who are seen to be emerging as future global powers.

Discussions and deliberations on the above suggested themes would not only help the cause of disarmament, non-proliferation and contribution to overall global peace but also provide food for thought to analysts and think tanks to deliberate on some real contemporary issues rather than wasting their efforts on fabricated narratives!

Endnotes

[1] http://carnegieendowment.org/2017/03/21/2017-carnegie-international-nuclear-policy-conference-event-5209

[2] http://www.livemint.com/Opinion/Ivxg7a5QQL9jeEkpxFAiNO/Time-to-nuke-the-storm-in-the-teacup.html. Complete text of his prepared remarks can be found at https://southasianvoices.org/wp-content/uploads/2013/08/Vipin-Narang-Remarks-Carnegie-Nukefest-2017.pdf.

[3] https://www.stimson.org/content/terrifying-geography-nuclear-and-radiological-insecurity-south-asia

[4] https://www.stimson.org/sites/default/files/Launching-Expanded-Missile-Flight-Test-Notification-Regime.pdf

[5] Shiv Shankar Menon, Choices - Inside the Making of Indian Foreign Policy, Penguin India 2016

[6] Ibid.

[7] http://www.armscontrolwonk.com/archive/1203018/the-counterforce-compulsion-in-south-asia/

[8] http://in.reuters.com/article/india-election-nuclear-weapon-idINKBN0D 20NA20140416

[9] Balraj Nagal, *India's Nuclear Strategy to Deter: Massive Retaliation to Cause Unacceptable Damage, CLAWS Journal, Dec 2015*

[10] http://idsa.in/issuebrief/RevisitingIndiasNuclearDoctrine_schandra_ 300414

[11] Op cit, Shiv Shankar Menon

[12] https://obamawhitehouse.archives.gov/the-press-office/2016/06/07/joint-statement-united-states-and-india-enduring-global-partners-21st

[13] http://delhipolicygroup.org/publication/policy-notes/dpg-policy-note-vol-ii-issue-3-indias-nuclear-doctrine-is-robust-and-requires-no-review.html

[14] http://www.livemint.com/Opinion/Ivxg7a5QQL9jeEkpxFAiNO/Time-to-nuke-the-storm-in-the-teacup.html

[15] https://warontherocks.com/2017/03/india-is-not-changing-its-policy-on-no-first-use-of-nuclear-weapons/

@Colonel Inderjit S Panjrath, SM was commissioned into the Corps of Army Air Defence in Jun 1990. He commanded an Air Defence Regiment in the Northeast. He is a graduate of Defence Services Staff College, Wellington, Defence Services Command and Staff College, Bangladesh and the College of Defence Management, Secunderabad, and holds post graduate degrees in Strategic Studies and Management. This article has also been published as USI Occasional Paper No. 9-2017.

Norms in Cyberspace: United Nations Group of Government Experts and Diplomatic Stasis

Ms Natallia Khanijo@

Introduction

There has been a seismic shift in technological advancement in the last few decades. The proliferation of cyber networks, and their resultant impact on Information and Communication technologies (ICT), has pervaded almost every aspect of human functioning. The recent shifts in ICT functioning and the emergence of increasingly interconnected cyber networks have reduced metaphorical distances across the globe and potentially changed the ways in which nation states conceptualise their role in an increasingly hyper capitalised, multicultural, global order. The current framework of legality and ethical norm enforcement – by its very essential emphasis on lived exchanges in real time – is ill-equipped to deal with the hyper reality of alternative spatial and temporal constructs of existence. There is a need, therefore, to construct alternative methodologies of applying available normative/regulatory frameworks onto cyber discourse. The construction of such a framework is linked to the need for "including increased predictability, trust and stability in the use of ICTs, hopefully steering states clear of possible conflict due to misunderstandings. Additionally, norms [can also be seen] as guiding principles for shaping domestic and foreign policy as well as a basis for forging international partnerships."[1]

To this effect, several global bodies have been constituted aimed at multilateral, multinational and multi-stakeholder based 'regulation' of cyberspace. These include the creation of transnational forums for diplomatic dialogue such as the United Nations Group of Governmental Experts (UN GGE), the International Telecommunications Union, the Internet Governance Forum, the Shanghai Corporation Organisation, the Tallinn Manual, etc. whose primary motive is the theorisation, collaboration and regulation of norms and laws concerning Cyberspace. Currently, at the international level, at least 19 global and regional organisations are actively involved in the security and governance of the cyberspace. One of these bodies is the UN GGE instituted to deliberate on the 'Developments in the Field of Information and Telecommunications in the context of International security'. The UN GGE had its latest meeting over the course of 2016-2017 but due to the inability to conclude with a consensus, the expert body has been unable to release a consolidated report regarding the application of International Law to cyberspace. The lack of concrete norm formation and regulatory security architecture for an interconnected cyberspace is difficult to envision due to the amorphous nature of the realm itself. The ease of access to cyber technology, and the versatile nature of emergent threats – 'Lone Wolf' terrorists, 'Black Hat' hackers, non-state actors, geopolitical rivalries – cumulatively remain at the edge of transgressing State thresholds and the creation of the GGE was aimed at navigating this terrain of militarised cyberspace and infringement retaliation. This article attempts to examine the functioning of norms in cyberspace, the UN GGE as a process and specifically India's functioning with respect to the GGE, the reasons for its failure and what might potentially lie ahead.

Norm Cycles and the UN GGE

The creation of a Norm Cycle for Cyber Discourse is primarily overseen by the United Nations. The debate concerning the emergence of ICTs and their impact on State sovereignty had first been introduced in the UN General Assembly (UNGA) regarding the field of Information and Telecommunication. As Roxanne Radu states, "In what concerns security in the cyberspace, three resolutions have been on the agenda. The First Committee of the UNGA discussed the resolution on 'Developments in the field of information and telecommunications in the context of international security' on a yearly basis starting in 1998; the Second Committee of UNGA discussed the 'Creation of a global culture of cybersecurity and the protection of critical information infrastructures', introduced in 2002 and adopted in 2005, and 'Creation of a global culture of cybersecurity and taking stock of national efforts to protect critical informational infrastructures', adopted in 2010".[2]

Two key bodies that have been linked to the creation of a Norm Framework have been the UN established Group of Governmental Experts which has served as the theorising body debating the modalities involved in the establishment of a Norm framework; and the International Telecommunications Union that is primarily concerned with the implementation of Norm Frameworks. The GGE emerged as a result of Russia's first proposition in 1998, regarding the establishment of a Group of Governmental Experts, who could examine the issue of Information Security. The General Assembly passed a resolution in 2002 concerning the "Creation of a Global Culture of Security",[3] and it outlined nine important elements that needed to be followed before engaging in the process of norm emergence. These elements are "awareness, responsibility, response, ethics, democracy, risk assessment, security design and implementation, security management and reassessment."[4] Furthermore, the Assembly also outlined the need for a resolution that determined the elements aimed at protecting 'Critical Infrastructure'. In its 11-point recommendation list, (that included Confidence Building Measures (CBMs), emergency/crisis communication networks, training exercises etc.), the assembly's resolution extrapolated on a lot of concerns that would form the basis of the various forums examining Cyber Discourse over the years.

Iterations of the UN GGE

There have been five iterations of the UN GGE thus far. These have taken place in 2004, 2009, 2011, 2013 and 2016-2017 respectively. India has been involved with every single one except for the 2013 version. The first GGE was set up in 2004 by the First Committee[5] of the United Nations, however given the drastically divergent perspectives,[6] a consensus regarding the need for a normative framework could not be reached. The report concluded by saying that "given the complexity of the issues involved, no consensus was reached on the preparation of a final report."[7]

The second GGE was held in 2009 and there was a shift in global perception following the distributed denial of service (DDoS) attack on Estonia in 2007. While the constituent members were the same, there was a drastic change in the power discourse. The US stance regarding Cyber Discourse had altered in the interim and there was finally a consensus of sorts surrounding the need for a Cyber Security Architecture. The 2010 report concerning the proceedings, codified and extrapolated on a lot of the basic elements aimed at securing cyberspace. These measures included the need to identify malicious actors/victims/vulnerabilities and threats. The report concluded with five recommendations, namely :-[8]

(a) State Dialogue

(b) Implementing CBMs

(c) Information Exchange

(d) Capacity Building

(e) Clarification of Terminology describing Cyberspace

The third GGE took place between 2012-2013, with the intent to carry forward the discussion that began with the 2009 GGE and its 2010 report. The mandate for this third iteration was the need to examine potential threats in the realm of information security and collaborate on cooperative mechanisms to address the dangers of 'transnational anarchy'. The Group submitted its report in June 2013, wherein it made several recommendations and continued with the five-point agenda. Two major points that emerged were:-

(a) Application of International Law to Cyberspace. A breakthrough recommendation, this was one of the first concrete steps towards the establishment of a security architecture dealing with Cyberspace.

(b) Maintenance of human rights and fundamental freedoms.[9]

The fourth iteration of the GGE that took place in 2013 increased the membership from 15-20 states. The recommendations laid out by the Group followed the pattern of the previous two GGEs of creating a peaceful ICT environment through the establishment of secure sustainable architectures, protecting ICTs from National Security Adviser (NSA) intervention, implementing CBMs, etc.[10] Further the group also observed:-

(a)   A need to follow international law while also recognising the State's right to take measures to secure its critical infrastructure keeping in mind four legal principles, i.e. humanity, necessity, proportionality and distinction.

(b)   The question of attribution of blame and sustainability of evidence was also raised given the amorphous nature of cyber crime. The group noted that mere geographical indicators of State infrastructure being used to perpetrate malicious activities might be insufficient evidence as the State might be a victim as well. The need for substantiation to avoid wrongful condemnation on circumstantial evidence was also raised.

The GGE was working towards the establishment of a normative framework that could capitalise on mechanisms that were already in place in order to regulate inter and intra-state cyber behaviour to prevent the escalation of conflicts. As Roigas and Osula state "The text clarifies that the UN GGE is seeking 'voluntary, non-binding norms for responsible State behavior' that 'can reduce risks to international peace, security and stability"[11] The question that emerges therefore, is what went wrong? And, why did the GGE devolve into its erstwhile state of fragmented partisan politics?

The 2016 GGE

The 2016 GGE was purported to deal with the impasse of norm applicability, multi-stakeholderism, legality and the militarisation of cyberspace. It was "tasked by the UN General Assembly with the study

of existing and potential threats in the sphere of information security and measures to address them, including norms, rules, and principles of responsible behaviour of states, confidence-building measures, and capacity-building."[12]

While the earlier reports merely took note of the GGE proceedings, the 2015 report called upon Member States to follow the recommendations in their use of ICTs. Furthermore, while debating future topics of research and reference, the group also stated that "The United Nations Institute for Disarmament Research, which serves all Member States, is one such entity that could be requested to undertake relevant studies, as could other relevant think tanks and research organisations." [13] What needs to be noted is the fundamental ideological disjunct between the United States and its allies on the one hand and Russia and China on the other regarding the creation of a cyber normative discourse. The former were primarily keen on setting up principles to form a structure that would streamline the implementation of International Law of Cyberspace – including but not limited to the Laws of Armed Conflict and International Humanitarian Law which would inevitably lead to a kind of militarisation of cyberspace. Russia and China on the other hand, were more interested in protecting State sovereignty and autonomy. The nail in the coffin for the expert body, interestingly, came from the Cuban representative who stated that "it would legitimise a scenario of war and military action in the context of ICTs."[14] The US representative proceeded to claim that this wasn't true and that such a stasis would undo the groundwork of consensus formation that had been formed thus far, but the lack of a consensus and consequently a resolution meant that the body was unable to come up with a concrete report regarding the navigation of cybernetic terrain and fell back onto the earlier impasse regarding problems of attributability, minimum credible force, and military retaliation. The key disagreement revolved around the question of self defence in cyberspace and the applicability of legal frameworks regarding the same. While the previous iterations had approved of the applicability of International Law of Cyberspace, "the right to self-defence as enshrined in Article 51 had been a source of heated debates in all of the sessions leading to their adoption."[15]

India and the GGE

India has been a member of all the GGEs barring the 2013 one. India has played an important role in facilitating cooperation and bridging the divide between polar ideological stances – particularly so in the 2011 GGE. Furthermore, "India has also acknowledged the seminal 2015 GGE report, with its cyber norms being endorsed in the India-US Cyber 'Fact Sheet' that was released during Prime Minister Narendra Modi's visit to Washington DC".[16] The question of access and inclusion are constantly raised with regard to the GGE given the discourse of power that emerges out of the tension between information rich and information poor nations. The politics and intersections of inclusivity in norm formation processes need to be examined in more detail given the fact that ICTs in particular are not just individual tools of state functioning but indispensable global architectures with interstitial, multi-pronged consequences. Being a part of the 2016 GGE was seen as an opportunity for India to navigate the politically complex terrain between developed and developing countries, and demonstrate its commitment to the creation of a peaceful, non-intrusive, collaborative ICT architecture. Even though several theorists believe that this would be the last GGE.

GGE Limitations

The 2016-17 GGE might possibly be the last meeting of the group, and it was primarily constituted on Russia's insistence. Over the years, the GGE has certainly made certain important changes in the discourse surrounding cyberspace and ICT usage, but it needs to be noted that "cyber-space is a singularly complex setting within which to understand and try to shape norms. The problem is not simply the nature of cyberspace, (although, acknowledging the unique characteristics of cyberspace is crucial when exploring norms in this realm). Rather, the challenge lies in the often over-looked nature of norms themselves and how their defining features render them especially difficult to decipher – and, by extension, to attempt to design – in the context of cyberspace."[17] While the lack of consensus regarding cybernorm formation is disappointing, it cannot be considered a surprise given the variant constructions of sovereign ICT frameworks that differ from State to State. The Cuban representative raised a valid point with respect to negotiating/implementing a norm framework in cyberspace when there was such a drastic imbalance of power among the constituent countries. While cyberspace cannot be conflated with geopolitical complexities, it cannot be divested from them either. It is precariously balanced on the cusp of traditional warfare and even manifests in espionage, low grade phishing attacks and other such information warfare tactics.

There are several key issues that emerge in the aftermath of the proceedings that are worth examining. Firstly, one major limitation of the GGE is the lack of inclusivity in its constituent body. While increased inclusivity is considered a problem given the statistical certainty that the larger the base of the group, the harder it might be to broker a unanimous agreement on practicable issues. The exclusivity paradigm of geographical rotation is not really an acceptable alternative either. The current discourse regarding cyberspace, norm formation and ICT security architectures, stem from a predominantly western discourse which is tremendously problematic given that these legislative frameworks affect everyone in a globally interconnected world. Furthermore, the problem of inclusivity is twofold. Not only is there a problem with the horizontal axis of cyber discourse – wherein the academic predominance of the West stems from an inherent advantage in terms of access and technological superiority; but there is also a problem with the vertical axis of cyber norm formation wherein any constitutive body needs better representation at the level of the individual, private stakeholder and the country.

A legislative framework that might potentially constitute global norms with far reaching effects needs adequate representation from all stakeholders involved for the sake of ensuring that every single concern is engaged with. The need for a more inclusive set of discussants as well as the need for multi-stakeholderism in an increasingly globalised world order is something that needs to be considered. There are several other bodies, treaties and groups attempting to pursue research in cyberspace and affect a secure architecture. Some key bodies are the International Telecommunications Union, the Internet Governance Forum, the International Committee of the Red Cross, the Shanghai Corporation Organisation, the United Nations Institute for Disarmament Research, etc.

It would be foolish to assume that geopolitical frameworks would not colour a country's approach to the implementation of cyber frameworks. As the Cuban representatives point out "an endorsement of the 'right to self-defense' [would] undermine asymmetric advantages which States that do not enjoy conventional superiority over their adversaries may have in cyberspace. So, Russia, which may be concerned that the United States will retaliate conventionally in response to a cyber operation that it

deems to be an armed attack, would have concerns about including the phrase. On the other hand, India, which would want the option to respond to Pakistan's cyber operations through conventional means, may welcome the express affirmation of a right to self-defense."[18] This bias is intrinsically tied to complicated issues of deterrence in cyberspace and the establishment of retaliatory thresholds that vary from one geopolitical situation to the other. The variability of contexts, the subjectivity of thresholds and the anonymous/amorphous nature of the threat all collusively point towards a volatile and unstable geopolitical scenario which could become a hotbed for escalatory conflict on the basis of a country's interpretive retaliatory action. These scenarios do not even take into account the question of rogue states and non-state actors all of whom would lie outside the purview of global norm formation but possess the power to destabilise any fragile consensus that might be established.

The major issue of attrition and culpability remain unresolved as there is no established definitive understanding of the key terms of cyber norm formation. While there are theories of cyber deterrence, variant definitions of threats/actors, there is no consensus regarding mechanisms of attrition or investigative mechanisms that can be employed in these scenarios. Furthermore, as mentioned earlier, given the ease of access to cyber technology, and the relative ease with which attacks can be carried out and blame misdirected, there needs to be a concrete system in place that can deal with such dangerous liabilities without infringing on personal rights.

Keeping all these factors in mind, it's not surprising that the UN GGE reached such an impasse. The various other international bodies that exist need to collaborate towards addressing the key insecurities that permeate the amorphous fabric of cyberspace and contextualise threats in a systematic manner that is inclusive, equitable, consensus driven and maintains global peace.

Conclusion

Totalitarian frameworks would be ill-equipped towards dealing with cybernetic transgressions and current legal architecture cannot just be placed onto cyberspace without modification and engagement. There is a need to reconfigure our epistemological frameworks to create a new sociological and geopolitical theory of knowledge regarding cyberspace and then work towards the implementation of particularised norms, tailored towards the specific contours of cyberthreats and cybernorms. There are several institutions and research organisations that attempt to do so such as the Tallinn Manual, that "address two subjects – the *jus ad bellum,* which regulates the use of force by States, and the *jus in bello,* the law that governs how States may conduct their military operations during an armed conflict and provide protection for various specified persons, objects, and activities."[19] While the Manual is not a legal document that is enforceable, it nevertheless provides an overview of potential ways in which Legal frameworks can be collated with cyber architecture. Compiled by lawyers and academics, the Manual provides a welcome first step towards engagement with the issue, but the levels and layers of inclusivity remain limited. True engagement with the complications of cyberspace would require re-engagement with the geopolitics that drives it as well. One cannot theorise the construction of cybernorm formation without examining the geopolitical realities within which it exists. Furthermore, given the rapid pace of technological proliferation, and the increasing vulnerabilities that are being capitalised on by rogue actors – such as the Wannacry ransomware attack and the Petya attack - it is absolutely essential that earnest measures towards cyber collaboration begin as soon as possible to prevent the devolution of the geostrategic world order into an apocalyptic cyber wasteland.

Endnotes

1 Osula, Anna-Maria, O. Rõigas, *International Cyber Norms Legal, Policy & Industry Perspectives.* CCDCOE, NATO CCDCOE Publications, Tallinn 2016.

2 Radu, Roxanne, Power Technology and Powerful Technologies: Global Governmentality and Security in the Cyberspace. In J.-F. Kremer, & B. Muller, *Cyberspace and International Relations,* Berlin: Springer, 2016.

3 Resolution - 57/239 Creation of a global culture of security, adopted by the General Assembly, 2002, Available at https://www.oecd.org/sti/ieconomy/UN-security-resolution.pdf, Accessed on 06 Sep 2017

4 *Radu, Roxanne, Power Technology and Powerful Technologies: Global Governmentality and Security in the Cyberspace. In JF Kremer, & B Muller,* Cyberspace and International Relations, *Berlin: Springer, 2016.*

5 Disarmament and International Security.

6 Russia and China disagreed with the United States' ideas as they believed those ideas would lead to the militarisation of Cyberspace.

7 *Report of the Secretary General, United Nations, Submitted by the Group of Governmental Experts on Developments in the Field of Information and Telecommunications in the Context of International Security, 05 Aug 2005, Available online at https://disarmament-library.un.org/, Accessed on 09 Sep 2017.*

8 Report of the Secretary General, United Nations, 30 Jul 2010, Available online at http://www.unidir.org/files/medias/pdfs/information-security-2010-doc-2-a-65-201-eng-0-582.pdf

9 *As set forth in the Universal Declaration of Human Rights and other international instruments.*

10 Ibid.

11 Osula, Anna-Maria, O Rõigas, *International Cyber Norms Legal, Policy & Industry Perspectives.* CCDCOE, NATO CCDCOE Publications, Tallinn 2016.

12 Korzak, E (2017). *UN GGE on Cybersecurity: End of an Era.* Available at The Diplomat: http://thediplomat.com/2017/07/un-gge-on-cybersecurity-have-china-and-russia-just-made-cyberspace-less-safe/ Accessed on 10 Sep 2017.

13 Report of the Secretary General, United Nations, 22 Jul 2015. Available online at http://www.un.org/ga/search/view_doc.asp? symbol=A/70/174&referer=http://giplatform.org/actors/united-nations-group-governmental-experts-developments-field-information-and&Lang=E Accessed on 08 Sep 2017.

14 *Korzak, E (2017).* UN GGE on Cybersecurity: End of an Era. *Available at The Diplomat: http://thediplomat.com/2017/07/un-gge-on-cybersecurity-have-china-and-russia-just-made-cyberspace-less-safe/ Accessed on 10 Sep 2017.*

15 Michael N Schmitt, Vihul Liis, (Ed.), *Tallinn Manual 2.0 on the International Law applicable to Cyber operations,* Cambridge University Press, (2017)

16 Sukumar, UN Reconstitutes its Top Cyber Body, This Time with India at the High Table, 2016, Available at The Wire: https://thewire.in/44696/un-reconstitutes-its-top-cyber-body-this-time-with-india-at-the-high-table/ Accessed on 09 Sep 2017.

17 *Osula, Anna-Maria, O Rõigas,* International Cyber Norms Legal, Policy & Industry Perspectives. *CCDCOE, NATO CCDCOE Publications, Tallinn 2016.*

18 Sukumar, A M, *The UN GGE Failed. Is International Law in Cyberspace Doomed As Well?* 2017, Available at Lawfare: https://lawfareblog.com/un-gge-failed-international-law-cyberspace-doomed-well Accessed on 08 Sep 2017.

[19] Michael N Schmitt, Vihul Liis, (Ed.), *Tallinn Manual 2.0 on the International Law applicable to Cyber operations,* Cambridge University Press, (2017).

@**Ms Natallia Khanijo** has done her graduation from Lady Sri Ram College and post-graduation from Miranda House, University of Delhi. Currently, she is researching on 'Cyber Issues' in Institute of Defence Studies and Analyses (IDSA), Delhi.

Defence Procurement Procedure 2016: A Perspective on Indigenous Design and Development

Ms Chandrika Kaushik,[@] Colonel Vijay Jain,[*]
Ms Jumi Hazarika Kakoty[#]

Introduction

Defence acquisition is a complex decision-making process that needs to balance the competing requirements of expeditious procurement, development of an indigenous capability for defence sector and conformity to the highest standards of transparency, probity and public accountability. With opening up of the government's policy on Foreign Direct Investment (FDI) in defence sector coupled with steps taken for ease of doing business in India, leading arms manufacturers/producers/suppliers are lining up to explore possibilities to enhance their business prospects. While the dynamics and economics of such an initiative and its analysis with a business overhang is beyond the scope of this article, a well-crafted policy, clear procedural framework and its consistent application are essential to create state-of-the-art capability towards achieving not only self-sufficiency but also self-reliance.

Mr K Subrahmanyam, Convener, National Security Advisory Board aptly summarised the self-reliance in defence of a country as that which requires the anticipation of threats to national interest and requires being prepared to meet such challenges in terms of personnel, their training and military equipment. Self-reliant defence requires equipping the Armed Forces with the whole range of military and support equipment that would at least match, if not be superior to, those of the adversary.[1] For a country as young as India, aspiring to be in the reckoning at the international arena, self-reliance in defence is a prerequisite. For that to happen, it has perforce got to have its own technology, own weapons, own back up plans and own infrastructure to give muscle to its authority. *It must be remembered that no country has ever been able to catapult to the top league of superpowers based on borrowed technologies and imported equipment.* It necessitates that more and more impetus be given to the Indian industries to participate, create infrastructure and manufacture defence equipment to meet the demands of the Indian Armed Forces. However, we are still far away from meeting this target.

Defence Procurement Procedure (DPP) is the primary document which governs all Capital Acquisition by the Services. DPP has steadily evolved over the years and current edition has introduced new provisions to further boost indigenisation. In this article, an attempt has been made by the authors to specifically analyse provisions contained in Para 72 of DPP-2016 with an aim to articulate its implementation and also to identify gaps, if any, with recommendations for improving implementation to contribute towards self-reliance.[2]

Self-reliance: A Status Check. In a watershed change in April 2001, private companies were permitted to engage in defence production, subject to licensing and to an FDI cap of 26 per cent (presently, FDI in defence is allowed up to 100 per cent with conditions, FDI up to 49 per cent is allowed through automatic route).[3] The latest data on international arms transfers released by a global think-tank, Stockholm International Peace Research Institute (SIPRI) shows that India continues to remain the world's largest arms importer, accounting for 14 per cent of the global imports in the 2011-2015 timeframe, in yet another indicator of the country's enduring failure to build a strong domestic Defence-Industrial Base (DIB).[4] The data also shows that India's arms imports remain three times greater than that of China and Pakistan. The volume of Indian imports of major weapons rose by 111 per cent between 2004-08 and 2009-13, and its share of the volume of international arms imports increased from 7 to 14 per cent. SIPRI reiterated the

well-acknowledged fact that "a major reason for the high-level of imports is that the Indian arms industry has so far largely failed to produce competitive indigenously-designed weapons".

Essentially there are three ways by which systems are developed/inducted in the Services. These are:-

(a) **Production Based on Foreign Technology**. In this the productionisation takes place through the industries, who manufacture based on Transfer of Technology (ToT) from foreign Original Equipment Manufacturers (OEMs). The ToT that comes to the country is however, essentially production ToT. In this process the capability of *'know how'* for production is acquired but *'know why'* does not come to the country. In addition, the perennial dependence on foreign OEMs for licenses to produce and supply critical items for example, T-72, T-90 tanks, SU-30s, MIGs etc. stays.

(b) **Design, Development by DRDO & Production by Indian Industry**. These systems are designed and developed by Defence Research and Development Organisation (DRDO) indigenously. In this the technology is developed by DRDO and product is realised through the industry. Wherever the developer and user work together, the projects have been successful leading to faster induction of the systems. However, if the developer and users work in their silos, it will lead to delayed timelines and production issues. Light Combat Aircraft (LCA) *Tejas,* torpedos, sonars, radars, electronic warfare (EW) systems, missiles etc. are few examples under this category (this option will be discussed in greater detail later in this article).

(c) **Design, Development and Production by Indian Industry**. In this, the equipment/system is pursued through design and development by Indian industries under 'Make'. Systems developed through this route are yet to be inducted.

Of the three ways of realising equipment, as enumerated above, in our context it can be stated that sub-para (a) and (b) will account for more than 95 per cent of the total procurement. Production of equipment under sub-para (c) is yet to start in a meaningful way; although lot of concerted efforts are being made by all concerned towards making a success of 'Make' through industry.

Understanding DPP – 2016

DPP over the years is being rationalised, improved and made inclusive to increase self-reliance. First DPP was drafted in 1992 and revised in the years 2002, 2003, 2005, 2006, 2008, 2009, 2011, 2013 and 2016.[5] The focus of DPP-2016 has been on self-reliance by giving a boost to 'Make in India' initiative of the Government of India.[6] The salient aspects of DPP-2016 contributing towards self-reliance are discussed below:-[7]

(a) A new category 'Buy (Indian-IDDM)', i.e. Indigenously Designed, Developed and Manufactured (IDDM) has been introduced to enable induction of systems/products from Indian vendor which have either been indigenously designed, developed and manufactured with a minimum of 40 per cent (raised from 30 per cent) Indigenous Content (IC) or minimum of 60 cent IC on cost basis of the total contract value, which may not have been indigenously designed and developed. Procedure for design and development has been spelt out at Para 72 of Chapter II.

(b) Flexibility has been landed with the Acceptance of Necessity (AoN) according authority to approve the IC in 'Buy' cases.[8]

(c) A new chapter on 'Revitalising Defence Industrial Ecosystem through Strategic Partnerships' (Chapter VII) has been added, for choosing a private sector partner for development of a specific, identified, strategic platform/systems or material, on a long term basis taking into consideration existing capacities in the public sector.

(d)   DPP-2016 has also introduced a provision for pursuing 'Make' category systems, in isolation, in sequence or in tandem with any of the other categories.

Analysis of Provisions at Para 72, Chapter II of DPP-2016

The provisions in DPP-2016 for cases that are to be undertaken as Design and Development by DRDO are mentioned in Para 72, Chapter II and are analysed are below. Design and Development undertaken by DRDO/Defence Public Sector Undertaking (DPSUs)/OFB (Ordnance Factory Board) will be progressed under this Para.

(a)   **Para 72 (a)**. Normally all design and development cases will be selected from the Long Term Integrated Perspective Plan (LTIPP)/Annual Acquisition Plan (AAP) and will be initiated by the concerned Service Headquarters (SHQ) only after holding discussions with the development agency. Based on the requirement, DRDO shall undertake feasibility study to establish clarity on realisation of the user requirements. DRDO will need to be given adequate lead time by clear articulation of their requirements by the users and stay steadfast on it. Failure on part of the users to stick to their requirements will take the project through several iterations/design loops leading to corresponding delays.

(b)   **Para 72 (b)**. This is the most important operative part of Para 72. It implies one or some combination of the following possibilities:-

(i)   SHQ to initiate Statement of Case (SoC) with Preliminary Services Qualitative Requirements (PSQRs) and Minimum Order Quantities (MOQs).

(ii)   Users and DRDO share a common perception about the realisation of the system through development by DRDO.

(iii)   Preliminary development of underlying technologies would have taken place based on draft PSQRs/Operational Requirements (ORs). Technology Readiness Level for major technologies is greater than six. The confidence level for realisation of the system is high and no technological uncertainties expected during the design and development phase.

(iv)   It *de facto* ensures commitment from the users.

(v)   In certain cases, where the quantities are limited and production by Industry is not feasible, production can be carried out by DRDO. However, identification of an Industry may still be required for providing necessary maintenance support.

(c)   **Para 72 (c)**. This Para relates to development of the prototype and selection of Development cum Production Partner (DcPP). It indicates the following:-

(i)   Development would be carried out as per the DRDO internal procedures.

(ii)   Development of prototype will be followed by trials and staff evaluation. This also implies that Maintainability Evaluation Trials (MET)/ Quality Assurance (QA) trials will be based on frozen PSQRs.

(iii)   DPP states that Categorisation (Cat)/AoN be taken based on PSQRs only.

(iv)   Validation trials, if required, would be carried out during the production phase and this aspect would be brought out during Staff evaluation.

(d)   **Para 72 (d) and (e)**.

(i)   These two sub parts deal with the commercial aspects of the acquisition after successful evaluation and issue of the Request for Proposal (RFP). However, it must

be noted that DcPP would not be treated as a Single Vendor Case (SVC) or a resultant SVC.

(ii) Post staff evaluation, commercial RFP will be issued to the identified DcPP of DRDO by the Acquisition Wing, MoD. DRDO is mandated to assist the Users and Acquisition Wing in RFP vetting, cost benchmarking, contract vetting etc.[9]

Gaps in DPP-2016: A Perspective

Most of the ongoing cases for Defence Acquisition Council (DAC) approvals under Para 72 of Chapter II have been accorded along with deviations of Para 72 (a) and 72 (b), since *a-priori* approval of DAC before initiating development had not been taken. These approvals have been accorded by DAC and pertain to systems that have already been designed and developed and have undergone limited or complete evaluation by users. However, no approvals have been granted by DAC for any design and development case to be taken up by DRDO or DPSUs under Para 72, Chapter II except for Airborne Warning and Control System (AWACS) (India) and Multi-Mode Maritime Aircraft (MMMA) for Indian Air Force (IAF) and Indian Coast Guard (ICG) respectively. This may be due to following reasons:-

(a) As per the new guidelines, it is a prerequisite that the users finalise the SQRs and state the MOQs *a priori* which would be in contrast to the existing system of finalising the SQRs after trial evaluating the prototype. Earlier provisions did not bind the users till a very advanced stage of development.

(b) Users will have to seek indulgence of the developers to technically visualise the equipment, finalise its QRs and take approval for the indigenous design and development, indicating the quantities required and MOQs.

(c) 'Changed perceptions of the same equipment with change in personality' is a challenge.

The DPP-2016 though is one year old by now, expectedly, slowly but steadily its acceptance and a need to realign the cases to its provisions has been felt and accepted. Para 72, the most important provision on indigenisation is being interpreted differently by different stakeholders based on their experience. Based on the experiences of the authors, implementation aspects from a development perspective have been attempted in this article. The onus for implementing the provisions of Para 72 and taking necessary approvals lie with the SHQs. The start point lies with the users in that they have to clearly articulate their necessity, in the form of operational parameters, which will enable DRDO to undertake the design and development project. This needs to be followed with finalisation of SQRs, categorisation as design and development and AoN. Important issues that need to be elaborated upon and clear implementation modalities are summarised below:-

(a) **Long Term Planning**. A mechanism to lay down vision and operational requirements by the users to the developing agencies, ab-initio, needs to be formulated and established.

(b) **Freezing of PSQRs**. DPP mentions about freezing of PSQRs after development of prototypes and user trials to be conducted based on frozen PSQR followed by staff evaluation. The procedure to be followed for freezing of PSQR needs to be elaborated to avoid any difference of opinion amongst various stakeholders. Also it does not mention holding of General Staff Qualitative Requirement (GSQR) based trials in addition to PSQR based trials, which is an expectation of the SHQ. There is a need to unambiguously clarify this issue by issuing an addendum to the policy guidelines to guard it against multiple interpretations.

(c) **Trial and Evaluation**. The DPP indicates the need to optimise the acquisition cycle by cutting down on the multiplicity of trials. While developmental trials will help the developer to evolve equipment. Once developed, repetitive trials must be dispensed with to avoid colossal national wastage. DPP could be further elaborated to bring clarity on this aspect to make it binding on developer as well as User. Presently, there seem to be multiple series of trials for indigenously developed equipment. The need for condensing the trial and evaluation cycle has been remarked upon by various committees and must be seriously examined.

(d) **Involvement of QA**. DPP-2016 mentions about 'staff evaluation based on PSQR based trials' but does not allude to the role of QA whose mandate starts only after SQRs are ratified by the Staff Equipment Policy Committees (SEPCs). QA and MET trials are not conducted on PSQRs. The process of conduct of QA and MET trials sequentially after successful user trials need to be relooked into in order to condense the evaluation timelines. For example, the conduct of *Intensified Standard Alternating Tests* (ISAT) trials, if initiated concurrently with the development of the initial prototype, will reduce the evaluation time. Therefore, the activity which consumes maximum time in the evaluation process must commence at the earliest. The need for involving QA and MET agencies in all development projects right from initial stage itself could be included in DPP.

(e) **Holistic Approach**. There is need for all agencies to work with a common goal of succeeding in indigenous development rather than working towards maximising individual organisational goals. Joint Project Management Teams (JPMTs), involving all stakeholders with adequate delegation of powers could be constituted to ensure timely decision making for faster development. These JPMTs should be held responsible and accountable for the success of the project. The JPMTs need to be empowered to resolve all issues pertaining to development, trials and evaluation and acquisition cycle (categorisation, commercial documentation and acquisition process etc.).

(f) **Trust Deficit**. Para 72 of DPP-2016 mandates that 'SHQ will obtain Cat/AoN right at the beginning'. However, the SHQ seem to be wary of this provision as they feel that once committed, and in the event of DRDO's development getting delayed, they will not be able to progress their procurement from other routes. This myth must be dispelled. Therefore, unless the provisions are made and clearly stated to accommodate both designer to pursue indigenous development (without linking it to meeting immediate operational requirements of the services) and SHQ to procure their urgent operational requirements, the compliance of Para 72 will be suspect. Both the processes namely, SHQs acquiring immediate operational requirements off the shelf and indigenous design and development for the future needs must be encouraged as a hybrid solution to drive ourselves towards self-reliance. The commitment from the SHQ in terms of MOQs is a must to encourage the designer and the industries to stay interested and invest for the required infrastructure to be created. This apprehension gets even more pronounced in the case of private sector industry, where the business model is driven by maximising the stakeholders' wealth.

Conclusion

There has been a constant endeavour by the government to reduce the import burden to equip our Armed Forces. Through 'Make in India' initiative, government has been trying to put in place a system which enables the Indian R&D/ DPSUs for in-house production to enhance the indigenous capability. With enunciation of various steps involved in capital acquisition, there is a definite need to articulate the implementable policy guidelines to bolster the indigenous design, development and production capabilities. This is a mandatory requirement so as to give sufficient lead time to the design and development agencies not only to realise the technology

but also create associated production and testing infrastructure. Para 72, chapter II of DPP-2016 has given provisions for DRDO/OFB/DPSU to spur the indigenisation process. With a common, collective and focussed aim of ensuring indigenisation, all stakeholders viz. users, developers, QA and Acquisition Wing have to operate jointly and zealously. Accentuated by easing of FDI in defence sectors and the government's focus on 'Make in India', it is expected that Indian industries will embark on private-public participation so as to meet the defence requirements of the Indian Armed Forces indigenously.

Endnotes

[1] Sixth Kirloskar Memorial Lecture by K Subrahmanyam, Convenor, National Security Advisory Board, https://www.idsa-india.org/an-oct-00-2.html

[2] http://mod.gov.in/dod/sites/default/files/dppm.pdf_0.pdf

[3] http://www.amritt.com/capabilities/analysis-of-the-indian-defense-procurement-process/

[4] http://www.thehindu.com/news/national/100-FDI-in-defence-What-does-it-mean/article14433877.ece

[5] http://pib.nic.in/newsite/PrintRelease.aspx?relid=160287

[6] https://www.sipri.org

[7] http://usiofindia.org/Article/?pub=Journal&pubno=557&ano=519

[8] http://www.idsa.in/issuebrief/DefenceProcurementProcedure2013_ acowshish_110513

[9] http://www.simplydecoded.com/2013/06/03/new-defence-procurement-policy-dpp-2013/

[10] http://www.business-standard.com/article/economy-policy/procurement-policy-undergoes-a-change-of-focus-113091001024_1.html

[11] http://www.idsa.in/specialfeature/dpp-2016_lkbehera_120416

[12] https://www.drdo.gov.in/drdo/English/index.jsp?pg=public.jsp

@**Ms Chandrika Kaushik** joined Defence Research and Development Organisation as Sc 'B' in 1991. Presently, she is pursuing PhD in "Leveraging Public-Private Partnerships for Self-Reliance in Defence".

***Colonel Vijay Jain** of the Corps of Engineers is an alumnus of NIT Jamshedpur and BITS Pilani. He is posted in DISB, DRDO HQ and looking after D&D projects related to Corps of Engineers and Artillery.

#**Ms Jumi Hazarika Kakoty,** is posted at the Directorate of Interaction with Services for Business as Scientist 'E' and Additional Director handling interactions with tri-services. Her focus is primarily in the DRDO related projects being taken up for the Services.

USI Strategic Year Book 2017[*]

Major General PJS Sandhu (Retd)[@]

USI Strategic Year Book 2017 is the Second Edition of the Year Book since it was started in

2016. In order to dispel the misplaced notion that India lacks 'strategic culture', it is important to visibly articulate our perceptions on strategic issues facing the Country as also to formulate a long term strategic view. The USI Strategic Year Book 2017 fulfils these objectives admirably.

The Book has a collection of 30 well researched essays which have been grouped under five sections. These Sections are: India's Internal Security Dynamics; India's Strategic Neighbourhood; Conflict Spectrum; India's Comprehensive National Power (CNP) and lastly, India's Defence Capability. The essays are authored by eminent persons who are experts in their own fields based on long experience and painstaking research. To that an extent, it is rare to find so much of wisdom and analysis in a single publication. In a review of this nature it is not possible to comment or apply even a broad brush on each of the contents. Hence, I will offer a few general comments so as to give the reader a fair idea of what to expect, from the book.

Section I, dealing with India's Internal Security Dynamics, starts with the lead article 'Revisiting India's National Security Interests and Objectives in the Evolving Geostrategic Milieu'. It is a comprehensive scan of India's geostrategic environment, challenges and the strategy, if India is to realise its dream of being a great power. In fact, this essay sets the direction for the whole book and could even have been a standalone content. So, the essay may be viewed in that context. The other essays in this Section deal with myriad challenges like: 'Hybrid War in J&K', 'Implications of Internal Security Environment and Infrastructure Development in the Northeast on the Defence of Northern Borders with China', 'Radicalisation in South Asia: Implications for India', and 'Modernisation of Police Forces for Effective Management of Internal Security Challenge'. Undoubtedly, all these subjects are important from national security perspective.

The lead essay of the next Section, 'Geopolitics of combating Terrorism in Af-Pak Region' captures the centre of gravity in India's Strategic Neighbourhood. Implications for India have been clearly spelt out. This Section further looks at 'India-Iran-Afghanistan Strategic Engagement', 'Conflict in the Middle East', 'India's Act East Policy', 'Indian Ocean', 'Shanghai Cooperation Organisation' and world powers like the USA, Russia and China which have a great bearing on the emerging world order and India's place in the order of things.

Section III, dealing with 'Conflict Spectrum' is of great relevance from the point of view of national security. This Section contains essays on 'Collusive and Hybrid Threats in the Indian Context'; 'China's Strategic Stakes and Growing Footprint in Pok'; 'India's Nuclear Neighbourhood' and lastly, the 'Non-linear Strategic Frontiers' dealing with Cyber Space, Outer Space and Information Space. All in all, this Section gives a very good idea of things to come and how India needs to be prepared for the challenges and opportunities.

Section IV, dealing with India's CNP is really the heart of the Book. It is the biggest section having ten essays on varied aspects of national power. As the lead article of this Section suggests, it is a reality check of where India stands, the direction and the distance it needs to travel to achieve what India aspires to be. The essay comparing economies of China and India

is particularly revealing. The author avers, any slowdown in China's growth would impose on the global economy, which in turn is likely to influence the Indian economy too. Similarly, the essay on 'India's Sustainable Economic Growth' is a good reality check and shows the long distance that we need to travel to achieve a modicum of standards to be considered a developed society. The essays dealing with 'Energy Security', 'Digital Transformation', 'Technological Empowerment', 'Make in India', 'UN Peace Keeping Operations', and finally 'Integration and Synergy in India's Instruments of National Power' complete the mosaic of India's road to the building of CNP. At the end of it, one cannot help feeling that there is a long distance to be travelled before we rest!

The last Section deals with 'India's Defence capability'. The four essays cover: 'A New Approach to Indian Military's Force Structuring', 'Role of Ballistic Missile Defence in India's Strategic Deterrence', Building Jointmanship in the Armed Forces', and lastly, 'Reforms for Optimisation of Defence Spending'. All these essays are futuristic in nature and bring home the point – what all needs to be done.

A few suggestions come to mind. It is quite natural in a work of this nature for some repetition to creep in which distracts a reader. For future editions, the editors may like to prune down the total number of articles which would help in retaining focus and avoid repetition to an extent. Further, a lead article setting out the direction of the Book may be considered. Also, if editors can add major takeaways at the end of each section, that would be of great help to the reader.

Overall, the Book is a treasure house of knowledge and analysis which would be extremely useful for researchers and to create general awareness on strategic issues facing the Country. The Book would also be useful for professional education of armed forces officers, especially those preparing for various promotion and competitive examinations.

Short Reviews of Recent Books

Strategic Vision-2030: Security and Development of Andaman & Nicobar Islands. *By Air Marshal PK Roy, PVSM, AVSM, VM, VSM (Retd) and Commodore Aspi Cawasji, NM, VSM (Retd) (New Delhi, Vij Books India Pvt. Ltd., 2017), pp 177, Price Rs 850.00, ISBN 978-93-86457-18-9 (Hardback) and 978-93-86457-19-6 (e-book)*

In an era where the geoeconomic and geopolitic centre of gravity has shifted from the North Atlantic to the Asia-Pacific, the Indian Ocean is fast evolving as a geostrategic frontier. This is not to say that the Ocean has not been an important source of civilisational exchanges in the past but with the shipping lanes through the Ocean witnessing the transhipment of nearly 50 per cent of trade and 70 per cent of energy flow, its importance to the littoral and extra regional powers, especially China is increasing manifold.

China, with its insecurities related to the choke points in the Indian Ocean, is increasingly making forays into the region with its 'String of Pearls' by development of ports and facilities all along the littoral, and is a source of concern to India. This is likely to result in a future permanent presence of the People's Liberation Army (Navy) in the Indian Ocean. The Andaman and Nicobar group of islands, with their north-south configuration spread of nearly 750 kms and domination over the six degree channel which is traversed by bulk of the traffic between the Indian Ocean and the Pacific, are ideally situated to supplement the already dominant location of India in the region.

This book provides a very lucid account of the importance of the Islands and the legacy of their neglect by the past and the current governments. Commencing with an environmental scan, legislating the strategic importance of the region in the emerging global dispensation, the book highlights the fact that security is a holistic concept encompassing physical, economic and human security aspects. Beleaguered by the general apathy towards the Islands, the book makes a compelling case for a fast paced, synergised and holistic development of the Islands which are located far from the Indian landmass and have limited habitation (only 37 of the 572 islands are inhabited). These are susceptible to myriad threats ranging from the conventional to the non-traditional; such as poaching of marine and forest resources, illegal migration, arms smuggling and natural disasters.

Easy to read, the book provides a global environment scan, geopolitical importance of the Indian Ocean Region, an overview of the A&N Islands, their natural, industrial and economic potential and their strengths and weaknesses and the way ahead. The book also highlights the dismal growth of the Andaman and Nicobar Command, an experiment in jointness mired in the bureaucratic apathy within the largely mainland centric Services Headquarters. The measures and initiatives (economic and strategic) required to be taken are well-researched and beg synergetic institutionalisation to harvest the full potential of these islands and intensify our physical claim.

A good read to get a comprehensive view on the status and potential of these islands, the book could have delved a little more on the benefits accruing in the security domain. Lauding the initiative of the present dispensation in Delhi towards recognition of these islands, the authors make a compelling case for comprehensive development not being held hostage to the environmental lobby within the country.

Major General Vivek Sehgal, VSM (Retd)

The Great Game in Afghanistan – Rajiv Gandhi, General Zia and the Unending War. *By Kalol Bhattacherjee, (Harper Collins Publishers, India), pp-300, Price- Rs-599/- , ISBN: 978-93-5264-439-1*

The book deals with the events that followed the Soviet intervention in Afghanistan on 25 Dec 1979 – the Christmas Day to install a Pro-Soviet government under Babrak Karmal of the PDPA and how this had posed a direct threat to Pakistan as well as endangered the stability of South Asia. It also uncovers the plans of Pakistan providing support to the Afghan Mujahedeen through financial aid from Saudi Arabia and supply of weapons by the CIA.

The book covers in detail the developing situation wherein there was a stalemate in Afghanistan and how the fighting had led to unbearable human and economic cost to the Soviet Union necessitating a peace plan that could ensure the honourable exit of the Soviets. While making a mention of the peace efforts made by the UN through its special representative, Diego Cordovez, the author unveils the vital role played by Rajiv Gandhi as the facilitator on the request of President Reagan of the US. Unveiling a series of meetings/conferences at Geneva that finally resulted in the signing of the mutually agreed upon Peace Accord by all the major stakeholders i.e. USA, USSR, Pakistan and Afghanistan; thus, setting the stage for the Soviet withdrawal, contingent to the US commitment of not supplying weapons to the Mujahedeen through Pakistan and forging a government of National Unity under Najibullah in Afghanistan. India also expected the US to terminate the military aid to Pakistan.

The author gives deep insight into how the convergence of interests brought the US and Pakistan together wherein the US continued to supply weapons to the Mujahedeen and rendering military aid to Pakistan despite its pursuing a covert nuclear programme. It also uncovers the plan of their betrayal that undermined Rajiv Gandhi's bid to end the unending war in Afghanistan leading to a serious erosion of relations between the US and India. While it was no surprise that Zia-ul-Haq continued providing support and weapons to the Mujahedeen in violation of the Geneva Peace Accord, April 1988; but the betrayal by the US was considered by India a "stab in the back".

Besides the main subject of the Soviet intervention, reaching of the Peace Accord and how it was violated, the book contains details of General Zia-ul-Haq emerging as the military dictator in Pakistan and the politics he played that finally led to his sudden death in an air crash. It also covers two other important subjects; Rajiv Gandhi taking over as the young Prime Minister of India, his vision of modernising the country, role as the facilitator of the Peace Accord and his disappointment on being spurned by the Reagan administration as also the contribution of John Gunther Dean in forging close relations between the US and India. The author makes it clear that India was against any intervention or interference in the affairs of another country.

In writing the book, the author relies on the declassified papers of Dean, the US Ambassador to India and the conversations with Ronen Sen, Rajiv Gandhi's diplomatic aide. The book details the account how Dean felt betrayed by his own country and was removed unceremoniously certifying him as mentally deranged.

The language of the book is simple and the author has done extensive research. However, Dean's claim of Israel being involved in the killing of Zia has not been substantiated by any evidence. The book is silent on the reaction of India to the Soviet intervention; probably Mrs Indira Gandhi was caught by surprise. Whatever be the truth, the fact remains that the majority of the Afghans believed that Mrs Indira Gandhi was supportive of the Soviet intervention.

The book offers a new look at the dynamics of the Afghan issue and details the active role of diplomacy during Rajiv Gandhi's years. The book, therefore, is of immense value to those in diplomatic assignments.

Major General Samay Ram, UYSM, AVSM, VSM (Retd)

Prison Narratives. *By Akhtar Baloch (Compiled and Translated by Asad Palijo) (Oxford University Press, Karachi, 2017), pp 178, Pakistan Rupees 995/-.*

History of Pakistan during General Yahya Khan's military regime inevitably focusses on the growing gulf between East and West Pakistan leading finally to the secession of East Pakistan and the emergence of Bangladesh. The drama of that political divide overshadows other conflicts in West Pakistan at the time and in particular in Sindh. Here a nascent Sindhi nationalist movement driven in part by a linguistic nationalism also had its own share of struggles and resistance to a military regime unable to understand such regional aspirations. In this background, Akhthar Baloch's *Prison Narratives* is an unassuming but riveting and most unusual book. As a young 17 year old undergraduate Akhthar Baloch was jailed for starting a hunger strike. This was part of a general student's movement against the military regime but had also a specific demand that electoral lists for the forthcoming general elections be published not just in Urdu (and Bengali for East Pakistan) but also in Sindhi for Sindh. Akhtar was to spend about a year from November 1969 in Hyderabad central jail. *Prison Narratives* is the dairy she kept during her imprisonment and is an account of the monotony, the petty tyrannies and exploitation but also the friendship and comraderie she encountered. This is a simple but sincere record of a young woman activist deeply committed to the revolutionary transformation of Sindh and in general against military rule and feudal domination. The book's great merit is that it does not try to overdramatise the author's experiences and reactions and its simplicity and directness underwrites the author's commitment and passion. It has nevertheless interesting sidelights in terms of Sindhi attitudes towards Urdu and Punjabi speakers, the extent to which developments in China, Vietnam and Cuba etc. influenced the Pakistani student's movement of the time, the rigid gender hierarchies that prevailed and how, notwithstanding these, a young girl could be so politicised as Akhtar Baloch was even as a teenager. Endearing also are the brief sketches of the other inmates of the prison. For readers interested in Pakistan's deeply contested domestic politics and modern Sindh history, this little book would be of great interest.

Shri TCA Raghavan, IFS (Retd)

The Arts and Crafts of the Hunza Valley in Pakistan: Living Traditions in the Karakoram. *By Jurgen Wasim Frembgen (Oxford University Press, Karachi in collaboration with the Museum Funf Kontinente in Munich, 2017). pp 110, Pakistan Rupees 1425/-.*

The Arts and Crafts of the Hunza Valley in Pakistan is an ethnographic study of the material culture of the Hunza Valley in Pakistan Occupied Kashmir. In administrative terms in Pakistan the former princely kingdom of Hunza stands incorporated in the Gilgit Baltistan region whose undefined constitutional status remains a matter of discussion and disputation both in Pakistan and India as also elsewhere. This book, however, addresses other issues- in particular the traditional crafts and other living traditions of the Hunza Valley and is, therefore, far removed from all these contestations. It is based primarily on contextualising the collection of objects gathered during field trips and now preserved in a museum in Munich, Germany. The analysis of a cross section of crafts ranging from textile, iron and stoneware, carpentry etc. is an insight into the traditional world of Hunza which is gradually disappearing. It is also a reminder of the cross civilisational links of this region connected as it was to China, Central Asia and India.

China's Emerging Cyber Operations: Capabilities and Implications for India. *By Colonel Rohit Mehrotra (New Delhi: GB Books, 2017), Price Rs 995, pp..302, ISBN 9789383930647*

This book, in six chapters, is a holistic study on China's emergence as a cyber power. It carries out an in-depth analysis of the structures which China has put in place for carrying out cyber operations, the supporting doctrinal thought and the present day capabilities. It is well known that cyberspace has emerged as the new domain of warfare. This type of war can be waged even during peacetime and for multifarious tasks such as surveillance, espionage and even economic espionage. Enemy's information networks can be disrupted with plausible deniability. Therefore, the study of China's capability enhancement has certain valuable lessons for India also. These have been succinctly brought out by the author.

The first chapter has traced the physical and virtual dimensions of the cyberspace. It has attempted to study the cyberspace in its entirety. Concepts of cyberwarfare, cyber strategy, cyber terrorism the possible threats to national security have been explained in this chapter. In the next chapter the author has focussed on the chronology of the evolution of Chinese warfare capabilities. The role of the government, role of CMC as also PLA has been examined in this regard. The author has correctly established that a determined impetus from the very top has been the key driver of China's growth in the cyber domain.

The third and the fourth chapters have been devoted to the doctrinal thought with respect to waging of cyber war as also the organisational structures and capabilities. It is noteworthy that China has recently reorganised its armed forces and created a strategic support force. Cyber organisations will be part of this force and will aid and assist the operational commander. The control of this force has been kept centralised, and need based allocation will be done to the Theatre commands.

In the last two chapters, further steps in China's cyber capability building as also implications for India have been traced. While China's trajectory in this field remains steady, India can ignore this emerging arena of warfare only at its own peril. India has become increasingly networked in all spheres. Even the armed forces are progressing towards net centric warfare. While this will make India more efficient, it also makes the structures more vulnerable to cyber threats. For example the entire financial sector is reliant on wire transfers making it vulnerable to Chinese hackers. India therefore will do well to emulate the Chinese model with suitable modifications. India has a sizeable IT sector capability. The need is to channelize some of this capability for developing offensive as also defensive cyber capabilities under a formal structure.

Brigadier Sandeep Jain

LATEST PUBLICATIONS OF USI

Code	Subjects	Price (Rs)	Year
**R-77	Strategic Year Book 2016 Edited by Lt Gen PK Singh, PVSM, AVSM (Retd)	1495	2016
*M-13/PB	Peace Building through Development Partnership : An Indian Perspective Lt Gen PK Singh, PVSM, AVSM (Retd)	150	2016
**M-14	"Development of Tactical Nuclear Weapons by Pakistan and Implications for India" By Lt Gen Arun Kumar Sahni, PVSM, UYSM, SM, VSM (Retd)	195	2016
**M-15	"Rising Powers and Peacebuilding : India's Role in Afghanistan" By Mr Shakti Sinha, IAS (Retd)	195	2016
**R-78	India's Water Security Challenges : Myths, Reality and Measures Col Vishal Murada	995	2016
**R-79	China's One Belt One Road : Initiative, Challenges and Prospects Edited by Maj Gen BK Sharma & Mrs Nivedita Das Kundu	650	2016
R-80	Developments in Central Asia : India-Kyrgyzstan Relations. Edited by Maj Gen BK Sharma & Mrs Nivedita Das Kundu M/s Pentagon Press, New Delhi	795	2016
**R-81	Geopolitics, Security and Bilateral Relations : Perspectives from India and South Korea Edited by Maj Gen BK Sharma & Cdr MH Rajesh	695	2016
R-82	In Memoriam – The Fallen Air Warriors By Air Marshal Bharat Kumar, PVSM, AVSM (Retd) M/s IMR Media Pvt Ltd, 8A Ashok Marg, Silokhra,Gurgaon-122001	695	2016
R-83	China Strides in Bhutan, Nepal and Myanmar – Option for India By Col Subodh Kumar Shahi M/s GB Books	995	2016
**R-84	"Strategic Year Book 2017" Edited by Lt Gen PK Singh, PVSM, AVSM (Retd), Maj Gen BK Sharma, AVSM, SM & Bar (Retd) and Dr Roshan Khanijo	1495	2017
R-85	"China's - Emerging Cyber Operations Capabilities & Implications for India" By Col Rohit Mehrotra M/s GB Books Publishers & Distributors	995	2017
**R-86	"Strategic Vision 2030 : Security and Development of Andaman & Nicobar Islands" By Air Marshal PK Roy, PVSM,AVSM,VM,VSM (Retd) & Cmde Aspi Cawasji, NM,VSM (Retd)	850	2017

*** Available from Vij Books*   ** Available from USI*